

H₂O Outlook

Kentucky Water & Wastewater Operators' Association, Inc.

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60th Annual Water and Wastewater Operators Conference

April 9—13, 2017

Crowne Plaza
Louisville, Kentucky

My New Pocket Knife

By James Hale
Grayson County Water District

It's funny how looking at old pictures can resurrect memories that have long been buried under the years of our past. That happened to me a while back looking at some old photos from 1974. We lived in a tiny white house on Hwy 86 in Breckinridge County. Those pictures of me playing with my farm toys on the carport (not really a carport, but the top of our cistern) and in the yard brought to the surface an "incident" that is surprisingly vivid for a 42 year old memory!

Several of the pictures were of me at four years old. I believe it was late summer or early fall 1974 because I'm in long sleeves and in one of the pictures I have my hand buried deep in my pocket; probably with my fingers wrapped tight around the little pearl white handled pocket knife my Pappy had given me for my fourth birthday in late August. I know that you're thinking, four years old is much too young for a pocket knife and by the end of this story that will be proven true! It was, however, a simpler time and Lord knows there were numerous other things we did back then that today are deemed much too dangerous. We'll get back to my pocket knife later.

As I looked at those pictures thinking about that "incident", I realized that nearly everything I need to know about protecting our water is represented in them. If you were there that day and had asked me what I wanted to be when I grew up, I would have said, "I want to be a waterman!" Not the kind of waterman I am today, but the kind that hauled water in a tank and dumped it into a cistern. Periodically, a man would come and put water in ours. I thought that was amazing and I really liked the guy that delivered the water, so a "waterman" is what I wanted to be. It wasn't clear to me at first glance and some are completely hidden, but there are at least four potential sources of contamination in those pictures.

If you walked around behind the house, up to the right of the yard, there was a small hill. Mom's clothesline was there where she would hang clothes to dry after washing them outside in the wringer washer. I loved playing on that hill

because hardly any grass grew there and I could play in the dirt with my toy trucks and tractors. When it rained, little gullies and ditches would be washed out on the hillside which made it all the more fun to play on. There is our first potential source for contamination. Unchecked erosion of soil which eventually fills up our rivers, streams, and lakes, has been a problem for decades. We have learned that protecting the shoreline by maintaining a healthy growth of trees and grasses and limiting activities that will wear away the shoreline, help prevent the soil from eroding.

Keep walking across the back yard and just a few feet from the back of the house, you'll find an almost perfect 4' x 8' rectangle of dead grass. Anyone that grew up in rural Kentucky will know that this is where the septic tank was located. I had no idea at four years old what a septic tank was, I only knew I could dig there a few inches deep and I would hit solid rock. And that if I dug in just the right spot, I could find a piece of round metal, looped and embedded into that rock like a handle for a lid. Was this where mom and dad hid all their gold? I eventually learned that gold was not contained in that underground tank, after I watched my dad and another man with a pump and a tank clean ours out! I'm not sure why that didn't inspire me to want to be a "sewer man" but I suspect it was the smell! It is here we find our second possible contamination source. Failing septic tanks, lateral fields, and straight pipes that dump waste into drinking water sources or drinking water lines running through lateral fields are of major concern; especially if your raw water source allows the building of homes near the shoreline. Regulations over the years have reduced this problem, but without a doubt there are a few still out there.

Now just a few steps further and you'll be standing on that carport where our cistern was located. In another picture, scattered all around me, were my toy tractors and such, our third potential source of contamination. In real life, farming operations most likely pose the greatest risk of contamination in most areas of rural Kentucky. I know in the Source Water Assessment for our water district in Grayson County, agricultural operations upstream

Article Continue on Page 16

Message from the Chair

By David Goodrum



I hope all of you are having a great summer. I want to remind all Central and Eastern Chapter members that this is an election year. If you want to get more involved and step up and help with organizational functions, please let one of your chapter officers know. Your help will be greatly appreciated.

This is also an election year for the State Board Vice-Chair. This person will serve as Vice-Chair and then move into the position of Chairman, so essentially nominees are committing to serve on the State Board, lead the Association and help with its day-to-day management for a four year period. If you or someone you know are familiar with and/or willing to learn the inner workings of the Association, then throw their name into the hat for consideration. Roy Gray, Eastern KWWOA Representative, is the Nominating Committee Chair, with Les Rogers, Western, Jacob Billingsley, Central and Matt Chancellor, Northern Central serving on the Committee. Nominations will be accepted through October 31, 2016. You may submit an individual's name and resume to Roy at manchesterwtp@yahoo.com, through one of the reps referenced above or to Lisa Detherage at Lisa@kwwoa.org. The term of this position will begin at the 2017 Annual Conference in Louisville.

I would like to thank Brian Bourne for agreeing to serve as KWWOA representative on the Kentucky Division of Water's Compliance Committee Workgroup for Distribution and Water Quality. These work groups are part of the way your voice is heard in the regulatory process.

I would like to inform all members of our future Annual Conference plans. By the arrival of this newsletter, the contract for the 2018 & 19 Annual Conferences should be inked in. We are excited to announce that we plan on going back to the Northern Kentucky area on the banks of the Ohio. We will be at the Northern Kentucky Convention Center just across the river from Bengal Stadium and Great American Ball Park in Cincinnati. We have not been in this area since our days at the Drawbridge Inn. The Marriot and Embassy Suites are adjacent hotels and will serve as the host hotels and have given us great rates. We are excited to be back in this beautiful and exciting area as it offers many attractions in addition to the Conference. We hope you will be as excited for this new venue as we are!

KWWOA still has several classes available this year. If you need hours and/or simply want to join us, go to www.kwwoa.org and register:

1. Central Chapter— Confined Space, August 11, Bowling Green, Kentucky
2. Central Chapter—Fall Conference, Sept. 27 and 28, Barren River State Park, Lucas, Kentucky
3. Eastern/North Central—Fall Conference, Oct. 10 and 11, Lexington, Kentucky
4. Eastern Chapter— Water & Wastewater Training— November 17, Morehead Utility Maintenance Dept., Morehead

I would like to take this opportunity to thank a fellow board member for his years of service. Lloyd Keyser has resigned from the state board due to health reasons. We wish Lloyd all the best and are praying for him and his family. Thanks as well to James Poindexter for stepping up to complete Lloyd's term as the Eastern Chapter Wastewater Representative.

Have a Great Summer and watch out for those HAB's!

KY Division of Water Recognizes Robin Strader

Robin Strader was recognized by KWWOA for all of her hard work during 2015, and also acknowledged by the Kentucky Division of Water (DOW) for her efforts in training wastewater facility personnel. The training focused on preparation of the "Field Only" wastewater laboratory application, as well as the preparation of the Quality Assurance Plan, Standard Operating Procedures and the actual analysis of Proficiency Test Study samples, required by DOW for certification.

Robin is the Head Operator for the Leitchfield WWTP, serves as the Vice Chairwoman of KWWOA and runs a family business, yet took time out last year to establish a curriculum and teach 11 "Field Only Lab Certification" classes from Pikeville to Mayfield. She originally intended to hold only a couple of classes given her other commitments, but when encouraged by facility operators and DOW she gladly added more classes to the schedule. This doesn't include the many hours she spent on the phone and email answering application questions outside of class.

Robin is recognized for her knowledge and willingness to help. Her philosophy is that operators need as much knowledge as possible and if a service can be performed in-house, why pay for outsourcing the work. Since the facility operators were only charged for the supplies required to prepare the application and the Proficiency Test Study samples, there is no telling how much money she saved facilities on the application prep and the cost of analyzing future samples, not to mention the time she saved DOW in phone calls and application review times. DOW laboratory certification staff are very grateful for Robin's efforts and the expertise that she shared with facility personnel.



Operator Profile — William Ford

William Ford is a Class IV wastewater and a Class II collection system operator. He works for Louisville and Jefferson County Metropolitan Sewer District (MSD) as an Environmental Compliance Inspector. He has served as a member of the MSD family for approximately six years in multiple roles. He began his career at MSD as an Operator in Training, acquiring technical wastewater knowledge, conducting various associated tasks, and developing relevant wastewater treatment skill sets. As a wastewater operator, William quickly developed and realized a passion to provide clean water. Eager to learn more, he enrolled in Western Kentucky University's Water Training Institute (WTI) program which was an industry demand driven workforce development program. The program offered a formal education system focused on producing graduates with knowledge and skills relevant to the water and wastewater industry. The program looked to educate operators in topics related to the profession, helping them to qualify for certification and close a gap many water and wastewater utilities encounter due to retirements and attrition. This program allowed him to earn an Associate of Science in Water Resource Management, as well as qualify for higher certifications. While in the program, he was also exposed to many water and wastewater utilities, including Hopkinsville Water Environment Authority.



William Ford,
Environmental Compliance Inspector,
Louisville-Jefferson
County MSD

As an advocate for the environment and industry, William felt the desire to be involved with a professional organization related to the industry. As a result, he joined the Kentucky Water and Wastewater Operators Association (KWWOA) and offered up his assistance. Not an organization to pass up free help, KWWOA encouraged him to attend the Central's Chapter Meetings and drafted him to participate in the Conference Committee. William said that his involvement has already proven to be extremely beneficial for a number of reasons. "First, the experience has allowed me to view management level decision making processes in its purest form, such as the allocation of resources and budgeting. Secondly, volunteering with the Conference Committee has allowed me the opportunity to glean an abundance of pertinent information related to the water environment industry, from a grass roots to a senior management level. Lastly, serving with KWWOA has allowed me to expand my professional network. The benefits of serving have helped me to understand issues like retirement and attrition are very real and we need to bridge the gap between younger and tenured water professionals not only at work, but within our professional organizations."

"KWWOA's 59th Annual Water and Wastewater Operators Conference exhibited many of the benefits I've noted above and more. Working with the Conference Committee behind the scenes, I can personally affirm they are some of the most professional and personable individuals I have ever met. It's like being around long lost family at a family reunion. In my opinion, those professional and personable characteristics are the backbone of this Conference! You can literally feel the excitement in the air. As an operator, there is nothing like having good, professional, whole-hearted individuals by your side. From the many smiles at registration, to the ice cream socials and technical sessions, you always feel welcome. Technical sessions, like the Sewer Exhibit, which displayed the history of water and wastewater conduits, provided insight on past practices which are still relevant today. The speakers who conducted the various technical sessions were very knowledgeable in the subject matter presented. Serving as a Conference volunteer, helped me understand the many different facets of setting up an event of that magnitude. Most importantly, it helped me understand how vital intangible characteristics like subservient leadership and emotional intelligence can be for an event. KWWOA is all about serving the operator community and doing so with a smile on their face which is evident in the Conference Committee and event workers."



William assists with Registration
during the opening morning of the
2016 KWWOA Conference.

William lives in Louisville with his fiancé Marissa and their three wonderful children, ages seven, four, and two months. Even though extremely busy with work and their littlest addition, William still makes time for KWWOA. He offered, "If you are looking for CEU's or just want to enjoy yourself around other water professionals, I would highly recommend coming out to one of the KWWOA's events and/or to offer up your services. You will be surprised at what you will gain!"

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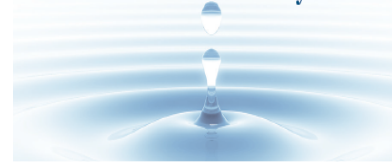
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59th Annual Water & Wastewater Operators Conference

The History Begins With You!

Congratulations to the 2016 KWWOA Award Winners!

With these individuals we know our "History" is in good hands!

J. C. Chambers Award Recipient

Angel Saltsman

Leitchfield Wastewater Treatment Plant



Angel is a 25 year veteran of the Leitchfield WWTP, a modified activated sludge plant with bio-towers and a lagoon at the head of the plant. She collects and analyzes process control and compliance samples. Angel assists in implementing a pretreatment program with 11 industrial users and runs split samples on industrial monitoring. She also analyzes compliance samples for 3 additional KPDES facilities and 4 storm water facilities.

Angel holds Class III Wastewater Operator, Class IV Wastewater Analyst and Class IV Water Analyst certifications. Angel is a dedicated operator with a strong work ethic. She is self-taught in chemistry and biology. She actually enjoys reading Standard Methods, as evident by the tattered cover of the 18th edition at the WWTP. Most of all she enjoys the

wastewater profession and if we had more operators like her there would not be as many enforcement cases. With very little guidance, Angel has taken a WWTP lab to a certified general lab. She is curious about everything and will research topics and experiment until she is satisfied with her understanding of the topic. As a result, she was selected as the J.C. Chambers award winner in recognition of her commitment to the improvement of the technical progression of operations, maintenance and water quality produced by the Leitchfield WWTP.

Earl T. Mitchell Award Recipient

Paul Goncher

Hardin County Water District No. 2



Paul is the Assistant Distribution Manager for the Hardin County Water District No. 2 (HCWD#2) where he has worked for 25 years. He manages the day-to-day operation of a 900+ mile distribution system, with lines ranging from 2 to 24", 27,000 meter connections & 13 tanks. He supervises multiple crews, including a construction crew, meter installation crew, maintenance crews, leak repair crews, and a water quality department. Paul also oversees developer projects & in-house construction projects.

Paul holds a Class IIID distribution certification. Prior to his current position, Paul worked for a utility construction company for several years. Paul is one of the most dedicated HCWD#2 employees, earning the respect of his staff and management. He keeps his

company phone with him 24/7 and takes calls day and night and is always willing to answer questions or help solve problems. Paul demonstrates his commitment to the technical progression of operations, maintenance and water quality on a daily basis and readily deserves the Earl T. Mitchell Award.

Eugene Nicholas Award Recipient

Robin Strader

Leitchfield Wastewater Treatment Plant



When thinking about who should receive the Eugene Nicholas Award, which recognizes individuals who promote the operator community through education, one person stood out above the rest. During 2015, Robin Strader developed and presented a field certification training program that was conducted across the state in 11 separate locations resulting in over 2200 certification hours being turned in to DCA. This course was key to many facilities complying with new regulatory requirements and becoming certified in field analysis. To accomplish this task, she had to sacrifice many hours for no compensation and in some cases used vacation time to travel and conduct the training sessions.

In addition to the field certification classes, Robin also coordinated additional classes for KWWOA and taught lab analyst certification classes. For the past several years, Robin has also been KWWOA's Kentucky Lab Analyst "Committee of One," serves as the Central

Operator at the Leitchfield Wastewater Treatment Plant. Robin holds a class III wastewater treatment, class IV collection, Landfarm, class III distribution, class IVA drinking water treatment, and class III water and IV wastewater lab analyst certifications, so you know she is serious about her profession. She also serves on the Kentucky Board of Certification of Wastewater System Operators. KWWOA & Kentucky's operators benefit from Robin's hard work & dedication every day, earning her the Eugene Nicholas Award many times over.

2016 KWWOA Award Winners

2016 Drinking Water Plant Award

Glasgow Water Company—Lucas Water Treatment Plant

Received by Tim Smiley & Wesley Wilson



Glasgow Water Company's (GWC) Lucas Water Treatment Plant, originally built in 1965, treats water from Barren River Lake. The GWC administration had future needs and expansion in mind when selecting their original plant. In 2007 when they expanded their plant, they were able to build a mirror image of the existing plant to double their capacity, resulting in a seamless facility that does not look pieced together. In addition, Glasgow was also certified in 1998 by the Kentucky Division of Water as a microbiology lab to analyze drinking water samples for total coliform and E. coli bacteria. This allows GWC to respond to water emergencies much more efficiently.

The Lucas facility produces high quality drinking water using conventional treatment and is staffed by 8 individuals, 6 of whom are college educated. Education and the ability to learn new skills are paramount in today's increasingly complicated treatment technologies and in meeting or exceeding strict water quality standards. The city-owned utility also provides water on a wholesale basis to Allen County Water District, Caveland Environmental Authority, Edmonton Water, Fountain Run Water District and Green River Valley Water District. The Lucas treatment plant staff oversee the distribution of their water through an on-site SCADA (system control and data acquisition) which monitors water tank levels yielding a more efficient use of maintenance manpower. Scott Young, GWC general manager, stated, "This award is a testament to our mission, which is 'to provide the highest quality water and wastewater services at the lowest possible cost, while continuing our commitment to meet the needs of today's customers as well as future generations.'" Tim Smiley, Plant Superintendent, added "That this award is an honor, validating the commitment by the GWC administration and board to provide the means to produce quality, safe drinking water that exceeds federal and state requirements. Without the dedication and hard work of all of the water plant operators, this award would not be possible. As water treatment plant operators, this is one of the highest honors that we can receive. To receive this award, that encompasses the entire state, makes all the operators proud to be associated with the Glasgow Water Company."

2016 Wastewater Plant Award

Caveland Environmental Authority—Horse Cave WWTP

Received by Kim Klotter, Roger Humphrey & Morgan Christie



The Horse Cave Wastewater Treatment Plant (HCWWTP) serves Horse Cave, Bonnieville and a rest area located on Interstate 65. The plant is operated by three full-time operators, who also have responsibilities within Caveland Environmental Authority's (CEA) pretreatment program and the Cave City plant. The HCWWTP receives the effluent from Cave City WWTP and the effluents are combined to take advantage of one outfall on the Green River.

In 2008, CEA began a 2 million dollar expansion of HCWWTP largely to serve local industry at Dart Container, Sister Schubert's Homemade Rolls and T. Marzetti. The upgrade included new wastewater screening equipment, a clarifying tank, an ultra-violet disinfection unit and a sludge dewatering centrifuge. The treatment plant's average flow is 280,000 gallons and is now rated to treat 480,000 gallons per day with the expansion. After screening, treatment and disinfection, the water is discharged into Green River for reuse and recreation, as well as, helping to sustain healthy ecosystems downstream. Kim Klotter, Horse Cave Plant Supervisor, stated, "Being able to help the community and our environment at the same time is rewarding. Being recognized for your efforts by your peers is a real honor. We were pleasantly surprised and very appreciative to learn of this award but without the hard work and dedication from employees Morgan Christie and Roger Humphrey, this award would be hanging in another utility's office. They meet challenges, solve problems and work together. They are devoted to producing high quality water every day. Additionally, we are fortunate to have skilled co-workers who are always willing to help tackle projects with us. CEA has a great crew that works hard for great results."

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2016 KWWOA Conference Happenings



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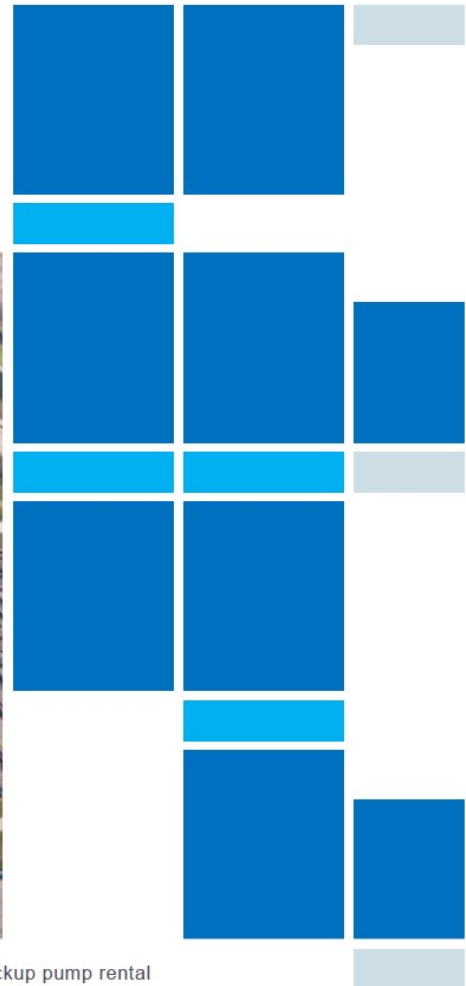
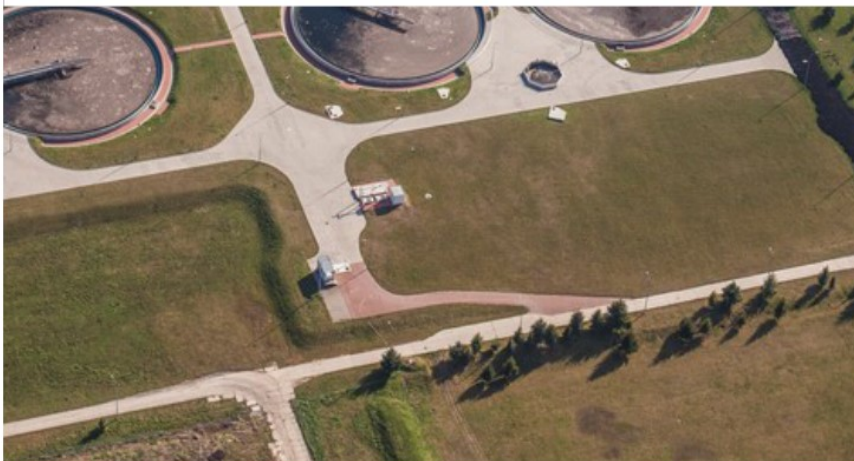
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2016 KWWOA Conference Happenings



And they all roll in! The Monday morning registration rush.



Is this a good looking group, or what?!?
N. Central Officers: Nathan Hodges, Matt Chancellor, Matt Piccirillo, Stewart North and Brian Bourne.



Jon Schladweiler, NASSCO and compiler of the Sewer Exhibit, shared with us the history of sewer and distribution systems.



The Sewer Exhibit was a hit! While materials may have changed, many of the early collection and distribution techniques remain in place.



And they just keep getting cuter! "Tech-man Extraordinaire" & Western Vice President, Chris Spriggs & Lori Simpson, KWWOA Secre-



It can't be all work! Winners of the KWWOA Cornhole Tournament, Noal Cotton & Leslie Rogers. The magic must be in the goatees!



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Could Toxic Chemicals Along the Ohio River be a Danger to Our Drinking Water

Lisa Bernard-Kuhn, WCPO

Arsenic. Lead. Mercury. Sulfuric Acid. At a closed Duke Energy power plant, at least 10 billion pounds of coal ash containing these toxins and more are sitting on the banks of the Ohio River – a source of drinking water for more than 5 million people. How the polluted ponds got there is a story that began long before environmental laws were created to keep people and drinking water safe from toxic waste. How much longer the dumps might stay – and put our drinking water at risk – is a saga that's just beginning to unfold.

"Think about what happened in Flint, (Mich.), and think about just how important this is to public health and safety," Clermont County Commissioner David Uible said. "To think that this day and age, that we have a water supply right next to these ash pits, it's just unbelievable." Local environmental experts agree. "The worst-case scenario is that you get a major flood on the Ohio, then you get a breach of the dams and all that ash is washed into the Ohio River," said Paul Braasch, who leads Clermont County's Office of Environmental Quality. "Then you have a plume of ash going down the Ohio River. That's a big problem, and lot of bottled water to be handing out."

As early as next year, Duke Energy has said it will begin tearing down the more than 60-year-old plant. The electric utility giant closed the plant in late 2014 just as the U.S. Environmental Protection Agency was writing new federal standards. Although federal rules went into place in 2015 that set new standards for how coal ash ponds should be managed and closed, the guidelines don't apply to Beckjord because the plant closed in 2014. That means most of the rules for how the ponds are closed will fall under a limited set of Ohio laws governing coal ash ponds. "Ohio is one of the largest coal ash producers in the country, and they have some of the worst state regulations," said Lisa Evans, an attorney with Earthjustice, a nonprofit D.C.-based environmental law firm. "These ponds fall into a very dangerous regulatory gap." So far, Duke hasn't said what its plans are for the ash ponds, which span nearly 170 acres of riverfront in New Richmond and Pierce Township.

A WCPO review of government and environmental records reveals a history negligence and pollution at the Beckjord plant and a big dilemma with coal ash that stretches across Ohio. To read more of this article, go to <http://www.wcpo.com>.



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Melissa McCaffrey, Velocity, shares information about an upcoming OSHA deadline.

Representing the Central Chapter:
David Goodrum,
Robin Strader,
Shaun Youravich and Mandy Spalding



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The Importance of Large Meter Analytics By Kristie Anderson, Badger Meter

Salisbury-Rowan Utilities in Salisbury, N.C. prides itself on providing excellent customer service. While its commercial and industrial customers comprise just 15 percent of total customer accounts, they generate 65 percent of the utility's monthly billed volume. That's why, when it came time to select a new meter reading solution, the ability to receive data-driven analytics to better understand, monitor and manage its operations was a top priority for the utility's leadership team.

"Prior to deploying an advanced metering solution, we manually read 22,000 meters each month. We were facing an aging infrastructure and were looking at a meter change-out. We looked beyond just the meters and evaluated metering solutions that could provide additional benefits such as proactive customer service, operational efficiencies, reduced meter-reading costs and rolling fewer trucks to get those monthly reads," explained Jason Wilson, engineering manager for Salisbury-Rowan Utilities.

The utility chose the BEACON® Advanced Metering Analytics (AMA) solution and ORION® Cellular endpoints from Badger Meter. BEACON AMA's cloud-based software analytics platform provides the actionable information Salisbury-Rowan managers need for improved efficiency, faster leak detection, better revenue management, easier reporting and better customer service. For its largest customers, the utility's BEACON AMA deployment has saved both time and money.



Jeff Jones & Jason Wilson, Salisbury Rowan Utilities

"The town of East Spencer is a wholesale purchase customer, and we also operate their system. As the contract operator, we are required to produce and file reports with the state for monthly water usage. We used to go there every day to read the master meter and record the usage," said Jeff Jones, senior engineer for Salisbury-Rowan Utilities. "Now, with BEACON AMA, we get the daily readings in the office. We can also see when there is excessive usage that indicates a potential leak, and then we go out and find it."

"One of our largest customers is our schools. We installed an endpoint at one of the elementary schools at the end of May. When school was out in June, we noticed there was still continuous usage, which indicated a leak in the plumbing system. Through acoustic leak detection, we identified where the leaks were. By the end of the month, the leaks were repaired and the usage patterns dropped to what they should be. If they went undetected, the leaks would have added about \$140 each month to the school's water bill. They were very appreciative that the AMA system had helped to identify the leaks and save money in their budget," said Jones.

At another large customer, reading a meter located in a below-ground meter vault was a labor-intensive process that required pumping water out the vault so meter readers could get the reading. With BEACON AMA, the utility obtains hourly reads without going into the vault. The software also enables the customer to access its usage information on its own to help monitor its system.

"Some of the issues that our commercial and industrial customers face include evaluating process efficiencies and accounting for the water they are using or may be losing. One of our largest accounts recently built a new plant in Salisbury. They compared their water usage here to other plants they operate throughout the country and noticed they are operating at a higher level with the new plant. They are using the hourly data from the BEACON AMA software suite to try to perform an audit of where that water is going," said Wilson.

For many water utilities that deploy BEACON AMA, cellular endpoints offer many benefits, including no infrastructure requirements, ease of installation and reliability through a cellular network.

"We initially chose the cellular meter reading technology because it allowed us to target customers that had a need for more data without having to provide a fixed-based infrastructure to collect that information for us. It allowed us to do shotgun deployments throughout our system, without a data collector in place. We can also provide the information we obtain through the software system to customers who express an interest in it," said Wilson. "We were surprised at how easy it is to deploy the cellular endpoints. You plug them in, activate them, provision them through the software and you start getting the reads," added Jones.

In addition to the new cellular endpoints, the utility was also able to leverage its investment in its existing ORION® SE fixed network endpoints and infrastructure by integrating them into BEACON AMA.

A big benefit of data analytics for Salisbury-Rowan customers is timeliness. The utility can let customers know within days if they may have an issue, such as a leak. Before BEACON AMA, it could have been six weeks to two months after an issue occurred before the customer would let the utility know they had a potential problem or question their water usage.

"Before, the only thing our customer service reps had was the same thing the customer had: the billing read. That was it. Now we're able to look at hourly data every day, analyze it or set alerts, proactively let the customer know they may have an issue and work with them to resolve the problem," said Wilson.

Wilson said Salisbury-Rowan's experience with BEACON AMA has been very positive. "We are actually generating increased revenues through more accurate meter reading. We can give our large customers access to the data we are seeing on a daily basis to help them monitor their water usage and see potential problems. The big one for us is the abundance of data that we can evaluate and analyze in order to make better decisions and better forecasts for our utility," he added.

Article Continued from Page 1

of our intake pose the greatest risk. Everything from feed lot run-off, improper and over use of pesticides or herbicides, and improper planting techniques, can all contribute greatly to contamination of a drinking water source. Proper regulation, adequate education, and delivery of information to the farmers are probably the most effective ways to combat these sources of contamination.

Now we come to our fourth potential source of contamination and the "incident". Near the edge of the cistern there is a slab of concrete about two feet square that served as the lid to our cistern. No seal, just concrete against concrete. I try not to think of the number of bugs and lizards that likely slithered underneath that lid into our water! Also in the picture, is a milk jug being used as a gas can sitting on top of that lid which is about half full of gasoline. It was a perfect storm; an improperly sealed drinking water storage tank, hazardous chemicals in an unapproved container stored too near a drinking water source, a curious four year old boy with a shiny new pocket knife with a sharp, pointed blade. I think you can figure out what happened next! If any of these problems had been corrected, the "incident" would have been prevented.

I learned a little about hydraulics that day. I learned that if you poke a hole in something containing a liquid, that it will run out till the level of the liquid reaches the hole. I also learned that the more holes you poke into something, the faster it will run out. Eventually that half gallon of gasoline was spilled into our cistern. I would guess that cistern held about one thousand gallons of water, so our cistern contained about 480 ppm mixture of gasoline and water. I don't remember much about what happened next. I don't even remember getting a spanking for poking those holes in the gas jug. I do remember peering down into the opening of our empty cistern the next day, watching my dad and two of my sisters scrub the walls and floor to remove the gasoline I had spilled into our drinking water. I also remember that my pocket knife got taken away. For several weeks it sat on top of our refrigerator and when I finally got it back, the sharp tip had been broken off. It sure wasn't nearly as prized a possession as it was before. After some time and hard work we were able to use our cistern again.

We moved from that little white house to our farm in Duncan Valley a couple years later. We had a well dug there that never ran dry and was never muddy after a rain. This was somewhat surprising since our farm was dotted with sinkholes and our neighbors well was always muddy after a rain. The people that bought our farm when we sold it learned the hard way that whatever you put in those sinkholes had a way of coming back; much like my memory of the "incident". They tried to dispose of a bunch of old tires in one and after a hard rain all those tires washed out into the field. They had a ten foot thick wall of tires washed up against the fence the next morning! I think luck played a role in the well we dug being so good.

Today, a water main runs along the road in front of that little white house on Hwy 86 in Breckinridge County. The people that live there now have no knowledge that the cistern was ever tainted with gasoline and don't have to worry about a four year old boy with a pocket knife contaminating their water; but the folks that take care of the water system there have several hundred or even thousands of potential sources of contamination to worry about. And, unlike the consequences of my actions that day that only affected me and the six other people that lived in that little white house, the actions or inactions by us as operators and managers to protect our water has a major effect on the millions of customers we serve.

The author, James Hale, is a Class IVA Water Treatment and Class IV distribution operator who serves as the Chief Water Treatment Plant Operator for the Grayson County Water District.



Eastern KWWOA Update By Katie Avera

The EKKWWOA chapter has been busy the last couple of months. On May 23rd, the Chapter held a golf scramble and training in Prestonsburg. The Chapter would like to take a moment and thank everyone who participated in the golf scramble, with a HUGE "Thank you" to all of our sponsors. Without the support of our sponsors this event would not have been possible! I would also like to say a special thank you to Kentucky Engineering Group for providing lunch to our golfers. The following day, the Pikeville Department provided a very informative confined space class.

On June 9th, the Chapter also held a training class in London. A big thanks to James Poindexter, London WWTP Superintendent, for allowing us to use the plant's facilities for the training! James is the Chapter's new Wastewater Representative, taking over Lloyd Keyser's vacated position. He jumped right into his new role and put together a great training class. We appreciate all of the presenters who took time out of their busy schedule to provide training.

Not only did we have great training and food at London, we also took a little time during lunch to have some fun! The London WWTP participates in a program through the state where they raise fish in their old clarifiers. These fish are then sold to local markets and released into the wild. Class attendees casted during lunch for tagged fish. Unfortunately, we did not catch any of the tagged fish, but we sure did have fun trying. We also had a corn hole tournament as well.

Our next training event will be the Eastern/North Central Fall Conference, October 10–12 at the Four Points Sheraton in Lexington. There will be a lot of activities going on during this event. A total of 18 hours of training will be provided, as well as an exhibit show and vendor roundtable on Tuesday. The Eastern and North Central Chapters will hold membership meetings on Monday and Tuesday respectively and it is an election year for the Eastern Chapter. If you are interested in attending training or exhibiting, please go on the website, www.kwwoa.org, and register. Exhibitor space is limited and always fills up quickly, so don't wait!

The chapter would like to also ask that you please keep Lloyd Keyser and his family in your thoughts and prayers. Lloyd has served as Eastern's Wastewater Rep and Secretary for many years. He is currently undergoing treatment for cancer and as a result had to resign his positions. We appreciate everything that Lloyd has done for the Chapter and are sending good thoughts his way!

Kentucky's Source Water Protection Program

Robert Blair, Kentucky Division of Water

One of the easiest ways to reduce water treatment costs and ensure an adequate water supply for the future is to protect and improve the area surrounding the supply for that water system. Systems throughout Kentucky utilize both surface water and groundwater for drinking water and keeping this water clean is everyone's responsibility. Unfortunately, the public often assumes that water systems have control of the activities occurring in or near their source water protection areas. Typically, utilities control only a small portion of the land that contributes to the recharge area for their wells or the watershed for surface water intakes. Therefore, it is imperative that utilities work with communities to ensure their water source is being protected.

The Kentucky Division of Water has been working on compiling resources that can assist communities and utilities with this task. One of the newest tools available is the Source Water Protection Assistance Program. The program is in its third year and has funded nine projects across the state thus far, with four new projects to be funded in 2016.

The assistance program provides funds to complete projects aimed at protecting source water. These funds are available to both surface water and groundwater systems. Project budgets cannot exceed \$60,000 and must be completed in a relatively short amount of time (around 1 year). Matching funds are not required to apply for assistance, although match (including in-kind resources) and partnerships are highly encouraged.

Utilities, cities, counties, or other governmental agencies must be the recipients of the funds. However, it is possible for systems to collaborate with outside groups to complete the project. The program guidance available at (<http://water.ky.gov/groundwater/Pages/SWPAssistanceProgram.aspx>) includes additional information about possible project types and program goals.

Projects completed thus far have been diverse and creative. The two initial rounds of funding included unused water well abandonment, creation of public education outreach material, identification and maintenance of private water wells, water quality monitoring and assessment, best management practices (BMP) implementation and hazard mapping.

The program uses a two part process to evaluate eligibility of projects. Applicants are encouraged to contact assistance program staff prior to the proposal due date to check project eligibility. Projects that rank high for the proposal will be asked to complete the full application. The project proposal period is January and February of each year. Full applications are requested from the water systems with the highest ranked proposals. Applications are due on May 1 of each year and projects are selected based on ranking and available funds.

Projects that demonstrate a very clear and direct link to a system's source water will rank higher than projects where the connection exists but is not as significant. For example, a direct connection would be reducing the amount of sediment entering the source water with BMP installation, whereas a less direct connection is fencing around a wellhead to prevent access and provide security. Both projects are technically eligible but the first involves working with landowners and volunteers, and has a measureable result. The latter is a good measure of security that should be taken for all wellheads, but does not provide any public outreach or collaboration.

Requests for funding have steadily increased in the last two years and project proposals are very competitive. In 2016, there were 13 proposed projects that requested at total of \$600,000. Total annual funding for the assistance program is approximately \$150,000.

For more information please contact Rob Blair (robert.blair@ky.gov) at 502-782-6893 or Jim Calhoun (jim.calhoun@ky.gov) at 502-782-6907.

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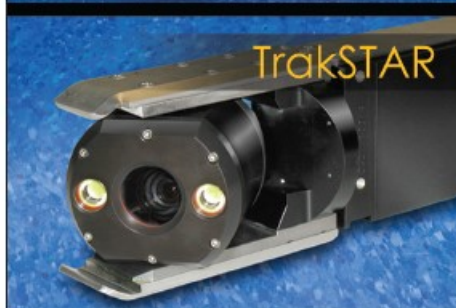
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KWWOA 2016 TRAINING & EVENT SCHEDULE

Chapter	Date	Training Cost	Location of Training	Type of Training*	Hours*
KLA	August 1–4	\$250.00—Members \$290.00—Nonmembers	Grayson County Water District Leitchfield, KY	Aug. 1-3—Cert. Review Session Aug. 4—Exam**	18
Central	August 11	Free—KWWOA Members \$50.00—Non-Members	Bowling Green Municipal Utilities Bowling Green, KY	Confined Space Entry	6
Central	Sept. 27-28	Free—KWWOA Members \$50.00—Non-Members	Barren River State Resort Park Glasgow, KY	Water and Wastewater	12
Eastern & North Central	Oct. 10–12	Free—KWWOA Members \$75.00—Non-Members	Four Points Sheraton Lexington, KY	Water and Wastewater	18
Eastern	November 17	Free—KWWOA Members \$50.00—Non-Members	Morehead Utility Maintenance Dept. Morehead, KY	Water and Wastewater	6
Central	Dec. TBD	Free-KWWOA Members	TBD	Holiday Awards Banquet	N/A
Western	December 3	Free-KWWOA Members	KY Dam Village State Resort Park Gilbertsville, KY	Holiday Dinner Meeting	N/A

* It is the intent of the KWWOA to solicit approval from the Division of Compliance Assistance and the Kentucky Boards of Certification for approval of the hours and type of training referenced above prior to the class. Once the hours have received Board approval, a notice will be posted on the KWWOA website with information on the particular class. If you need these hours for renewal purpose and/or the specific topic referenced, you should inquire ahead of time as to the agenda and whether approval has been obtained.

** Must be prequalified for this exam.



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