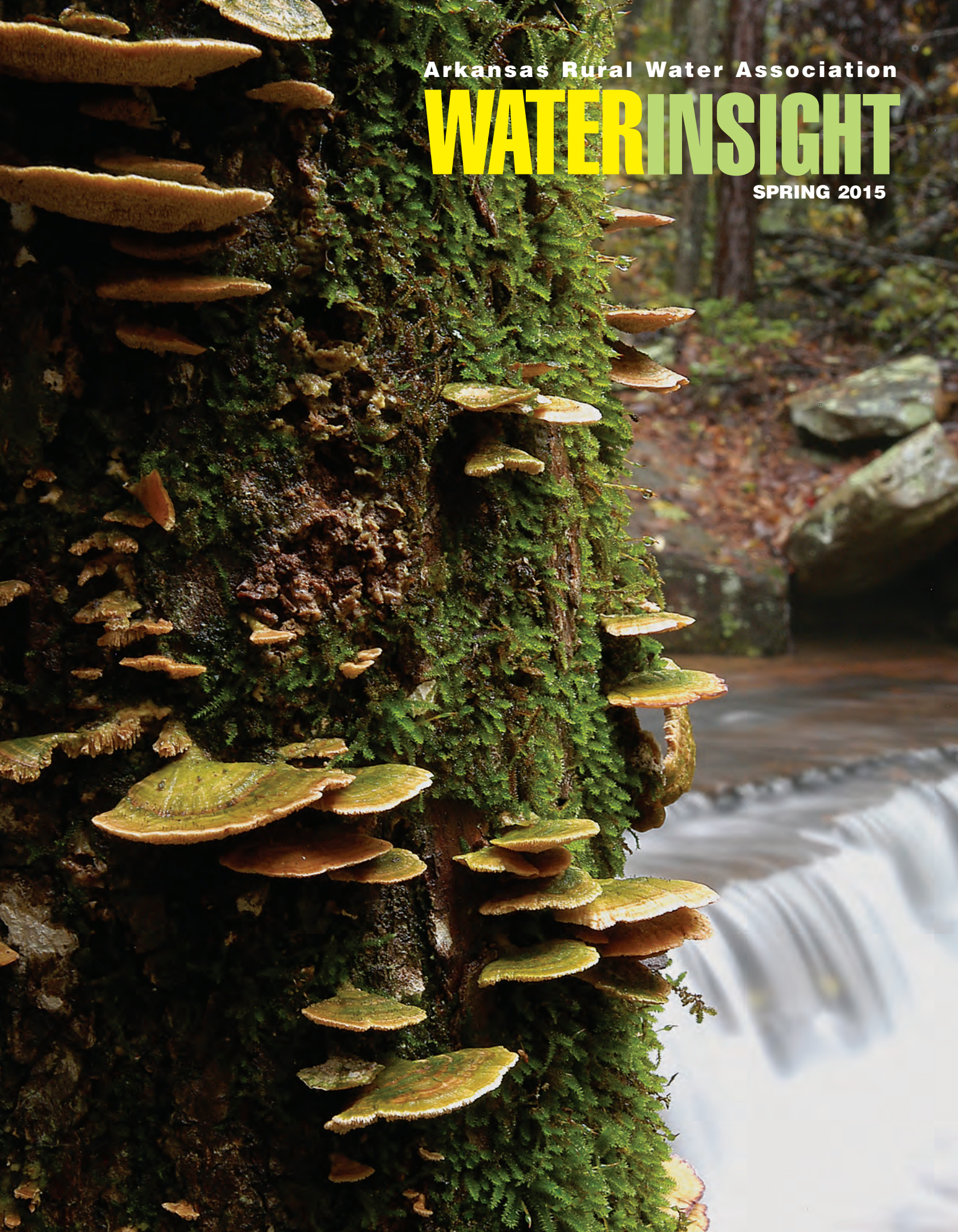

Arkansas Rural Water Association

WATERINSIGHT

SPRING 2015

FROM YOUR CHIEF EXECUTIVE OFFICER

DENNIS STERNBERG

Arkansas Rural Water Association (ARWA) attended the National Rural Water Association "Water Rally" February 10-12, 2015 in Washington D.C. The board of directors' members attending from ARWA were Steve Wear from Conway County Regional Water Distribution District, Greg Cross from the City of Greenwood, Bobby Brown from Clay County Regional Water Distribution District, John Choate from Tri-County Regional Water Distribution District, Cecil Zolliecoffer from the City of Ozark, Mark Bennett from ANRC, and myself.

The NRWA Water Rally has representatives from every state rural water association in the nation coming together in the nations' capital to carry the message to Congress on the importance of Rural Water funding needs, water and wastewater utilities funding needs, and to discuss EPA regulations and the need for them to be more reasonable.

During the Rural Water Rally meeting attendees heard from Congressman Robert Aderholt (AL-4th District) Appropriations Committee, and Lisa Mensah, Under Secretary of Rural Development, which both mentioned the importance of State Rural Water Associations providing services to rural America.

The ARWA delegation also met with each Arkansas Congressional member or their staff to discuss the need of each member to continue to support Rural Water funding requests. All members were very supportive, and most agreed to make these requests to the appropriations committee.

Everyone needs to remember to speak to each Congressman or Senator when they are back in Arkansas, and remind them of the importance of these programs to your community and/or water or wastewater systems if you want these programs to continue. Also remember to thank them for their support of these programs as well!!

The City of Bono Water Department, winner of the Best Tasting Water in Arkansas at the 2014 Arkansas Rural Water Association Annual Conference competed in the NRWA "Great American Water Taste Test" in Washington D.C. on February 11, 2015. Although the City of Bono Water Department didn't win the Great American Water Taste test this year, they can say that they finished in the top fifty Best Tasting Water in the nation!!!!!!

National Rural Water Association Great American Water Taste Test -WASHINGTON, D.C. – The Easthampton Water Department from Easthampton, Massachusetts won the gold medal for best tasting water at the 16th annual Great American Water Taste Test, held as part of the Rural Water Rally on February 11th in Washington, D.C. Easthampton water competed against water samples from across the nation in the areas of clarity, bouquet, and taste. Each state rural

(continued on page 4)

ARWA delegation meeting with Senator Boozman

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Cover Photo

Collins Creek, Heber Springs

Photo courtesy of Arkansas Department of Parks and Tourism

Magazine Editor – Sandy Cohen

ARWA Mission Statement

To provide Arkansas' Rural Water Utilities the highest level of Training and Technical Services in order to obtain Quality Water at the lowest possible cost.

Arkansas Rural Water Association is a non-profit organization of rural and small publicly owned water and wastewater systems. Our goal is to enhance the lives of Arkansans. Our efforts to achieve this goal are focused on providing training and technical assistance to the managers and operators of all eligible systems serving populations not greater than 10,000. We work with other non-profit organizations in representing the interest of public water and wastewater systems at both the local and national levels.

• ARWA is affiliated with the National Rural Water Association •

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DENNIS STERNBERG

(continued from page 2)

water association holds a drinking water taste test from among their members, and the winners of those competitions are eligible for the national taste test. Rogerson Water District from Buhl, Idaho won the silver award and City of Whittier, Alaska won bronze. Del Paso Manor Water District from Sacramento, California and Francis City, Utah were the other five finalists. The five finalists were selected from a preliminary round of tasting. A panel of special guest judges then selected the winners from the five finalists.

Please remember to make sure and have the required twenty-four hours of approved water and wastewater training for renewal, which ends June 30, 2015!

Remember ARWA is here to assist your utility 24Hours/Day/7Days/Week/365Days/Year!!! Call the ARWA office at 501-676-2255.

ARWA delegation meeting with Congressman Bruce Westerman.

ARWA delegation meeting with Congressman French Hill and Legislative Director Peter Comstock.

ARWA delegation meeting with Congressman Rick Crawford.

ARWA delegation meeting with Senator Tom Cotton.

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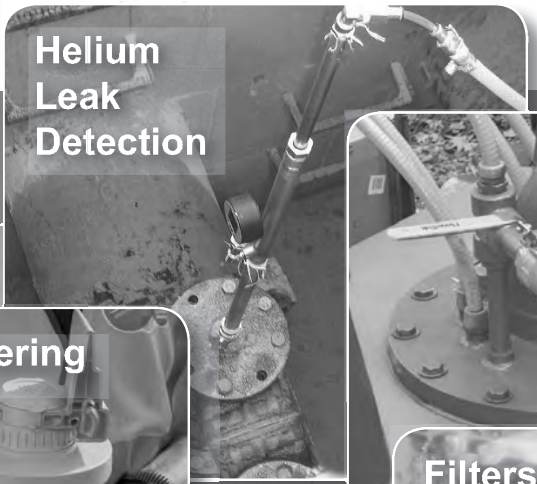

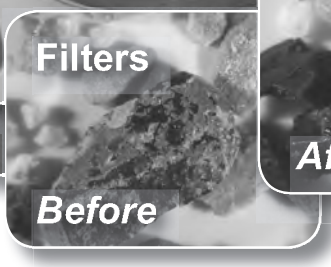

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WASHINGTON, D.C. — Jasper Schneider, acting administrator of the Rural Utilities Service, honored three states during the NRWA Rural Water Rally in Washington, D.C.
"The administrator's coin is really the highest award the administrator can bestow," Schneider said.
He awarded coins to representatives from the state associations of Arkansas, Illinois, and Mississippi for their emergency response efforts after tornadoes struck each state, last year.

MAKE PLANS TO ATTEND

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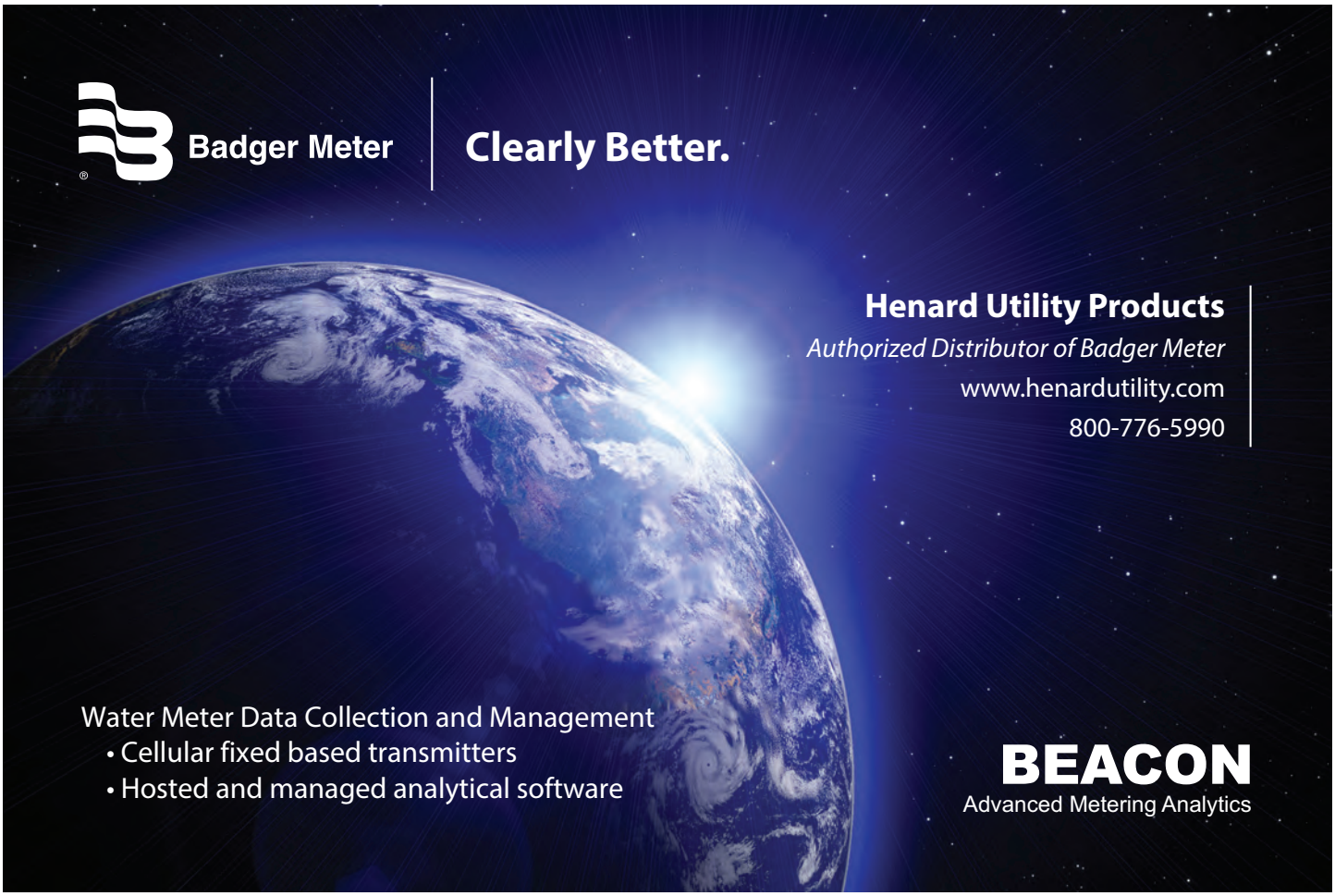

Cross-Connection

By Chris Harris, ARWA Circuit Rider

As winter comes to an end, one of the most exciting times of the year quickly approaches. A time to get back to the great outdoors and to enjoy things like farming, gardening, firing up the old grill, and cooling off in the pool with the kids. The last thing on anyone's mind is cross-connection. A cross-connection is a connection from a potable water source to a non-potable source. Unfortunately, this is a very common mistake that can hold serious health consequences for many water consumers. A cross-connection risks contamination of building water piping or municipal water supply with bacteria, which can have hazardous effects on an individual's health and well-being. One very common way of creating a cross-connection is to attach or submerge a household garden hose into something that we don't use for human consumption, such as a watering trough for livestock or a pool. Two different ways you can create a cross-connection from these scenarios are backflow or backpressure and backsiphonage.

Backflow is the flow through cross-connections from a possible source of contamination back into the drinking water system. It occurs when a pressure reversal takes place within the water supply piping. Some common backflow hazards that threaten the homeowners' well-being, as well as other consumers are: hose connections to chemical solution aspirators to feed lawns or gardens with herbicides or fertilizers, chemically treated swimming pools and hot tubs, water-operated sump drain devices, and livestock holding areas or barnyards fed through pipes or hoses from your water supply plumbing system.

Backsiphonage is another common way a cross-connection can happen. Backsiphonage occurs when there is a loss of pressure in a piping system. This can occur if the water supply pressure is lost or falls to a lower level than the source of contamination. This condition can be compared to drinking liquid through a straw. The straw allows the liquid to be siphoned back into the distribution system.

While heading to the river with the family, or planting the biggest tomato plants ever seen, should remain top priority this summer, it is important to be aware and try to eliminate any potential cross-connections. We all have a role to play in the safety of water distribution. Ensure to maintain air gaps. Do not submerge hoses or place them where they could become submerged. Use hose bib vacuum breakers on fixtures and install approved, testable backflow prevention devices on lawn irrigation systems. And lastly, do not create a connection between an auxiliary water system (well or body of water) and the water supply plumbing. If you feel you could benefit from additional information or training on backflow prevention, Arkansas Rural Water offers classes throughout the year on backflow equipment inspection and repair. Cross-connections can be drastically decreased or even eliminated if we all share in the important responsibility of preventing them.

Garden hose

Hose in water trough

Attention: Board Members and Managers of Rural Water Associations:

Airport Road Water Association
Arkansas Rural Water Association, Inc.
City of Ash Flat
Bald Knob North Water Association
Beaver Water District of Washington & Benton Counties
Bee Branch Water Association
Benton County Rural Water #5
Benton/Washington Regional Public Water Authority
Benton County Water District #1
Bethesda Water Association, Inc.
Blue Mountain Water Department
Breckenridge-Union Water Association
Brinkley Municipal Waterworks
City of Brookland
Bruner Hill Water Association
Buffalo Island Regional Water District
Calhoun County Water Association, Inc.
Carthage Water & Sewer Commission
City of Cash
Cedarville Water Works
Center Grove Water Users
City of Cherry Valley
Cherokee Village Waterworks Facilities
City of McDougal
Clay County Regional Water
Cleveland County Rural Water Users
Colt Water Department
Concord Water and Sewer P.F.B.
Conway County Regional Water
Cotton Plant Water & Sewer Main and Control
Town of Cove
Cross County Rural Water System
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Dota Public Water Authority
Earle Water and Sewer Division
East Prairie County Water Association
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Fulton County Water Authority
City of Fulton Water & Sewer Department
Gentryville Water Association
Gillham Lake Regional Water Association
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Grange Calamine Water Association
Grand Prairie Region Water Distribution District
Grand Prairie Bayou II Public Facilities Board
Greenfield Capital Development, LLC
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Hardin Water Association, Inc.
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Old Bella Vista POA, Inc.
City of Omaha Water Department
Outside Kingsland Water
Ozark Acres PFB of Sharp County

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Highway 63 Water Users Association
Highway 71 Water District No. 1
Highland Public Water Authority
City of Highland Sewer Department
Horsehead Water Association
City of Hoxie
Independence Jackson County Regional Water Users
Jefferson Simple Deer Water Association
Johnson Township Water
Water and Sewer
City of Kingsland
Water Association
Lake Rural Water Association
Lake Bull Shoals Water Association
Lake Chicot Water Supply Association
Lakeside Midway Public Water Authorities
Lakeside Water Association
Lawrence County Regional Water
Lawson-Urbanna Water Association
City of Lead Hill Water
Lonoke Water Water
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Lost Bridge Village Water Association
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City of Perrytown
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Pike City Rural Water
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Rattler Water & Sewer Department
Riverbuthman Water District
Riviera Utilities of Arkansas, Inc.
Rock Moore PWA of Arkansas
Saline County Water & Sewer
Saline Water Regional Water Distribution District
Sardis Water Association, PWA of the State of AR
Sevier County Water
Sidney Waterworks
Southwest Arkansas Water System
Southwest Atkins Water Users
Southwest Boone County Water Association
South Logan County Public Water
South Pike County Public Facilities Board
Southwest Section American Waterworks Association
South Sheridan and Little Creek
Southeast White County Water
Spadra Roose Camp Water Users Association
City of Sherman
SPC Water Association
Subiaco Abbey, Inc.
Sylamore Valley Water Association
Toad Suck Public Facilities Board
Tri-County Regional Water
Trumann Water Association
Tulip Princeton Water Association
Tumbling Shoals Water System, Inc.
City of Valley Springs Water Department
Van Buren County Water Association
Vandale Birdeye Water Association
Walkers Creek State Line Water Association, Inc.
Walker Water Association
Watalula Water Users
Watson Chapel Water Association, Inc.
Wesson Newell Water Association
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WaterPro Community *By Jeff Ford, Deputy Director*

As Operators or Managers, we are constantly working to ensure our systems are operating in a good and safe manner. Many times few are faced with new and more difficult challenges as our systems age and regulations change. Have you ever had questions about a problem or needed information on a piece of equipment, but didn't know who to ask? Or have your ever needed a place you could ask questions about a hard to find piece of equipment or control system part? Maybe you are looking at a new type of treatment and would like to know which systems have had positive results.

We may have a new tool that could help you ask other operators by posing questions such as these. National Rural Water has developed a new web site designed to help systems do that. In the past, water professionals might only meet by chance at a national conference, if they ever met at all. A simple meeting could unlock valuable knowledge and experience in their overlapping areas of interest. Today though, the WaterPro Community gives these professionals a chance to network on-line, to ask questions and exchange experiences for the benefit of their utilities.

"Today's world is an on-line world," explained NRWA CEO Sam Wade. "Professional networking is no longer limited by time or geography: the internet allows water professionals from all over the world to share their valuable knowledge and experience." WaterPro Community forums provide more than a simple question and answer session or a quick networking session. These discussions collect into persistent, categorized, and searchable institutional knowledge – a question need only be answered one time for all members. These forums have the power to put the knowledge and experience of life-long water professionals at each member's fingertips.

"The forums are a powerful tool, but they are just one of the WaterPro Community's many features," Wade said. The power of the WaterPro community is that it combines the power of several, common web tools into a single, easy-to-navigate platform. These tools include forums, blogs, file libraries, wikis, and networking tools. The community platform gives members one login to access the full array of tools. Additionally, it adds a layer of search and tag functionality that makes finding information easier than ever. A simple search for "arsenic," for example, could yield blog posts on new arsenic regulation and new remediation technology, forum discussions about systems' experience dealing with arsenic, sample presentations on how to deal with arsenic, and links to webinars on arsenic reduction.

The WaterPro Community blogs will focus on regular updates on industry issues, ranging from technical operations to regulations and compliance. Expert authors share regular news links, insight, and analysis on various industry topics. Various subscription options ensure members are always up-to-date on the latest news in their favorite topic area. WaterPro Conference blogs also have commenting options that allow members to continue the discussion, to ask questions, and to increase learning.

File libraries are a community warehouse of documents, files, videos, and presentations. They can include everything from training presentations to official documents. The file libraries will grow dependent on the interest from the members, but could include utility documents, including sample work orders and job descriptions, or a sample boil order notice.

A WaterPro Community membership also includes a free NRWA membership, which provides access to other benefits and discounts. The primary benefit is that NRWA members are helping support National's efforts to support continued utility funding, sensible regulations, and protection of water resources. NRWA members also receive special discounts on NRWA events, webinar events, and other vendor deals. This membership also includes a free subscription to Rural Water magazine, and access to special interviews with decision makers in the water industry. Please visit the WaterPro web site for further information at www.waterprocommunity.org

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2015 Training

By Jim Barkie, ARWA Wastewater Trainer/Technician

As the new year begins, new training opportunities have been made available at various locations throughout Arkansas. We provide training for water treatment, water distribution, and wastewater treatment for new operators to obtain their first license. ARWA also offers continuing education classes for those who are already licensed.

All licensed operators must attain twenty-four hours of training every two years as required by the Arkansas Department of Health and Arkansas Department of Environmental Quality to renew a water or wastewater license. For those individuals, our three day specialized training sessions provide all the direct and indirect training hours you need to keep your license current and up to date. These classes are geared towards the operator and their jobs instead of certification material, and provide practical information that can be used every day.

Arkansas Rural Water Association also provides the best license specific training you can get. Each of these classes are particular to an individual license depending on the level of that license. Attending a class for a higher level in hopes of obtaining the training you need for a lower license is a bad idea. I recently had an operator show up to take a Class I Wastewater exam, without attending the training for that license. He had attended Class III Wastewater training instead thinking he would be more than ready for the test. He had the required training hours needed according to Arkansas Regulation 3, but the training he received did not concentrate on Class I material. The outcome was not good, and he will have to retest in ninety days in order to get his license if he chooses.

You can look over our training schedule for 2015 by going to arkansasruralwater.org and find the classes you need for each license, then make plans to attend only the classes you need. You may register on our website, or call us at 501-676-2255.

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Tips For Tornado Season *By Josh Freeman, ARWA Circuit Rider*

It's springtime in Arkansas so that means that tornado season is here. In my experience in disaster relief, I've learned a few tips that utilities can use to be prepared before disasters hit, such as a tornado.

1. Does your system have generators? If so, that is great! If not, you need to know three things when you request a generator. What phase is it (single phase or three phase), what voltage is it (such as 240 or 480), and which watt or kilowatt do you need to run your pump stations, lift stations, wells, water and wastewater plants, etc. In addition, a manual transfer switch comes in handy when having to wire in a generator. On a lift station, you may be able to use a trash pump by making a by-pass tap on the force main.

2. If your system does not own a generator, to find out what you need, locate a few rental companies and get a credit application to them. This could be a major time saver in an emergency and maybe the difference of your system receiving the generator instead of somebody else.

3. Contact your county's Emergency Management Coordinator and asks what resources they have available for your system and what they need from you when a disaster hits.

4. Does your system have its meters, valves, and manholes located by GPS, because when a tornado hits everything is going to look different. In most counties after it's over, the homeowners pile all the debris up along the ditches near the roads so they are able to take a loader down the road and use dump trucks to haul away the debris. In many cases, this is when the utilities' problems begin; by having everything located by GPS you can go in before the clean up begins and locate all the meters, valves and manholes. There will also be several meters that will have to be shut off before the main line can be pressured back up. I've learned some of the radio read meters have built in locators on them. This would be a good question when doing a meter change out program.

5. If at all possible make sure that the water tanks are topped off and full, by doing this, it makes the tank more stable and if you do lose power, it will help keep the water supply longer. In the wastewater collection system, keep the wet wells pumped down as often as possible before the storm so that there will be more storage in case of a power outage.

I hope this article helps everybody prepare a little better for tornado season. If you have any questions, please feel free to contact me at Arkansas Rural Water Association at 501-676-2255 and I hope to see you at the ARWA Operator EXPO on July 22, 2015.

Emergency Contacts

ADEM
www.adem.arkansas.gov
ARWARN
www.arwarn.org

Arkansas Rural Water Association
Arkansasruralwater.org
501-676-2255

Generator

Water Tank

The Retirement Celebration of *Carolyn Willett and Dian Parker*

By Susan Poe Wastewater Trainer/Technician

On December 17th, I was honored to be a part of a retirement celebration at the City of Smackover for Carolyn Willett and Dian Parker. It was a festive Christmas themed reception that drew many members of the community, family members, as well as dignitaries from around the state to help honor two truly deserving women for their dedicated service. Carolyn served as Recorder/Treasurer while also working in the Water/Sewer Department for a length of thirty-six years, while Dian worked for the City Police Department, and most recently in the Water/Sewer Department for thirty years. The day's festivities included reminiscing about the history of the city at their brand new City Hall, which was completed last year, and involved presenting several recognitions and awards. Smackover Mayor Bobby Neal presented both women with keys to the City of Smackover, Public Works Director Benjy Hildebrand surprised them with beautiful clocks including personalized plaques commemorating their years of dedicated service to the city. Dian also received a plaque from the Police Department by City Police Chief, Michael Fife whom she served with as Secretary/Dispatcher before moving to billing and collections for the utility department. The Arkansas Municipal League honored Carolyn for her service to the League. She served as Chairperson for the Cities of the Second Class Advisory Council, as well as on the Executive Committee with a lifetime membership, presented by former State Representative and former Mayor of Warren, Gregg Reep and the former Mayor of Star City, Gene Yarborough. Carolyn's dear friend, Regina Walker from Mena, a former President of the Arkansas City Clerks and Recorder Treasurer's Association, also honored Carolyn with a beautiful award for her service as President of the ACCRT. During her career, she had also received the Arkansas Clerk of the Year Award in 2000. CEO for Arkansas Rural Water Association, Dennis Sternberg was also there to present Carolyn with a plaque from ARWA acknowledging her support and recognizing her for being a Licensed Water Operator since 1985. Carolyn is also a recipient of the Office Manager of the Year Award from ARWA at their Annual Conference.

Carolyn and Dian both truly represent what being dedicated to your community and your state means in Arkansas. They are two of the nicest people you will ever meet, and they have made a difference in their careers for their city. I have been fortunate enough to have spent a lot of time at the city with these two women and will truly miss seeing them there. On a personal note, Carolyn inspired me to pursue this industry and my current career with ARWA, when we first met back in 1990 at a Municipal League Conference, and we became the closest and best of friends. She has inspired many people to pursue their dreams both personally and professionally. I admire Carolyn and Dian for their selflessness and dedication to both their families and careers. I know that we all wish them both the best in their retirement and acknowledge what an accomplishment it is to have been a part of the City of Smackover and the Water/Wastewater industry for so many years.

Dian and Carolyn with the keys to the city.

Dian with Chief of Police Michael Fife.

Carolyn with Dennis Sternberg.

Carolyn and Maylor Bobby Neal

Carolyn and Dian with cakes

Greg Reep, Carolyn, and Gene Yarborough

Dian, Mayor Neal, and Carolyn

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Rural Cooking

• Beef Crostini Sandwiches

1/3 cup olive oil
3 tablespoons Kikkoman Lite Soy Sauce
¾ cup thinly sliced red onion
½ cup packed fresh parsley leaves
1 loaf Italian bread
¾ pound thinly sliced deli roast beef
3 tablespoons grated Parmesan cheese

Thoroughly blend oil and soy sauce; remove ¼ cup and set aside. Pour remaining mixture over onion and parsley in a small bowl; stir to coat all pieces well. Let stand 15 minutes, stirring occasionally. Meanwhile, cut bread into 12 slices, each about 1/2" thick. Lightly brush both sides of bread with reserved soy mixture; place on a large baking sheet. Broil 1-2 minutes on each side or until golden. Drain onion mixture; set aside. Cover each bread slice with roast beef and then onion mixture. Sprinkle cheese evenly over onion mixture; serve immediately. Yield: 6 servings.

• Quick Salsa

1 can petite diced tomatoes
1 large can whole tomatoes
1 jalapeno pepper minced
Dried cilantro
Garlic salt
Salt and pepper
Ground cumin

Combine all ingredients in a food processor and pulse until mixed to the consistency that you like. Makes 1 ½ quarts of salsa.

• Creamy Chicken Noodle Soup

1 Whole chicken
2 Bouillon cubes
1 onion
2 ribs of celery
1 pound package thin spaghetti
1 can cream of chicken soup
16 ounces sour cream
Salt and pepper

Boil the chicken with bouillon cubes, onion, and celery until the chicken is tender. Remove everything from the broth and set aside. Debone chicken once it has cooled. Bring broth to a boil and cook the spaghetti noodles until done. Add the deboned chicken. Whisk sour cream and soup together until smooth. Gradually add to the boiling broth. Salt and pepper to taste. Let the soup cool slightly. As the soup cools it will thicken. The soup is always better if it is allowed to cool then reheat.

• Grape Salad

Salad
8 ounce package cream cheese, softened
8 ounces sour cream
½ cup sugar
1 teaspoon vanilla
2 pounds red seedless grapes (removed from bunches, washed and dried)

Topping
1 cup brown sugar
1 cup pecan pieces

For the salad, beat the cream cheese then add the sour cream, sugar, and vanilla. Add the grapes. Stir until the grapes are well coated. Pour into a 9x13 pan or casserole dish. Sprinkle the topping over the top and refrigerate overnight.

• Chocolate Mayonnaise Cake

2 cups all-purpose flour
1 cup sugar
2 teaspoons soda
5 tablespoons cocoa
Dash of salt
¾ cup mayonnaise
1 cup hot water
1 teaspoon vanilla

Mix all dry ingredients together. In a separate bowl mix hot water and mayonnaise with a whisk until there are no lumps. Add the liquid mixture to the dry ingredients and mix well. Add the vanilla. Mix all this by hand not with an electric mixer! Bake in two round pans at 350 until done, do not over bake. Use a cake tester or toothpick to check for doneness. Remove when done and cool completely. Use seven minute icing to ice it, and it is heavenly. I buy the icing in a box that you just add hot water and mix with a mixer for 5-7 minutes. Don't fudge on the time of mixing because it will run!

• Corn Casserole

1 can cream style corn
1 can whole kernel corn undrained
1 cup uncooked macaroni
1 cup shredded Velveeta cheese
1 stick butter melted

Mix all together in a 2 quart casserole dish with lid. Bake at 350 degrees for one hour covered.

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Importance of Proper Sewer Main Cleaning

By Terry Fortenberry/ARWA Circuit Rider

As most systems are aware, and I have mentioned in earlier articles, ARWA has been fortunate to obtain a Cues Sewer Camera Trailer unit that can be used to video inspect the wastewater collection mains for systems that wish for ARWA to do so. ARWA also has a Vac Con Cleaning Truck. This Vac Con Truck is also available for use to help systems that do not own a sewer jet-cleaning machine to clean sewer mains, clean out wastewater lift stations, treatment units, among other uses.

Looking at past requests of systems using this equipment, many operators think that the collection mains are in bad shape and in need of replacing. In some of these cases, this is found to be true when the mains are inspected with the camera. More often, the problem is not that the mains are bad, but that problems are caused because the mains are in need of proper cleaning. Many times, there have been problems due to the fact that there is a lot of sand and/or gravel in the mains. When this is true, problems can occur because the wastewater can't flow properly, and when the wastewater sets in the main, grease can build up and cause blockage of the main. Also, with the wastewater sitting in the main due to the gravel, it can become septic and produce more gases, which can cause more corrosion of concrete mains and manholes. Or the problem may be from roots that have grown through a joint or crack and filled the main, or possibly a buildup with grease. Whatever the cause of the problem, it is very important that proper cleaning techniques and proper CLEANING NOZZLES for the machine to be used. Of course, many times the actual problem is not known, so the problem cannot be taken care of properly. All that may be done is jet the main until there is flow and no sewer backup. If this is the case, we may be only opening up a small hole in the grease blockage, root wad, or gravel buildup, and guess what? Here we are again to the same spot a couple days, weeks, or months later, cleaning or probably just UNSTOPPING the same main again, and starting to believe that we have a problem with the main itself, such as a collapsed main. This is where the use of a camera can be very beneficial, as it allows you to see exactly what and where the problem is located. If it is some type of blockage rather than a problem with the main, the camera can be used to assure the main is cleaned of the blockage, roots, gravel or whatever it is, properly and completely. If this is done, we will probably not have to be back to this area for a long time, and possibly never.

Another thing that is very important in cleaning a sewer main properly is the speed and direction of cleaning with a jet machine. Nozzles for jet cleaning machines usually always jet most of water to the back of the nozzle which serves two purposes: one is to pull the hose through the main; the other is to wash whatever is in the main or what is knocked off the main out of the main. So when general cleaning a section of main, it is important that we enter the main from the downstream manhole and allow the nozzle and hose the travel against the flow to the upstream manhole. This should be done as fast as possible after reaching the upstream manhole. The nozzle should be pulled back toward you, which would be with the flow, and this should be done slowly to allow the nozzle to clean the walls of the main and keep washing all debris toward you. Of course, if there was a lot of grease buildup or gravel and sand that you were trying to clean out, it may be necessary to only clean in short runs say twenty to fifty feet at a time, rather than the whole section. This is because the gravel or grease may build up in the main to the point that it could not be washed out of the main and was then left behind. Also

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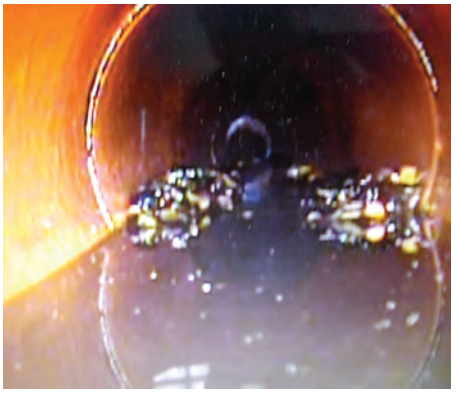
if there is a lot of gravel, sand, or other debris we may have to remove it from the manhole as washing takes place, in order to prevent it from going down the main and causing stop ups downstream. Or in order to prevent build up to the point that no more can be removed from the section of main we are trying to clean. This is where the use of a Vac Con can be helpful because whatever is being removed and washed from the main, can be removed as the cleaning is taking place thus increasing the effect of the cleaning.

Also, it is helpful to use proper skid attachments on the nozzle in order to keep the nozzle from lying on the bottom of the main which will reduce the cleaning effect of your nozzle. Cleaning in this direction also reduces the changes of the all-dreadful chances of blowing wastewater back into someone's home while cleaning. Of course, it always helps to remove cleanout caps on customer services on the section being cleaned to prevent this. Let's not forget to use that Tiger Tail to protect our jettier hose, I know it's easier and can be done without using it, but it will help protect and prolong the life of your hose.

Below you can see some pictures of some problems that have be determined by using the camera equipment from some of the requests we have had.

If your system ever needs assistance in camera or cleaning of your collection system main, please give us a call at 501-676-2255.

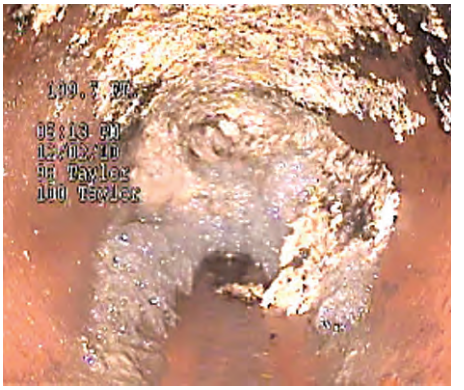


Gravel in main

Gravel removed from main

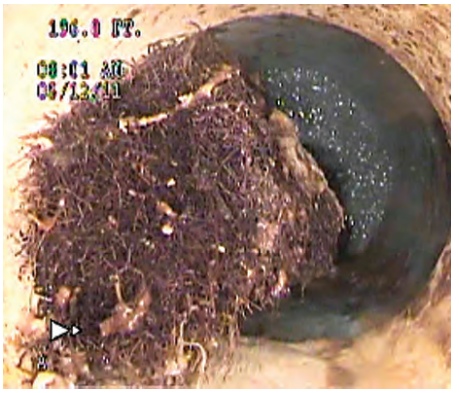
Gravel in bottom of manhole – removed from main

Grease and root blockage



Grease blockage

Roots in main



Roots in Service

Looking for Submissions

We are looking for article and recipe submissions from our members for future editions of *Water Insight*! Please email your submissions to arkrwa@sbcglobal.net. ARWA reserves the right to edit all submissions, and we do not guarantee that all articles or recipes will be published. We are looking forward to hearing from the Arkansas Rural Water Community!

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ARWA GETS LETTERS AND E-MAILS FROM SYSTEMS

• Dear Mr. Sternberg, December 12, 2014

I wanted to take a moment and thank you and your staff at ARWA for all that you do for the City of Mountain Home Water & Sewer Department.

We appreciate each and every training class that you and your staff make available to the City of Mountain Home. These training classes enable us to make sure our employees are trained and licensed to do their job safely and effectively. It's a blessing to have such a resource in Arkansas. Thank you again to Susan Poe and Jim Philipp, they do a fantastic job teaching and training our water and wastewater employees.

I appreciate all the help we get from ARWA. I cannot express how much we value your services.

Thank you,
Alma L. Clark
Director, Water & Wastewater Services
Mountain Home Water & Sewer Department

• To whom it may concern, December 22, 2014

I recently had the pleasure of assisting Mr. Rodney Baldwin in leak detection of our system. He was very helpful in finding a large leak and instructing me on the proper way of doing the job myself. His help was greatly needed and appreciated in a time our water loss was enormous.

I wish to thank him and your organization for the greatly needed help now and in the past. Keep up the good work.

Thank you,
Roger E. Brewer
Highway 4 & 24 Water Association

• Dennis, January 7, 2015

Thank you so very much for honoring me at my retirement reception with a beautiful crystal ARWA award.

I appreciate you and your staff for all the assistance provided to the city of Smackover over the years. I will always treasure the award and the friendship made through my association with ARWA.

Sincerely,
Carolyn Willett
Smackover Municipal Water Works

• Dear Jim Barkie, January 13, 2015

I would like to thank you for helping our city employees with smoke testing our sewer lines during the week of December 15, 2014. I appreciate your help and the Arkansas Rural Water Association's assistance.

Sincerely,
Brandon Nelson, Superintendent
City of Waldron

• Dear Mr. Sternberg, January 19, 2015

I would like to thank you for the use of the bypass pump. I had called around to possibly rent one and didn't get any positive results. After trying to decide what would be the next step I thought of ARWA and you came through immediately, within four hours my problem was solved. Your fast service is appreciated and needed in our line of business.

Sincerely,
Billy Graves
Water/Wastewater Superintendent
Hot Springs Village Property Owners Association

• Dear Dennis, January 20, 2015

We would like to express our sincere thanks to ARWA, especially Josh Freeman for his assistance the week of January 12, 2015. With Josh's expertise he was able to help us locate some leaks on our water system, as well as a major pressure problem. We really appreciate his assistance and all of the assistance ARWA provides to our Water District.

Sincerely,
Jesse L. McChristian, Jr.
Highway 71 Water District No. 1Public Water Authority

• Dear Mr. Sternberg January 24, 2015

I recently attended the basic distribution class in Lonoke. The amount of information I received in that class was staggering. I will be back in February to take the intermediate distribution class. I cant wait to see the topics covered in that class. With the training classes ARWA provides I have total confidence of success going into my March exam date.

This is just the beginning of my journey into the water industry. With a wonderful facility to study in and even better instructors, I feel prepared for that journey. Mr. Philipp is a true asset to your organization. Jim's passion for what he does and his energy translate well in the classroom and keeps things interesting.

Thank you for the training you folks provide, I look forward to my next classes.

Marc Gahagan

• January 29, 2015

I would like to thank Josh Freeman for coming to our Southwest Water Users Board Meeting to present a Water Rate Study for us. We are getting ready to build a new water tank and replace some old lines, so this water rate study was very helpful. Thanks Josh!

Sincerely,
Pam Doughty
Southwest Water Users Public Water Authority

• To the Arkansas Rural Water Association, January 30, 2015

I would like to express my appreciation to your organization, and for what you do for the water systems in the state of Arkansas. Your expertise and being able to assist water utilities to perform some of the tasks that they cannot do due to the expense of having to purchase high dollar equipment to only use once in a great while. This service is so greatly appreciated and allows utilities to operate within a budget while keeping customers' rates minimal.
Again we thank you and applaud your organization for what you do. Our circuit rider Josh Freeman is a first class guy and very knowledgeable and we are proud to be able to work with him.

Thank you again,
Larry D. Garrett
Director
Huntsville Water Utilities

• Dear Mr. Sternberg, February 10, 2015

This letter is to thank you for allowing Josh Freeman to do a rate study for our water system. Mr. Freeman is always willing to help in any way he can. The City of Hartman is very fortunate to have Mr. Freeman in our area and ARWA a phone call away.

Thank you again,
Robert Hadlock, Jr.
Water Superintendent

• To whom this letter concerns: February 16, 2015

This office would like to take this time out to say thanks for all your help in getting our sewer problems under control. I want your office to know that you sent the best two men from your office to help us. Mr. Terry Fortenberry and Mr. Jeff Ford came and worked very hard and continuously on our system until they functioned properly. They kept this office informed step-by-step as to what they were doing and also trained me, the mayor, and my city workers of what we needed to check to keep the system working. They had patience and answered all of my questions so we could understand them. They are very honest and professional men and provide great service to the people and to your company.

This office wants to thank these two men for all their hard work and dedication to this town. If I had to recommend anyone to go to the White House to work, I would highly recommend your company and these workers. If this city can ever assist your company, or these two men in any project or

need any type of help, please feel free to call upon this office. Again, many thanks.

Sincerely,
Mayor Joseph Carlton
City of Montrose

• February 19, 2015

I support the training at ARWA! It sometimes gets difficult to find classes available and it is very handy for me to come to Lonoke for training! I hope ARWA is able to keep giving classes for licensing and license renewal!

Thanks!
Mike Moody

• Dear ARWA, February 20, 2015

On Wednesday, February 11th, Circuit Rider Josh Freeman and Wastewater Tech Susan Poe assisted our water system with technical support on a new budget, equity form, and compliance letters for USDA. I would like to take this time to let ARWA know how much I appreciate them and what the organization does for small water systems. As a small water system operator I will continue to use ARWA on tech support in the future.

Thanks again!!
Josh Campbell

• Dear Mr. Sternberg, February 23, 2015

The City of Lavaca has been a member of the Arkansas Rural Water Association for many years. We are proud to be a member of this organization, but more than that, we wanted you to know how much we appreciate the benefits of membership. Most recently, Mr. James Barkie spent a day helping to rebuild check valves at our main sewer pump station. Mr. Barkie also spent several days assisting our men with smoke testing our sewer collection system – not once but twice. These services would be very costly without the assistance of your organization.

Membership in the Arkansas Rural Water Association has been very beneficial to the City of Lavaca Water Department.

Sincerely,
Dwayne Wallace
City of Lavaca Water Superintendent

• Dear Sir, February 23, 2015

I would like to thank you for the license renewal training classes offered last week for water and wastewater. Very informative. As well done as the weather conditions allowed.

The water tower inspection and safety seminar was a surprise to me for the information received. I don't deal directly with potable water systems so I don't deal with water towers, but my department is looking at putting a couple of our radio antenna on water towers. So it will be very helpful to me, things to watch out for and try to prevent a problem now or in the future.

Also, the use of cell phone technology for remote information gathering at the customer was enlightening in another way. The meter technology is not necessarily applicable to my work, but the increased use of bandwidth in the cell phone frequency is directly of concern.

Just two items of interest, of many, that I thought worth pointing out.

Again, thanks to you and your staff.

Sincerely,
Kelley Fields
Communications Maintenance Technician

• Dear Mr. Sternberg, February 25, 2015

Arkansas Rural Water has helped the City of Lonoke by performing leak detection which has lowered our water loss and in turn saved us thousands of dollars in revenue. They have helped us with rate studies, valve location, flow testing on the lift stations, adjusting impellers, and cleaning and TV on sewer lines, and these are just a few of the larger projects.

The City of Lonoke, Public Works Department would like to take this opportunity to say thank you. We appreciate all of the services that you have provided us through the years and that you continue to provide for us. Without your help small cities could not survive. Once again, thank you for all you do.

Sincerely,
Ron Gosnell, Director
Lonoke Public Works

Spring 2015

James Philipp, MPA, USEPA Training Specialist

Great day fellow operation specialists!

Winter is almost over for our beautiful state and with new spring flowers in 2015 comes the renewal of your water and wastewater licenses. We hope you all have taken advantage of the many "license renewal" classes offered throughout the state by ARWA, which allows a duel license holder the opportunity to renew both licenses in one convenient three day training session.

ARWA has an abundance of classes with interesting subjects, which allows for in-depth analysis of a variety of topics. We hope your system personnel leave the training with a greater understanding of the unit process discussed. In addition to the renewal classes, certification classes are also being very well attended this year. Many of y'all have heard that passage rates continue to be dismal. I attribute this partly due to the wait time between exams, and for students not continuing to study and prepare for exam during non-classroom time by utilizing the ABC suggested study materials.

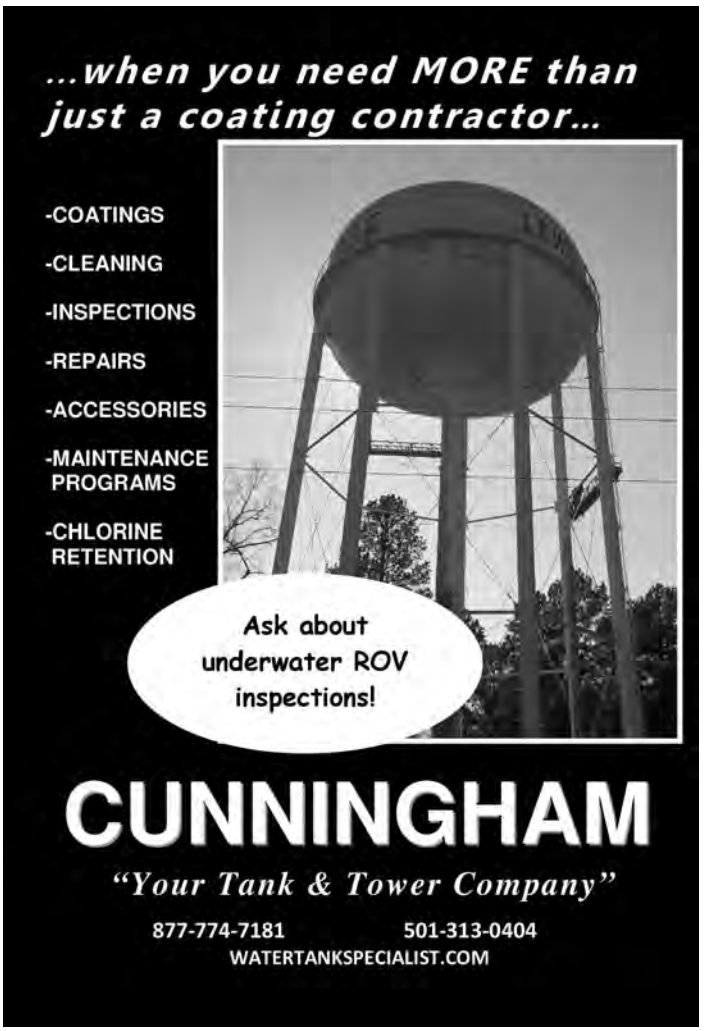
In order to be successful in school, life, work, or athletic competitions, one must put ample time into the preparation. Cramming for a few hours before a test will no longer, in my opinion, allow you to pass. A study regiment should be established with dedicated focus time on the materials. Try and eliminate outside distractions, choose a time when you are at your sharpest mental state to review and assess the information. If at first you do not succeed (and not score a 70%), I hope you will remember that failure should only make you work harder towards your goal. And as the wise Henry Ford once said, "Whether you think you can, or think you can't, you're right." Keep that positive attitude.

We look forward to seeing many operators at the just announced for 2015, MUELLER ROAD SHOW (April 15th), the annual golf scholarship tournament (June 24th), the ARWA outdoor EXPO (July 22), or the energy conservation class (July and October). In addition, I would ask that every person that plans on attending the ARWA conference in September, pre-register to be entered to win the grand prize - 4 wheeler, but also to bring or encourage one additional individual to attend.

Lastly, we encourage all operators to take advantage of the resources available for free at the National Rural Water Association's Web page, under the WaterPro online community. A portal for knowledge, questions, answers and peer communications based on input from around the nation.

Please continue to work safe,
continually educate yourself
and your public and most of all,

KEEP THAT WATER FLOWING.



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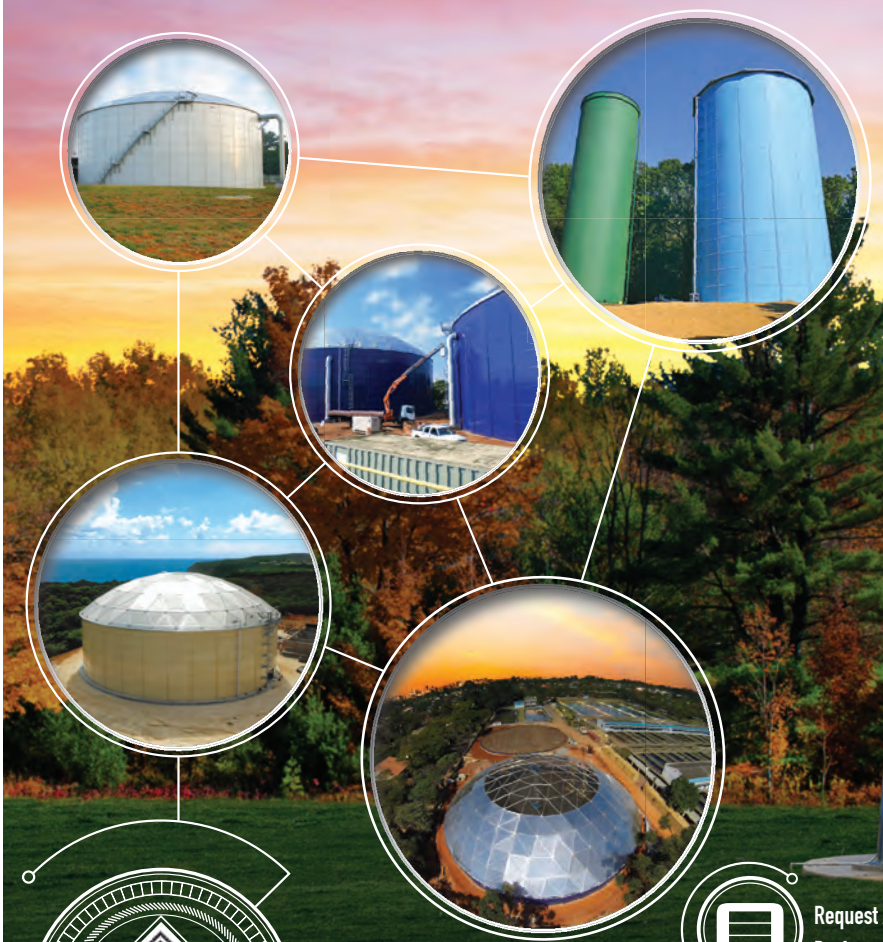

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Rural Water Trains For Emergency Water Treatment
WaterStep Unit Converts Brine Into Chlorine

LONOKE, Ark. – Kurtis Daniels holds up a small pile of salt, enough to fit in the palm of his hand. It's only a few cents worth of common table salt, but with a combination of ingenuity and technology, it's the key ingredient to generating 10,000 gallons of clean drinking water. On December 3rd, rural water experts from five states gathered at the Arkansas Rural Water Association's office in Lonoke to learn how to use this technology during emergencies and natural disasters.

Daniels and Doug Lark are part of WaterStep, an organization that brings clean drinking water solutions to developing countries. WaterStep's mobile water systems are built to be simple, rugged, and able to run on limited resources – qualities necessary for working in developing countries; that also make the systems perfect for emergency response. In October, during the National Rural Water Association's WaterPro Conference, HD Supply Waterworks donated two of the WaterStep mobile water systems to NRWA as part of their sponsorship of the organization.

"We're really excited," said Kevin Renckens, HD Supply Waterworks Director of National Sales. "We think this is a great opportunity to provide help for communities in emergency situations."

WaterStep systems have already been serving communities in developing nations for nearly a decade, where they are saving lives.

"I first got into this, because a friend of mine showed me a demonstration of the chlorinator," Daniels explained. "He told me: 'Did you know that 25,000 people die every day from water-borne illnesses?' I told him that couldn't be right. He told me it was the equivalent of loading a 747 full of people and crashing it to the ground every 30 minutes.

"I looked up the numbers and he was right. After he demonstrated this system, I knew we had a way to make a difference."

The mobile system's potential to provide support during emergencies in this country is enormous. All the necessary components are stored in a small rolling cart, weighing only 445 pounds, and everything can be assembled in roughly 15 minutes. Yet, the system has the power to treat 1,250 gallons of water in one of its bladder tanks in 30 minutes.

The heart of the system is the M-100 Chlorinator. It looks like a simple jar of plastic and dangling hoses. Inside, though, are a pair of electrodes and a gas-permeable membrane that can convert a handful of salt, some water, and the electricity from a marine 12-volt battery into enough chlorine gas to treat thousands of gallons of water.

"We don't have to bring in a train or boat loads of bleach and chemicals," said Daniels, the WaterStep Director of Field Operations. "Salt is everywhere, it's commonly available, and it's cheap."

The pound of salt used in the training session was bought for $.43 at a local store. Daniels mixes the salt into a brine solution and connects the chlorinator to a DV battery. Bubbles of hydrogen gurgle though the solution and a fog of gas begins collecting at the top of the chlorinator. In just a few minutes of operation, the membrane system is producing chlorine gas from salt, water, and electricity.

"We chlorinate to five parts per million, and that's overkill," Daniels said. "But, if we can get it to five parts per million and have 30 minutes of contact time, then if the chlorine level drops, it tells me a lot about the water. It tells me I need to filter the next batch."

The mobile water system includes a filtration attachment that can be connected to the hoses at the water source. The package includes a 100 micron and a 25 micro disk filter.

"These disk filters are great because you don't have to replace them. Just clean them out," explained Lark.

The filtration attachment is made to quick-connect to the hoses filling the bladder tanks, but the system includes adapters that allow it to be connected to our source. Part of the system's effectiveness is that the parts

can be configured to numerous ways to fit each situation.

"In an emergency situation, your fire department will be best to bring the water to you," Daniels said. "These will connect right to their pumpers and if the water is clear, you can connect the chlorinator in-line and chlorinate as you fill the tanks.

"In another case, you can use the pump to draw from a body of water like a pond or river, and filter it, then treat it in the tank," Lark added.

The system can then distribute through common connections into portable containers or other applications. It can also supply water to Red Cross trailers, shower stations, or decontamination trailers. The chlorinator can also be connected to "water buffalo" towed storage tanks that are commonly brought in by National Guard units during emergencies, disinfecting those water supplies right in the tank.

"Anything you can think of, you can arrange the parts to do it," Daniels said.

The system remains simple despite its power and flexibility. Most connections use a quick connect system and are color-coded for easy installation. Major parts have labels to ensure easy use.

"So you fill it to the line that says 'Fill to Here,'" Daniels explains, holding up the chlorinator. "You pour the salt water into the spout that says 'Pour Salt Water Here.' It's not rocket science."

The entire system can be run by a hand pump, a power outlet, or with the included 12 volt DC marine battery. The package includes a battery charger and folding 60 watt solar cell capable of running the entire system while charging the battery.

Every aspect of the system has been considered, engineered, and tested in real communities throughout the developing world. Even the byproducts from the chlorinator can be put to use. One side of the membrane produces sodium hydroxide, or lye, which can be used to kill flies and mosquito larva. The other side of the membrane creates a chlorine solution similar to bleach that can be used as a disinfectant or cleaning agent.

"A real world application you might encounter in a disaster is with Red Cross food trailers," Lark said. "We know that in Sandy and in Joplin the Red Cross was struggling to find enough bleach to keep their kitchen trailers clean."

The two water systems donated by HD Supply will be stored in Arkansas and New York, where they can be dispatched to other areas in case of emergency. The plan for the Arkansas unit is to house it in a small covered trailer that can be towed to systems in need.

"This is not our unit, this is everyone's unit," said Dennis Sternberg, executive director of the Arkansas Rural Water Association. "We're all interested in this for the same thing, to help our members. This is just one more piece of equipment to do that."

Nearly twenty rural water specialists from Arkansas, Louisiana, Mississippi, Missouri, Oklahoma, and Tennessee attended the training. The second WaterStep unit donated by HD Supply will be located in New York. Training is scheduled for New York Rural Water Association and surrounding states.

RURAL WATER:

Understanding the Water Purchase Agreement and the Ratemaking Process

By: Alison A. Dennington, William & Anderson, PLC

It is often said that Arkansas has abundant sources and quantities of water, but even in areas where there are sufficient quantities of water, distribution to rural areas can be costly and difficult for a number of reasons. Municipalities traditionally supply what most consider basic services—water, sewer, and fire protection. These services are not available for many rural residents who live outside the city limits. Water and sewer utilities enjoy scale economies, so delivery of such services to widely scattered rural residents is far more expensive per capita than such services are for urban residents.

The legislature has created several different statutory vehicles for the formation of special districts for the purpose of acquiring, storing, and distributing water for domestic, industrial, agricultural, and commercial uses, including improvement districts, regional water distribution districts, and public facilities boards. Although these water distribution districts are similar in many respects, there are several noteworthy distinctions.[1] Generally, these water distribution districts, which are nonprofit organizations composed of elected boards, have the power to issue tax-exempt bonds for the purpose of constructing costly water facilities and distribution systems. The bonds are repaid with revenue generated from the sale of water to the water district's customers. In addition, these water districts generally have one or more loans from the state and federal governments.

Most of these water districts purchase water from one or more municipalities under long-term, standard form USDA water purchase agreements that must be approved by Rural Development. Generally these contracts provide that the seller agrees to sell potable water in such quantities as the purchaser may desire, not to exceed a certain stated amount—for example, 2 million gallons per month. The contract requires that the water be furnished at a reasonably constant stated pressure, such as 56 psi, but the seller is excused from this requirement during emergency pressure and supply failures. The contract is generally for a period of forty years, but can be longer or shorter to suit the parties. The contract provides for a certain stated minimum price per thousand gallons. This price can be increased or decreased upon certain conditions generally every two or three years, depending on the contract. Although these contracts are form contracts, they can be negotiated and modified to fit the individual needs of the water districts, subject to approval from the USDA. Even if the contracts are not modified, there are a few very important clauses within these contracts that should be fully considered and understood.

As with any long-term contract, these water purchase agreements have a built-in mechanism to deal with inflation. The contract language provides that the provisions of the contract pertaining to price are subject to upward or downward modification every couple of years based on a "demonstrable increase or decrease

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in the costs of performance hereunder, but such costs shall not include increased capitalization of the Seller's system" (hereinafter the "Modification Clause"). The use of the word "demonstrable" is significant. This means that the seller must demonstrate why and how its costs have increased before it is entitled to impose a higher rate. Similarly, if the water district can demonstrate that such costs have actually decreased, it is entitled to a rate decrease.

Another significant phrase in the Modification Clause is "in the cost of performance hereunder." In other words, what is the seller's cost to acquire, treat, and deliver water to the contractually designated point of delivery? This means only the costs affecting the specific purchaser are to be considered. Generally, this means costs associated with supply, treatment, storage, and transmission, but not those arising from the distribution function.[2] Wholesale water is water that is sold to a wholesale customer (the water district) through a master meter at a major point of delivery that then travels through the wholesale customer's distribution system and is resold at a retail rate to individuals. The basic premise behind these differing rate structures is that a rate should reflect the cost of providing water service commensurate with the customer's service requirements. To do this, costs must be properly classified and allocated. The wholesale customer has its own distribution system, meter-reading services, customer billing, customer service, and similar associated expenses. The wholesale customer then passes these costs down to its own customers, who purchase water at a retail rate. These costs are not borne by the original seller (the city). Instead, the original seller has similar services for its retail customers, but these services are not utilized by the wholesale customer. Therefore, the rate at which the wholesale customer buys water should be cheaper than the retail customer. The retail rate for the customer of the rural water district is generally going to be higher than the city customer's retail rate as a result of economies of scale and distance.

Often cities disregard this language in the Modification Clause and calculate the "total cost," which is what it costs the city to produce 1,000 gallons of water. While this might seem rational and just, it is in fact very unfair because it creates a situation where the rural customers are subsidizing the city customers. The total cost to the city includes the costs of the meters at individual homes, the cost of the meter-reading service, the costs of maintaining the distribution lines within the city, and the administrative costs that are incurred for things like accounting and generating each monthly water bill. If this total cost is used to calculate the water district's cost under the contract, the rural customer winds up paying these costs a sec-

(continued next page)

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Understanding Water Purchase Agreement and Ratemaking Process *(continued)*

ond time and the city customers are free riding.

There are experts in the fields of accounting and engineering who specialize in determining the amount of these costs and the appropriate wholesale rate. Water districts should be aware of and insist upon compliance with this contractual obligation. Furthermore, water district and cities should attempt to formulate standards concerning costs that are to be included and those which must be excluded, rather than fighting over such disputes in court.

Finally, the Modification Clause provides that the seller may not include capitalization costs in its calculation for the purposes of determining whether an increase is in order. Capitalization costs are the cost of capital improvements which increase the value of the system. For example, if the city were to decide to expand its system to increase storage capacity, it might seek to increase rates in order to pay for this upgrade. However, the water purchase agreement prohibits the city from passing this cost on to the water district. If this were not so, the rural customers would be once again subsidizing the city customers. Because the water district has already incurred significant debt obligations in the construction of its own facilities, the costs of another system's facilities should not also be borne by the water district. It would be unfair to require the water district to pay a portion of these costs to expand capacity when it is only entitled to purchase a maximum amount of water for a limited period of time.

Because these contracts were entered into with the object of supplying water in rural areas and with the expectation, and obligation, that the revenue would repay any indebtedness incurred in the construction of the rural distribution system, long-term sources of supply were necessary. Furthermore, protected services areas[3] were established to protect that source of revenue for the debt repayment. At the inception of the contract, the city selling its water had to determine its supply, storage, and current and projected usage needs, and the water district had to determine, as near as possible, its current and future needs. Twenty or so years later, many of these water districts find themselves in a situation where their current need far exceeds what had been projected. Unfortunately, nothing in these water purchase agreements explicitly provides for renegotiation of the amount of water that the city must sell. Although many cities have in fact sold more water to water districts than required under these contracts, there is nothing in the contract which explicitly requires the city to do so.

Water is a precious and necessary resource that is becoming increasingly scarce and, as a result, disputes over water supply will occur more often and with greater intensity. Thus, it is vital that water districts and municipalities engage in regular conversation and share long-range plans. Often a regional approach[4] will most effectively insure that infrastructure is efficiently planned; and most importantly, a long-term supply to meet anticipated growth is assured.

[1]An improvement district is created for the specific purpose of constructing or maintaining a local improvement and can be established upon petition by a majority of the landowners in the district. These districts can be formed for the purposes of constructing, operating, and maintaining water storage and distribution and similar facilities. E.g., ARK. CODE ANN. § 14-117-203(a)(1) (irrigation, drainage, and watershed improvement district). Contracts between an improvement district and a city in excess of 20 years are void, unless the Arkansas Soil and Water Conservation Commission approves and determines that a longer time is necessary. ARK. CODE ANN. § 14-234-108(b)(2). A regional water distribution district can be formed upon the petition of 100 interested landowners and such districts are given broad power to carry out the purposes for which they are authorized. Ark. Code Ann. § 14-116-101 et seq. Regional water distribution districts are authorized to acquire, store, purify, treat, transport, and deliver water and to do that which is necessary and convenient in carrying out their purposes. When originally enacted, regional water distribution districts, unlike improvement districts, were without the power to assess benefits and levy taxes. In 1995, the act was amended to give regional water distribution districts the power to tax in order to finance an improvement plan. Regional water distribution districts, but not improvement districts, are included within the Arkansas Groundwater Management and Protection Act, found at ARK. CODE ANN. § 15-22-901 et seq. This Act enables the Arkansas Soil and Water Conservation Commission (now called Arkansas Natural Resources Commission) to regulate and limit the withdrawal of groundwater and to delegate its regulatory authority to regional water distribution districts. ARK. CODE ANN. § 15-22-904(8). Unlike improvement districts, regional water distribution districts are given explicit authority to enter into joint cooperation agreements with municipalities and other regional water distribution districts pursuant to the Interlocal Cooperation Act, found at ARK. CODE ANN. § 25-20-101 et seq., and the Consolidated Waterworks Authorization Act, found at ARK. CODE ANN. § 25-20-301-323. Public facilities may be organized for several purposes, including furnishing water for domestic, commercial, agricultural, and industrial purposes pursuant to the Public Facilities Boards Act enacted in 1975, found at ARK. CODE ANN. § 14-137-101 123. Public facilities boards can be created by a city or a county.

[2] For more information concerning water ratemaking principles, see THE AMERICAN WATER WORKS ASSOCIATION, PRINCIPLES OF WATER RATES, FEES, AND CHARGES (5th ed. 2000).

[3] ARK. CODE ANN. § 15-22-223 (a) (stating that it is unlawful to provide water or wastewater services to an area where such services are being provided by a current provider that has pledged or uses revenue from services within that area to repay financial assistance provided by the Arkansas Natural Resources Commission, unless the commission gives its approval); 7 U.S.C. § 1926(b) (similar).

[4] For more information on regional cooperation agreements, see the Interlocal Cooperation Act, found at ARK. CODE ANN. § 25-20-101 425, and specifically, the Consolidated Waterworks Authorization Act, found at ARK. CODE ANN. § 25-20-301—323.

Arkansas Department of Health

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Governor Asa Hutchinson
Nathaniel Smith, MD, MPH, Director and State Health Officer

Engineering Section, Slot H37 Ph 501-661-2623 Fax 501-661-2032
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WATER OPERATOR LICENSE EXAMINATIONS
DECEMBER 2014 – DECEMBER 2015 – SCHEDULE

Most current Exam Schedule is available at http://www.healthy.arkansas.gov/eng/autoupdates/oper/operexam.htm
You must register for the exam 45 days in advance. Call (501) 661-2623, ask for Water Licensing Program.
Listed below are the dates and locations of examination sessions as scheduled, as of **October 2, 2014**. All Treatment and Distribution exam grades will be available at the sessions. Acceptable photo identification (Drivers License or equivalent) will be required to sit for an Exam. Cell phones, pagers and other electronic communication devices are not allowed. Non-Programmable calculators are allowed in exam sessions.

EXAM DATE	REGISTER DEADLINE	CITY	LOCATION	TIME	DISTRICT
12/5/2014	10/21/2014	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM	4
12/5/2014	10/21/2014	Nashville	Carter Day Center, 200 Nichols Drive	9:00 AM	6
12/5/2014	10/21/2014	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM	7
12/12/2014	10/28/2014	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM	3
12/12/2014	10/28/2014	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM	5
12/12/2014	10/28/2014	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM	9
3/6/2015	1/20/15	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM	1
3/6/2015	1/20/15	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM	4
3/6/2015	1/20/15	Mtn. Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	9:00 AM	2
3/13/2015	1/27/15	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM	8
3/13/2015	1/27/15	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM	9
3/13/2015	1/27/15	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM	3
4/29/2015	3/15/15	Hot Springs	AWW&WEA Annual Conf, HS Convention Center	9:00 AM	Staff
6/5/2015	4/21/15	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM	7
6/5/2015	4/21/15	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM	4
6/5/2015	4/21/15	Nashville	Carter Day Center, 200 Nichols Drive	9:00 AM	6
6/12/2015	4/28/15	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM	5
6/12/2015	4/28/15	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM	9
6/12/2015	4/28/15	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM	3
9/4/2015	7/21/15	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM	1
9/4/2015	7/21/15	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM	4
9/4/2015	7/21/15	Mtn. Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	9:00 AM	2
9/11/2015	7/28/15	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM	5
9/11/2015	7/28/15	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM	9
9/11/2015	7/28/15	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM	8
9/16/2015	8/2/2015	Hot Springs	ARWA Conference, HS Convention Center	9:00 AM	Staff
12/4/2015	10/20/15	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM	1
12/4/2015	10/20/15	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM	8
12/4/2015	10/20/15	Nashville	Carter Day Center, 200 Nichols Drive	9:00 AM	6
12/11/2015	10/27/15	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM	5
12/11/2015	10/27/15	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM	7
12/11/2015	10/27/15	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM	3

Compiled March 16, 2015

(Over)

Water Operator License Exam Schedule

The exam session information is subject to change. You should confirm this information just prior to the scheduled examination period. Also, the latest exam schedule information can be viewed on the Internet at: < http://www.healthy.arkansas.gov/eng/autoupdates/oper/operexam.htm >.

You must register for the exam 45 days in advance. Call (501) 661-2623, ask for Water Licensing Program.

Please verify that your license application has been filed with this office and that the required exam fee for each exam has been paid. The license exams require significant preparation prior to sitting for the exam. The preparation must include extensive study utilizing the study guide and recommended reference materials. Credit for the mandatory Certification Training Courses must be obtained before taking an exam. Copies of your training documentation must be provided when registering for an exam or provide documentation of its attendance by the exam session.

Computer-Based Water License Examinations Provided By Applied Measurement Professionals Information & Reservation Instructions

Computer-based Arkansas Water Operator License Examinations are available utilizing Applied Measurement Professionals (AMP) Assessment Centers. This is an optional method of examination with an additional administration fee of $64.00 per exam. This option allows exams to be scheduled with a large degree of flexibility as to day of the week (open Monday through Saturday) and time of day (morning or afternoon sessions).

To utilize AMP, the Water Operator Licensing Program must be contacted to start the process. To schedule an exam utilizing AMP, the License Program must be in receipt of the candidate's (exam taker) Water Operator License application, the required License and Exam fees must be paid, and the mandatory training requirements must be documented as met.

The Licensing Program will arrange for AMP to contact the candidate. AMP will provide needed information and directions to schedule the computer-based exam. The AMP computer based exam administration fee of $64.00 must be paid directly to AMP when the exam is scheduled. The time needed to complete the examination process, from a few days to several weeks, depends on several factors. Has the license application and licensing fees been paid? Mandatory training attendance is documented to the Water License Program. The mode of communication, internet versus US mail, can influence the time needed significantly.

The exams are administered via computer terminals in an AMP Assessment Centers, they are not paper based. AMP provides a paper copy of the ABC exam formula sheet and scratch paper. A practice exam to become familiar with the computer process is available at the time of examination. The process is very user friendly and is suitable for non-computer users.

Computer-administered examination is scored at the conclusion of the exam with your score and mastery report provided to you prior to leaving the Center. AMP will furnish the Licensing Program your exam results. The Licensing Program will follow-up the exam results with the appropriate documents based on the exam results.

AMP has assessment centers in Fayetteville, AR; Little Rock, AR; Memphis, TN; Jackson, MS; Shreveport, LA; Tulsa, OK; Springfield, MO; and other AMP Assessment Centers throughout the United States. Any Center may be utilized. For additional site information, examination concepts, and examination procedures, see AMP's website, www.goamp.com. Under Candidates, click/select "Get Started". I suggest, at a minimum, you review the Arkansas handbook, view the "What To Expect" video, and review the "General Recommendations" before you "Schedule an Exam".

PREPARATION = SUCCESS

ARWA TRAINING AND EVENTS 2015

ARWA Scholarship Golf Tournament June 24, 2015 Bryant, AR

ARWA Annual Operator Expo July 22, 2015 Lonoke, AR

ARWA Training Technical Conference September 13-16, 2015 Hot Springs Convention Center

ARWA WATER TRAINING SCHEDULE – 2015

April 22-33, 2015	Water Renewal Training	Mountain View State Park
April 28-30, 2015	Advanced Water Treatment	Lonoke
May 5-7, 2015	Basic Distribution	Lonoke
May 13-14, 2015	Water Renewal Training	Mountain Home
May 19-21, 2015	Advanced Distribution	Lonoke
June 3-4, 2015	Water Exam Review	Lonoke
June 9-11, 2015	Basic Treatment	Mountain Home
June 17-18, 2015	Water Renewal Training	Piggott
July 7, 2015	Basic Water Math	Clarksville
July 8, 2015	ADH Compliance Course	Clarksville
July 9, 2015	Applied Water Math	Clarksville
July 29, 2015	Energy Conservation/Water Loss	Clarksville
August 4-6, 2015	Intermediate Treatment	Mountain Home
August 11, 2015	Basic Water Math	Springdale
August 12, 2015	ADH Compliance Course	Springdale
August 13, 2015	Applied Water Math	Springdale
September 2-3, 2015	Water Exam Review	Lonoke
September 22-24, 2015	Intermediate Distribution	Lonoke

ARWA WASTEWATER CLASS SCHEDULE – 2015

April 6-9, 2015	Class II Wastewater	Nashville
April 13-17, 2015	Class III Wastewater	Arkadelphis
April 21-22, 2015	Wastewater Renewal Training	Mountain View State Park
May 12-13, 2015	Wastewater Renewal Training	Mountain Home
May 20-21, 2015	Wastewater Microbiology (Fee Based)	Lonoke
June 16-17, 2015	Wastewater Renewal Training	Piggott
July 13-16, 2015	Class II Wastewater	Rogers
August 18-20, 2015	Class I Wastewater	Lonoke
September 14-16, 2015	Class I Wastewater	Hot Springs

To see our entire schedule of classes or to get more details please go to our website: arkansasruralwater.org

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BACKFLOW CLASSES

**Please fill out information below and mail to Arkansas Rural Water, with payment, ten working days prior to the class date you wish to attend:
ARWA - P.O. Box 860, Lonoke, AR 72086. You may also fax your registration form to 501-676-2266 and we can take a credit card payment over the phone.**

REGISTRATION FORM

Class Time: 8:00 a.m. - 5:00 p.m.

NAME: _____

ADDRESS: _____

CITY:_____STATE:_____ ZIP:_____

PHONE_____

EMPLOYER:_____ARWA MEMBER: YES___ NO___

NAME OF CLASS: _____

DATE OF CLASS: _____

BACKFLOW CLASSES IN 2015

February 9-13, 2015	**Tester Certification**	**Lonoke**
April 6-10, 2015	**Tester Certification**	**Lonoke**
July 13-17, 2015	**Tester Certification**	**Lonoke**
October 12-16, 2015	**Tester Certification**	**Lonoke**
February 9, 2015	**Tester Re-Certification**	**Lonoke**
April 6, 2015	**Tester Re-Certification**	**Lonoke**
July 13, 2015	**Tester Re-Certification**	**Lonoke**
October 12, 2015	**Tester Re-Certification**	**Lonoke**
March 17-19, 2015	**Repair Course**	**Lonoke**
August 18-20, 2015	**Repair Course**	**Lonoke**

ARKANSAS RURAL WATER ASSOCIATION
BACKFLOW PROGRAM

Arkansas Rural Water has been approved by the Arkansas Department of Health and is now offering training courses for persons wishing to be certified in backflow prevention and cross-connection.

Below, you will find courses offered and their cost. If you wish to attend a course, please fill out and return this registration form, along with a check for the amount of the course.

Please mail to: Arkansas Rural Water Association, P.O. Box 860, Lonoke, AR 72086
You may also fax your registration form to 501-676-2266
and we can take a credit card payment over the phone.

ASSEMBLY TESTER CERTIFICATION COURSE

COST: ARWA MEMBER: $400.00 NON-MEMBER: $445.00

The Assembly Tester Course is a 40-hour course that consists of classroom training and actual hands-on training to train the student to field test various backflow prevention devices.

NOTE: (It is required by the Arkansas Department of Health that anyone wishing to be a Certified Tester, attend and pass this type of an approved course and also pass a test given by the Arkansas Department of Health after completion of this course.)

ASSEMBLY TESTER RE-CERTIFICATION COURSE

COST: ARWA MEMBER: $100.00 NON-MEMBER: $125.00

The Assembly Tester Re-Certification Course is an 8-hour course that consists of lab training to re-certify CERTIFIED TESTERS.

NOTE: (It is required by the Arkansas Department of Health that Certified Testers attend and pass this type of an approved course every two years in order to maintain Certification.)

ASSEMBLY REPAIR CERTIFICATION COURSE

COST: ARWA MEMBER: $300.00 NON-MEMBER: $345.00

The Assembly Repair Course is a 24-hour course that consists of classroom training and hands-on lab training to train the student to be able to repair Assemblies in the field.

NOTE: (It is required by the Arkansas Department of Health that before someone can be a Certified Assembly Repair person they must be a Certified Tester, attend and pass an Assembly Repair Course and also pass a test given by the Arkansas Department of Health after completion of this course.)

PLEASE FILL OUT THE INFORMATION ON THE FOLLOWING PAGE & MAIL IT TO
ARKANSAS RURAL WATER
10 WORKING DAYS PRIOR TO THE CLASS DATE YOU ATTEND.

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Lonoke, AR 72086

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Fax: 501-676-2266

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Street Address : _____ City, State, Zip: _____

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Industrial Waste Treatment, Vol. 1 - 3rd Edition	_____	$50.00	_____
Operation of Wastewater Treatment Plants, Vol. II - 7th Edition	_____	$50.00	_____
Advanced Waste Treatment - 5th Edition	_____	$50.00	_____

Please make checks payable to: ARWA Wastewater Education Account – P.O. Box 860 – Lonoke, AR 72086
Prepayment is required on all book orders!

Shipping & Handling: $8.00 per book or $20.00 per set.
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