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Cover Photo

Springtime at the Old Mill
Magazine Editor – Fatina Dodson

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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FROM YOUR CHIEF EXECUTIVE OFFICER

DENNIS STERNBERG



Arkansas Rural Water Association attended the National Rural Water Association Water Rally in Washington, D.C. on February 5-8, 2018. In attendance from the Arkansas Rural Water Association Board of Directors were Greg Cross, John Choate, Tate House, Greg Hooten, Bryan Smith and myself.

Arcadia Water Utility of Wisconsin Named Nations Best-Tasting Water in the Nation at the NRWA 2018 Water Taste Test. The winners were selected by a panel of judges who included Kevin Baily, Professional Staff, Senate Committee on Agriculture, Nutrition and Forestry; Claudette Fernandez, Assistant Administrator Water and Environment Programs, Rural Utilities Service; and Sarah Tyree, VP Government Affairs, CoBank.

I would like to thank all six Arkansas U.S. Congressional members for seeing and understanding the most efficient way to continue to assist water and wastewater systems compile with EPA regulations across this state and the nation. With their efforts of continuing to support the Rural Water funding requests, this training and technical assistance can continue to assist systems across the state and nation. During the NRWA Water Rally on February 5-7, 2018 in Washington, D.C., we were able to meet with some of all the Arkansas delegation or with their staff to discuss the continued need for funding for Rural Water programs which consist of the USDA Circuit Rider, Wastewater Technician, FSA Source Water, EPA Training & Technical Assistance programs, and the USDA Loan & Grant funding for water and wastewater systems.

We encourage all members of congress to review all federal programs with strict scrutiny and make prioritization of federal dollars. I believe the Rural Water programs will rank as high as any of the federal government programs in existence today.

To continue funding for the Rural Water programs

will require YOUR system to start telling the Arkansas Congressional members of the need for these very vital technical assistance and training programs. These programs have assisted your City, Water District, PWA, PFB and Water Associations for years and must continue to assist your communities in the future to stay in compliance and sustainable for your communities to thrive into the future.

I would like to also invite everyone to mark your calendars to come and play in this year's Ernie Faucett/Jack Lambert Scholarship Golf Tournament, June 27, 2018 at Hurricane Creek Golf Course in Bryant, Arkansas. All proceeds go towards scholarships to be given away to the member utilities dependants to further their education at ARWA's Annual Conference. Please make plans to participate in this very worthy cause.

On to another topic that I hope everyone will be making plans to attend is the upcoming Arkansas Rural Water Association's 41st Annual Technical Conference September 9-12, 2018 at the Hot Springs Convention Center, Hot Springs, Arkansas. Make sure you pre-register to be eligible for the GRAND PRIZE drawing a brand new 4-wheeler on Tuesday, September 11, 2018 at the luncheon. The staff has designed a great agenda for the water and wastewater personnel, and we will have the exhibit hall full of exhibitors displaying the latest water and wastewater products for all to see.

So, make plans for this event, and watch the mail for all the registration information to be coming out soon. Till then, take care, and remember to call ARWA for any of your training and technical assistance needs at 501-676-2255.



Washington, DC Water Rally February 5-8, 2018



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**Arkansas Rural Water Association
is looking for the
“BEST TASTING WATER” in the state.**

The State Water Taste Test will be held on
September 10th, 2018
at 2:30 pm - 3:00 pm at the
ARWA Annual Technical Conference in
Hot Springs, Arkansas.

All member water utilities are encouraged to enter.

**Arkansas Rural Water Association will
choose the best of the best to represent the
Arkansas Rural Water Association in
Washington, D.C. at the
NRWA Water Rally February 4-6, 2019**

Systems need to bring a quart of water, labeled with their
system name, to the ARWA Annual Technical Conference
registration desk by Noon on September 10th, 2018

*For more information, contact the
Arkansas Rural Water Association at 501-676-2255*

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Have you considered the NRWA Affinity Programs? The NRWA Affinity Programs are designed to help meet the needs of Arkansas Rural Water Association's utility members. (See Page 15 to consider your options)

Looking for an Insurance Program specifically tailored to the unique exposures your industry faces? Arkansas Rural Water is offering the AQUASURE Program through Risk Services of Arkansas/INSURICA to meet your unique industry needs. (See Page 18)



Become a member of the AQUASURE Program and receive an opportunity to win at the 2018 ARWA Annual Technical Conference.



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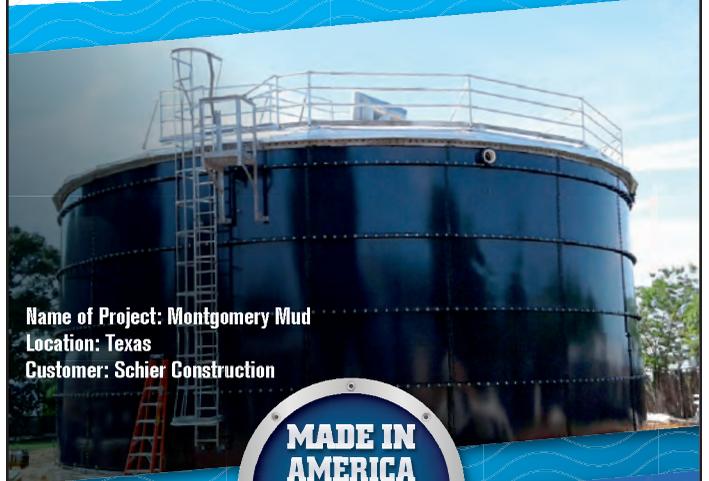


Contact your local representative

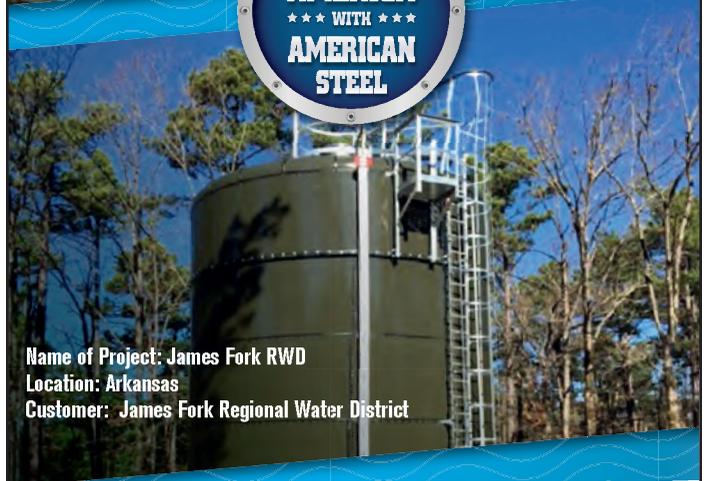
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- RWWA's 27th Annual Technical Conference | Aquarius Casino Resort | Laughlin, NV
March 20-22 | Booth 201
- Rural WaterCon | Omni Hotel | Fort Worth, TX | April 4-6
- Texas Water | San Antonio Convention Center | San Antonio, TX | April 23-26

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We Need Your Help!

By Jeff Ford, Deputy Director

Arkansas Rural Water Association has held the Jack Lambert Memorial Scholarship Golf Tournament every year to raise money for the Ernie Faucett Scholarships that we give away at the Arkansas Rural Water Association's Annual Technical Conference every year. In Fall 2017, we gave away 20 scholarships. The attendance at the golf tournament has been decreasing every year, and we need your participation, because it is very important for us to continue to be able to give away scholarships every year.



We would like to have 100 players in our tournament this year. Our record is 104, so I know we can do it. Get your team together now, and if you know of someone that likes to play golf, have them get a team as well. The tournament will be held at the Hurricane Creek Golf Course in Bryant, AR on June 27th, 2018. Come on out for a great fun day, meet new friends, and visit with old friends as well, and help out the Scholarship Fund.

WE ARE COUNTING ON YOU!!

Jack Lambert Memorial Golf Tournament • June 27, 2018

Sign In: 7:45 a.m. until 8:45 a.m. • Tee Time: 9:00 a.m.

Benefiting – The Arkansas Rural Water Association
Ernie Faucett Scholarship Fund



Proper golfing attire is required.
Shirt with collar and dress slacks or dress shorts.
NO BLUE JEANS OF ANY KIND!
The entry fee will be \$100 per person or \$300 per team.
This will include green fee, cart, range balls, refreshments, and lunch.
The format is a Three-Person Scramble.
For further information, contact Jeff Ford 501-676-2255.

Hurricane Creek Golf Course:
From Little Rock take Interstate 30 South to Exit 121, get off and go back over the Interstate to the service road, and take service road back towards Little Rock. Hurricane Creek Golf Course is located one-half mile past Landers Chevrolet.

ATTENDEE REGISTRATION • You may photocopy this form for additional registrants

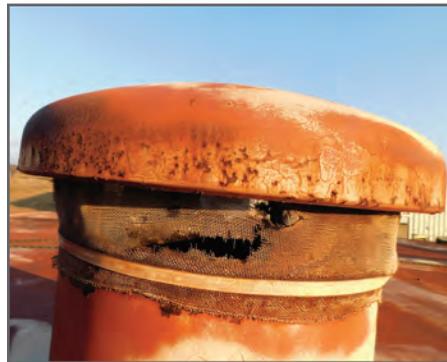
Team Captain _____
Address _____

Office Phone _____
Cell Phone _____
Player 2 _____
Player 3 _____

Enclose \$300 team entry fee (\$100 per person)
Entry fees must be received by June 8, 2018
Make check payable to: ARWA Jack Lambert Golf.
Send Registration Form and Money to:
ARWA
PO Box 860 • Lonoke, AR 72086
Team Captains are responsible for team, including entry fees. Additional information about the tournament will be relayed to team captains.

Identifying and Remediating Corrosion on Steel Tanks

Erin Schmitt



Erin Schmitt is the media/director for Pittsburg Tank & Tower Group, a Henderson, Kentucky-based company that will celebrate its 100th anniversary in 2019. Schmitt has a bachelor's degree in journalism from the University of Kentucky. She can be reached at eschmitt@pttg.com.

Failing to address corrosion issues can weaken the structural integrity of tanks, possibly even leading to collapse.

That's what happened to a standpipe tank located in a small Kentucky town. The 177,000-gallon tank split along the bolted seams near its base, according to an analysis from the Kentucky Public Service Commission. The top portion of the tank separated, falling off the base and away from nearby buildings. Flooding destroyed a church's outbuilding and damaged several other buildings. Fortunately, there were no injuries.

The PSC alleged that the local water district failed to heed warnings that the tank had structural problems. According to the report, a remotely controlled video camera detected "fairly aggressive" corrosion during an interior inspec-

tion about three years before the tank collapsed. When the local water district filed their report with the PSC, the utility acknowledged the inspection but said the report didn't indicate any significant issues that would have predicted the tank's collapse.

Proceedings began to determine whether the local water district had violated inspection and maintenance regulations. Before the case went to a hearing, the utility agreed to pay \$7,500 total in penalties.

Corrosion is the deterioration of metals such as steel due to chemical interactions with the environment. It doesn't happen overnight – it typically takes years. Catastrophic failures like the bolted tank that collapsed are worst-case scenarios. Best-case scenarios are when issues are realized early and addressed accordingly.



The best way to prevent corrosion and other problems is to perform routine checks. Operators can look for visual cues like rust or leaks. A few rust spots on the exterior is no reason to panic. An isolated rust spot that's also leaking is concerning though. "Any exterior corrosion, especially where metal loss is apparent, should be evaluated by a professional engineer familiar with the construction of water storage tanks," according to AWWA Manual M42. The American Water Works Association also advises that tank operators report any noticeable change or severe worsening of exterior corrosion patterns to the engineer.

Operators should pay close attention to anchor bolts and nuts, rods, and rod pins and clevises during their routine checks. While it's difficult to paint anchor bolts and anchor bolt nuts, it can be done to maintain the tank's structural integrity.

Rust staining is one of the most obvious signs of corrosion. Rust streaks on top of the tank suggest that inside the vent or roof hatch may have corrosion. Different metals interacting can cause galvanic type corrosion, such as if the tank has a stainless-steel or galvanized

ladder welded to carbon steel. If rust streaks are seen on the tank shell, that's a sign that the metal has corroded.

Ground tanks that have supported roofs with a center column are prone to have corrosion on top of rafters that are covered with lapped roof plates. Occasionally this can lead to premature failure of support rafters. Rafters that are not caulked or welded are vulnerable to rusting. Rafters can deteriorate badly if they are not cared for properly. This could pose a serious problem if, for instance, there's too much weight on the roof from snow one winter causing the rafters to deform, or in the worst case, collapse.

An inspector should be contacted to do thorough examinations. The National Fire Protection Agency recommends that the interior of steel tanks without corrosion control be routinely inspected

every three years, while all other tanks should be inspected every five years (NFPA 25). The inspections allow you to maintain a visual on your interior and exterior coatings. Routine inspections also can help pinpoint issues that can be mitigated before they become major issues in both fire protection tanks and dual-purpose tanks.

Interior inspections should be carried out, even if it's just with a remotely operated underwater vehicle. Scanning the tank with an ultrasonic testing machine can help determine if the steel is as thick as it should be. Inspectors should have a rough idea of what the thickness should be before they start their inspections. Original drawings of the tank can be used as a reference point to compare with the readings.

Owners may be reluctant to have their tanks drained for fears it would interrupt service. Some

maintenance companies can provide temporary tank service, allowing water systems to drain their tanks and let inspectors do their jobs.

Cathodic protection is another corrosion barrier. It acts as a kind of a backup to the coating, which is the first line of defense. If a pinhole develops, or someone dropped a tool and that chipped away paint, the cathodic protection would help minimize corrosion. Corrosion affects both flat-bottomed tanks and elevated tanks. Depending on the foundation type, flat-bottomed tanks can have corrosion underneath the floor. Cathodic protection underneath floors can help minimize corrosion.

Periodic inspections and routine maintenance and upkeep are the best preventative measures against corrosion. They can also help keep costs down.



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Be Prepared For Power Outages

By Tee Easley, Energy Circuit Rider

If the power goes out, will you be ready? One of the things I've noticed while traveling the beautiful state of Arkansas is the lack of generators or generators existing but not functioning properly. If you're a utility that doesn't have one, check with surrounding utilities and ask if they're selling used ones in preparation for new ones, or check with the local surplus. Before obtaining a generator, make sure you are getting one large enough to run your utility. If you are a utility that has one, make sure it's ready for a power outage.

To ensure a long, reliable operating life for your generator, implement a preventative maintenance (PM) program. PM's and service are usually done on a schedule based on engine hours and/or time periods. Based on the environment, being severe (very humid, extreme heat/cold, dusty, etc.), you'll want to service that equipment more often. There's a lengthy list when it comes to preventative maintenance. If you're



uncertain how to maintain a generator, always consult an expert.

Arkansas is very unpredictable when it comes to weather. There's not a warning when it comes to power outages, and as a utility, you want to be prepared when that time comes. So, clear the cob webs from the doorways to the shop, dust off those generators, and remove the bird nests from the control panels.

It's time to get those generators ready!



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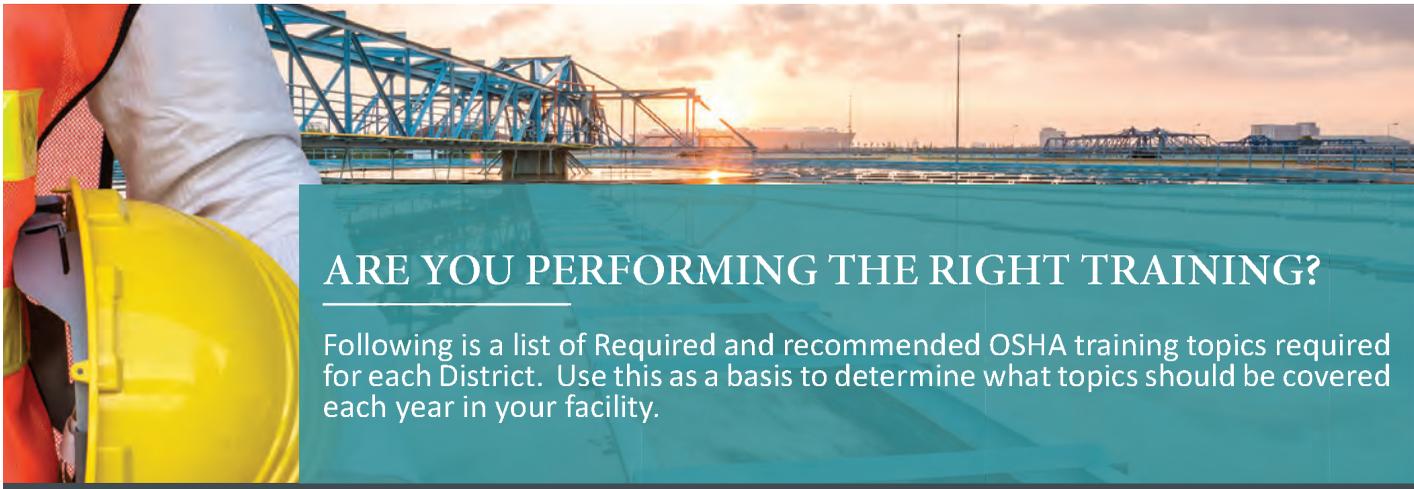
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ARE YOU PERFORMING THE RIGHT TRAINING?

Following is a list of Required and recommended OSHA training topics required for each District. Use this as a basis to determine what topics should be covered each year in your facility.

OSHA Program Topic	OSHA Reference	Required Program	Required Audit	Required Training		Training Frequency		
				All	Affected	Initial	Annual	Periodic
Accident and Illness Recording and Reporting	1904	Yes	Yes	Yes	---	Yes	No	No
Bloodborne Pathogens Safety	1910.1030	Yes	Yes	No	Yes	Yes	Yes	Yes
Compressed Gases (General)	1910.101	No	Yes	No	No	No	No	No
Confined Space Entry (Permit-Required)	1910.146	Yes	Yes	No	Yes	Yes	No	Yes
Electrical Safety Plan	1910.331-335	Yes	Yes	No	Yes	Yes	No	Yes
Emergency Action Plan**	1910.38	Yes	No	Yes	---	Yes	No	Yes
Ergonomics Plan	5(a)(1)	No	No	No	No	No	No	No
Fire Extinguishers (Portable for Employee Use)	1910.157	No	Yes	Yes	---	Yes	Yes	No
Fire Prevention Plan**	1910.39	Yes	No	Yes	---	Yes	No	Yes
First Aid Program	1910.151	No	No	No	Yes	Yes	No	No
Flammable & Combustible Liquids Safety	1910.106	No	Yes	No	Yes	Yes	No	No
General Working Spaces – Housekeeping	1910.141	No	No	No	No	No	No	No
Hand Tool Safety	1910.242	No	Yes	No	No	No	No	No
Hazard Communication Program	1910.1200	Yes	Yes	Yes	---	Yes	No	Yes
Hearing Conservation	1910.95	Yes*	Yes	No	Yes	Yes	Yes	No
Hot Work (Cutting/Welding)	1910.252-255	Yes	Yes	No	Yes	Yes	No	No
Ladder Safety	1910.25-27	No	Yes	No	No	No	No	No
Lockout/Tagout (Control of Hazardous Energy)	1910.147	Yes	Yes	Yes	---	Yes	No	Yes
Machine Safeguarding	1910.212	No	No	No	No	No	No	No
Material Handling & Crane Safety	1910.179-184	Yes	Yes	No	Yes	Yes	No	No
Means of Egress	1910.36-37	No	No	No	No	No	No	No
Mechanical Power Presses	1910.217	Yes	Yes	No	Yes	Yes	Yes	Yes
Personal Protective Equipment	1910.132	Yes	Yes	No	Yes	Yes	No	Yes
Powered Industrial Truck	1910.178	Yes	Yes	No	Yes	Yes	No	Yes
Powered Platforms for Building Maintenance	1910.66	No	Yes	No	Yes	Yes	No	No
Radiation (Ionizing) Safety	1910.1096	Yes	Yes	No	Yes	Yes	Yes	Yes
Recordkeeping Practices & Reporting	1904	Yes	Yes	Yes	---	Yes	No	No
Respiratory Protection	1910.134	Yes*	Yes	No	Yes	Yes	Yes	Yes
Ventilation	1910.94	No	No	No	No	No	No	No
Walking-Working Surfaces	1910.23-24	No	No	No	No	No	No	No

* *Bold means that a written program shall be written.*

For more information contact:

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It's Infiltration Season Again

By Shelby Townsley, Wastewater Technician/Trainer

The rainy season is here in the Natural State, and you know what that means, Infiltration! The term infiltration is used by operators to describe the excess water that sometimes flows into collection systems from heavy rain or snow events. For example, high water and water remaining in the soil after rain or snow can seep, trickle, or at times flow right into old, punctured or broken pipes. This puts more strain on the treatment plant, the lift stations, the pumps, the motors, and the operators. Infiltration can become costly. Not only does it put more wear and tear on equipment, it requires more man hours and can possibly lead to fines. The good news is, infiltration can be fixed, and it's not that hard.



Everyone has an infiltration issue. The best thing is to be proactive about it. Know where your lines and manholes are. Replace old lines when it's feasible. Remember, a higher flow rate to your treatment plant, will mean more food for your microorganisms. Supplement food if needed. We go through this every year, and we will for many more to come. Keep up with maintenance, and do your best to stay above the flood.

We also offer smoke testing here at Arkansas Rural Water Association. If you are interested or have any other questions concerning Infiltration, please give me a call at 501-676-2255.



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ARWA Membership

Why Should I Join?

The rural water and wastewater industry face many challenges now and in the future due to increasingly complex regulations. These regulations place an increasing technical and financial burden on small communities and systems. Rural communities and systems must stay informed to keep up with changing laws and regulations governing their systems. Operators, managers, board members, and owners must maintain an adequate level of training to deal with these changes. ARWA offers numerous services and educational opportunities in order to make this possible. We welcome communities and utilities to join our association.



- ARWA is a non-profit organization with the purpose to assist water systems with day-to-day operational and management problems.
- Largest water and wastewater utility membership association with over 600 utility members.
- Training and renewal hours in Water, Wastewater, Backflow Tester Certification and Backflow Re-Certification, Backflow Repair, the ARWA EXPO, and the ARWA Annual Technical Conference.
- Governed by a sixteen member non-paid Board of Directors.
- Energy Circuit Rider, Wastewater Technicians/Trainers, Water Trainers, and Source Water Technician that provide on-site training and technical assistance.
- Legislative voice for water and wastewater utilities.
- Employs field staff that provides energy saving tips, water and wastewater training and on-site technical assistance for ARWA members year-round.
- Members receive an opportunity to participate in a series of Affinity Programs through National Rural Water Association.
- Members receive an opportunity to become a member of the AQUASURE Program through Risk Services of Arkansas/INSURICA.
- Through our quarterly magazine, "Water Insight", members stay up to date on water related news and association activities.
- Comprehensive technical training program for water and wastewater operators, managers and board members.
- Members receive a yearly Training Calendar of continuing education training sessions each January.
- All of the training sessions for operator certification renewal offered by ARWA are approved by Arkansas Department of Health and Arkansas Department of Environmental Quality. Members receive discounted prices at ARWA's Annual Technical Conference and Operator Expo.
- ARWA works with the Arkansas Department of Health, Arkansas Department of Environmental Quality, the USDA Rural Development Administration, the Arkansas Natural Resources Commission, and other state and federal governmental entities that influence water, wastewater, and solid waste policies in Arkansas.
- Lobbying - Arkansas Rural Water Association monitors water and wastewater legislation in both Little Rock, Arkansas and Washington, DC.
- NRWA Water Rally - The Washington, DC "Water Rally" provides an opportunity for small system representatives to meet with our Congressional delegation to express the concerns of the water and wastewater industry on funding and regulations.

The Arkansas Rural Water Association strives to meet the needs of each individual water and wastewater system.

Suggestions on how we could better serve you and your system or need membership forms?

Phone: 501-676-2255 • Fax: 501-676-2266 • Email: arkrwa@arwa.net or arkrwa@sbcglobal.net • Web: arkansasruralwater.org

NRWA INITIATIVES

for Arkansas Rural Water Member Utilities

The National Rural Water Association has a new series of affinity programs available for Arkansas Rural Water Association's Member Utilities to support small water and wastewater utilities across the country.

Please go to the NRWA website at www.nrwa.org or the WaterPro community website www.waterprocommunity.org to learn more about these programs.



Smart Websites for Smart Water Systems. Rural Water Impact is the industry leader in professional, cost effective websites – custom designed for rural water systems.

Phone: 1.888.551.4815

Web: <https://nrwa.org/affinity/rural-water-impact-com/>



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Phone: 1.800.768.7475

Web: <https://nrwa.org/affinity/data-breach-insurance/>



Residential Service Line and Leak Adjustment Program *ServLine* is a new and unique insurance program that covers water loss with no deductible, as well as repairs or replacement of a customer's water and sewer line in a timely fashion. *ServLine* is a full service program backed by Hanover Insurance Company – not a warranty program.

Phone: 1.800.589.9876

Web: <https://nrwa.org/affinity/servline/>

Lifestyle Health Plans – A World of Wellness



Medova Healthcare and Mike Keith Insurance is pleased to introduce Lifestyle Health Plans, a unique health benefits program designed to address the underlying causes of the rise in healthcare costs for both employer and employee alike – employee health behaviors.

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Web: <https://nrwa.org/products-services/loifestyle-health-plans-2/>



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The Rural Water Loan Fund (*RWLF*) is a funding program specifically designed to meet the unique needs of small water and wastewater utilities. The RWLF provides low-cost loans for short-term repair costs, small capital projects, or pre-development costs associated with larger projects. The RWLF was established through a grant from the USDA/RUS, and repaid funds used to replenish the fund and make new loans.

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Web: <https://nrwa.org/initiatives/revolving-loan-fund/>

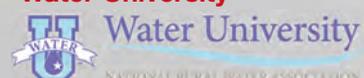
Other support initiatives



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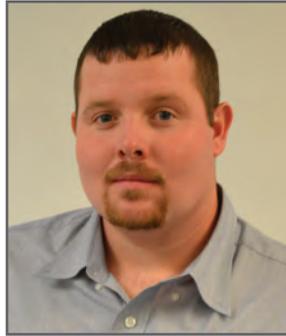
By Chris Harris, ARWA Circuit Rider

Benjamin Franklin wrote “an ounce of prevention is worth a pound of cure.” In the water and wastewater industries, that quote holds more truth than we realize. When we hear the words ‘emergency preparedness,’ we think of preparing for natural disasters such as tornados, ice storms, or massive floods.

What most people don’t think about is leak detection. When a water system has a leak that is physically draining or fiscally draining the community, it is an emergency. Whether you produce your own water and that leak is draining your tanks or you purchase your water, and its draining the system’s accounts, it becomes an absolute emergency, and time is of the essence. So what can systems do to be better prepared in the case of an emergency leak? There are two main things that stand out to me regarding leak detection. Those two issues are not knowing which valve controls which water line, and the absence of knowing where valves are located within the water system. A lot of new operators, including myself, have been guilty of accepting what a former operator has said about the system without question or any type of investigation of their own. As time goes by, people forget or get confused about what they remember from 20 years prior.

The only way to truly know something is to verify it is what they say it is. The way to begin verifying is get out the maps you do have and start physically putting your hands on the valves that the plans show. If you don’t have any plans, try contacting the Department of Health to see if they still have a copy when the system was approved. Do remember not all sets of plans are “as-built”, so if the plan says the valve you are standing on is a 2”, make sure it is really a 2”. Many operators don’t know that you can count the number of turns it takes to fully open or close a valve and determine the size of valve you are turning. As a general rule, the number of turns minus two divided by three will give you the size of valve. (20 turns-2 =18, 18/3=6 inch valve). Now I get that not every valve fits that exact mold but it will be close. A 2” will be around 5-8 turns, a 4” 13-15 turns, 6” 18-22 turns, 8” 24-26 turns, and so on.

An emergency is not the time to be asking yourself where valves are located or what valve controls which areas within the system. So, as the weather starts to warm up and leak repairs begin to slow down, it would be a great time to answer these questions. If you’re having trouble answering these questions, give us a call, and we will be happy to assist you. Two



heads are definitely better than one.

If you want to take it further, the use of GPS to keep track of your valves and to locate the valves that constantly get covered over is an invaluable tool. GPS mapping may be a great tool for your system. If this is something you are interested in, contact ARWA and ask for Jeff Ford. He is continually looking and trying programs that make system mapping much more user

friendly for operators in the field. Whatever tools you choose to use, always verify so you will know and never have to rely on what others say about your system.

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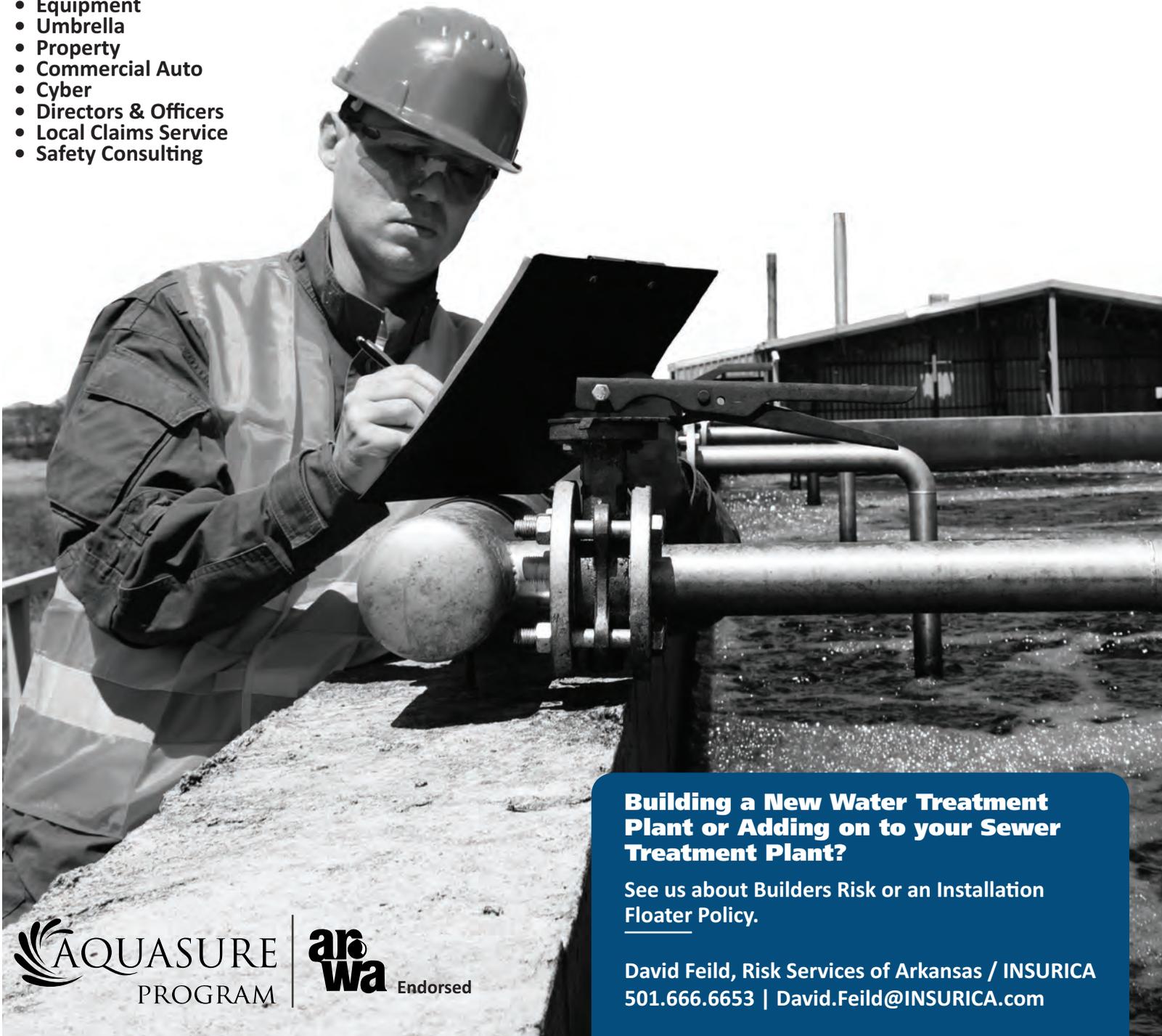
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Rice Bran, Not Just For Deer Hunters, Also For Wastewater Operators

By Susan Poe, Wastewater Trainer/Technician

This year has been a tough year for a lot of the wastewater plants in Arkansas due to temperatures being up and down, and we have had lots of calls come through ARWA for problems at wastewater plants that related back to temperatures, lack of rain, or too much rain. This led me to doing an article about Rice Bran, not to mention Arkansas is the leading producer of Rice in the United States (GO ARKANSAS!!!)



What is Rice Bran? Here is the short version from Wikipedia, “rice bran also known as miller’s bran is the hard outer layer of cereal grains. It is an integral part of whole grains, and is often produced as a byproduct of milling in the production of refined grains.” Bottom line, it is rich in carbohydrates. Most people load up on carbohydrates when they want more energy for an activity, and as I always preach in my classes, “think about yourself when thinking about your microorganisms (critters and bugs) when making plant decisions”. Microorganisms in wastewater are varied in type and have specific jobs in treating our wastewater and in the majority of our aerobic processes that we have in our state, not giving enough oxygen, a good supply of food or suspended solids, or using toxic chemicals all react to these wonderful critters and bugs performance. A bugs primary job is to eat or remove wastes, so let’s keep them happy and healthy.

This year I have stated the question, “Ever heard of Rice Bran?” so many times I can’t remember, and of course, the number one answer is “Yes, the deer like it!” But I have also learned from working with my fabulous operators, rice bran is something that our critters and bugs like in wastewater. (Don’t run to the feed store yet. Continue reading!) I was taught early on, that dog food was a great way to supplement a plant’s food supply or MLSS in moments of crisis such as high infiltration, loss of solids due to over wasting, small plants that have seasonal flows and solids problems. The controversy soon followed of having glues, dyes, and greases that aren’t good for the plant, but several people still use it when dealing with problems. Depending on where you live, rice bran turns out to be cheaper than dog food (in some areas you can get it free depending on who you know). It breaks down easily in wastewater, and microorganisms seem to react quicker to the addition, and it’s easy to apply to the plant (normally directly in the aeration tank depending on the process).

Food to Microorganism Ratio (F/M Ratio) is a very

important key in wastewater treatment on all processes large or small. I see a lot of operators add enzymes or bacteria when things go wrong to try to recover the plant, but a lot of times the bugs were there, the food was gone. Adding bugs to a plant usually works more effectively when you add additional food, such as rice bran, because when those babies hatch, they will be hungry. I have operators that have suffered sludge bulking (in case you forgot from

your test, it is light tan in color, rises up and goes over the clarifier weir) and been successful by supplementing the diet in the aeration basin while returning the bulking sludge back in the plant and recovered nicely.

If you have a problem with your wastewater plant and some of the things I mentioned have peaked your interest. Check it out online (there is a lot more that it can be used for in wastewater treatment). You can give us a call for one of our Wastewater Techs to help you with more information, and would gladly assist you with a problem. **WARNING:** Do not put rice bran in your plant every day just because you think it might run better (there’s a little more to the story, but I am running out of room). You need to strive to operate your plant naturally the way it was designed, and solve problems for the long haul as opposed to throwing quick fixes at it. Rice bran may become a big benefit to staying in compliance when emergencies arise. Don’t hesitate to contact me at arwasusan@att.net or at 501-676-2255.



Did You Know?

69% : 68%

of RUS funded projects are to populations of 2,500 or less.

of Rural Water Circuit Rider assistance is to populations of 2,500 or less.

41% : 40%

of RUS funded projects are to populations of 1,000 or less.

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NRWA Water Loan Fund

By Jim Barkie, Circuit Rider

Late last year National Rural Water offered a loan program tailored to the smaller water and wastewater systems across the United States. It provides low interest loans to enable systems to repair or replace various components within the system.

Recently, the city of Mountainburg in Crawford County Arkansas utilized the program to relocate a portion of a water main on the edge of a state highway and going through a box culvert. Water was observed at a two-inch hole near the bottom of the box culvert and was thought to be part of an under drain for the highway. Soon the volume of water increased, and a sink-hole appeared. The water was tested and found positive for chlorine and fluoride. Several attempts were made to repair the line but were unsuccessful, because the leak was against the concrete box culvert.

The solution was to relocate a portion of the line around the box culvert, and abandon the leaking section. I spoke with the mayor and general manager about the RWLF and how it would ease the upfront



cost of making the repairs. I helped them fill out the two page application, and they were approved in a matter of days. A contractor was selected, and the repairs were underway in a matter of weeks.

The city of Mountainburg purchases their water, so this leak was very costly. Once the repairs were complete, the savings in water loss were more than what was needed to repay the loan, and the remainder of the savings can be put back into the system.

This is only one example of how Arkansas Rural Water Association and National Rural Water Association can help you with small projects that do not exceed \$100,000. I have several small systems that will use this program to purchase equipment, such as a backhoe. Others are planning on line extensions or new pumps. This is a great program for the smaller systems that need a little help with water or wastewater projects. If you are interested and would like assistance or more information, please contact Arkansas Rural Water Association at 501-676-2255, and we will be glad to help you.



The Rural Water Loan Fund (RWLF) is a funding program specifically designed to meet the unique needs of small water and wastewater utilities. The RWLF provides low-cost loans for short-term repair costs, small capital projects, or pre-development costs associated with larger projects. The RWLF was established through a grant from the USDA/RUS, and repaid funds used to replenish the fund and make new loans.

Phone: 1.800.332.8715 Web: <https://nrwa.org/initiatives/revolving-loan-fund/>

Having a Secondary Water Source

By Roy Richards, Circuit Rider

The holidays are supposed to be a happy time with family and friends. It's not a time to be without water for days at a time.

We received a call just like this the week between Christmas and New Years. The city's well went out the Thursday before Christmas, and the tank went dry by that Tuesday after Christmas.

The reason I'm writing this article is to make water systems think about what would happen if this happened to them.

Do you have a backup well?

Do you have a backup water source? Maybe an emergency connection to another system for just this kind of event?

I know what you're saying. We can't afford an extra well, or it's too far to connect to another system. Ask yourself this.....Can we afford to be out of water?

Cities around the state are struggling with financial problems, but this is something that you need to



be thinking about when you do your next rate increase or any capitol project you are planning on having done in the near future.

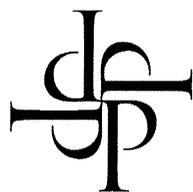
There are emergency funds available for water systems in case this happens, but DO NOT count on these funds to save you if this does happen to your system.

Be proactive, not reactive.

If you think something is wrong with your well or just need it checked out, call a well service company to schedule an inspection of your well. This will be fairly cheap compared to the cost of replacing the pump and motor.

Now, some systems purchase water, and some treat surface water. You also need to be thinking of a second source as a backup.

If your well or water source does go out, call us at Arkansas Rural Water Association (501.676.2255) for help with technical assistance.



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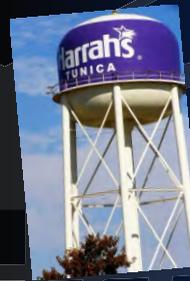
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Tanks, Altitude Valves, and Pressure Switches

By Tim Carey, Circuit Rider

I know you probably hear a lot about all of these topics, but the purpose of these items are seldom discussed. Most people know the type of tank they have in their system and how much water it holds. But, the main reason why your system has the size or type of tank or equipment is seldom discussed. The reason for a storage tank is to provide a sufficient amount of water to average or equalize the daily demands on the water supply system. If your storage tank or tanks are too big for the system, maintaining required chlorine residuals can be a challenge. This can require flushing of your system. Your storage should be able to provide water for average and peak demands. Also, your storage helps to maintain pressure throughout your system. This also helps your fire department to have adequate pressure and quantity to provide fire protection. The amount of industry and the system demand play a big role in what size tank you should have.

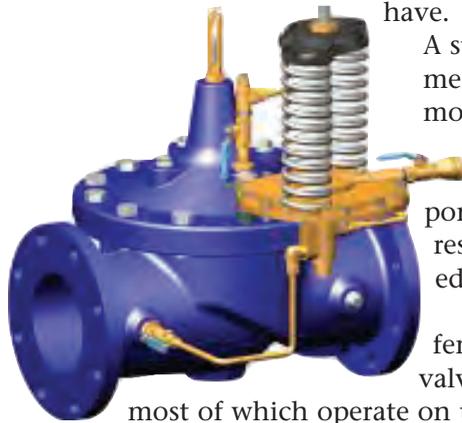


that move water from your water supply to your tank. You have two settings on them, a high side and a low side. Your high-side setting is for your highest tank level without running your tank over. Once in a while, it is good to run the tank over to clear out your overflow, but you don't want this happening all of the time. The low-side setting is there to make sure your tank doesn't empty or get too low. This enables you to

maintain constant pressure and volume for your distribution system.

Another type of tank regulator is floats or probes. These applications work almost the same as a pressure switch, except you don't need the water pressure to regulate tank levels. Tank probes operate by the water making or shorting out a contact making a pump start or stop.

Most of these applications can be repaired or replaced. Make sure you know what you are doing before you try your hand at adjusting or repairing any of these. If we can be of any assistance in this matter, feel free to ask for our assistance.



A storage facility can also mean a reservoir. The most common type of reservoir is a body of water resembling a pond. The water in a reservoir has to be treated.

There are a few different types of altitude valves on the market, most of which operate on the same principal.

This valve shuts off the flow into an elevated tank when the water level in the tank reaches a predetermined level. The valve automatically opens when the pressure in the distribution system drops below the pressure in the tank. This valve is responsible for maintaining a given pressure in the system. Most of the time when your altitude valve hangs up or quits, the problem a lot of times is just that there is a buildup on the diaphragm of the main valve and buildup on your regulator. This can be taken care of by taking the valve apart and cleaning it about once a year. The main thing is to make sure that you reassemble it the same way it comes apart. You should also mark the settings to make sure that you get your adjustment right.

Pressure Switches are another subject rarely discussed. Most Pressure switches control your pumps



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One Pan Roasted Chicken and Vegetables

4 whole boneless, skinless chicken breast
 6 whole roma tomatoes
 1 pound green beans
 1 cup olive oil
 1/3 cup Balsamic Vinegar
 5 cloves garlic, minced
 1 teaspoon dried parsley
 1 teaspoon dried basil
 1 teaspoon salt
 1/2 teaspoon black pepper
 2 tablespoons finely minced fresh parsley

To a bowl or pitcher, add the olive oil and balsamic, along with the garlic, parsley, basil, salt, and pepper. Whisk it until it's emulsified.

Place the chicken in a large zipper bag and pour in half the dressing. Seal the bag and set it aside.

Halve the tomatoes lengthwise. Trim the ends off the green beans, and place the veggies in a large zipper bag. Pour in the rest of the dressing, then seal the bag and set aside.

Preheat the oven to 425 degrees. Arrange the chicken and veggies on a sheet pan, leaving the excess marinade behind. Roast in the oven for 25 minutes, shaking the pan once during baking to keep things from sticking to the pan.

Variations: In the last 10 minutes lay slices of mozzarella on each chicken breast and finish the baking time.

Or sprinkle parmesan cheese all over the pan for last 10 minutes of baking time.

Ham Bone Soup (Delish)

1 left over hambone
 1 tablespoon olive oil
 3 cloves garlic, minced
 1 onion, diced
 2 carrots, peeled and diced
 1 or 2 russet potatoes, peeled and diced
 1 can white kidney beans, drained and rinsed
 3/4 cup frozen corn kernels
 3/4 teaspoon fresh thyme leaves

2 bay leaves
 Kosher salt and fresh ground pepper to taste
 1 1/2 cups leftover ham diced

Cook hambone in just enough water to cover. (I like to put it in a pressure cooker to bring out the flavor of the bone) cook till all the meat comes off the bone.

In a pan add the olive oil with the garlic, onion, and carrots. Sauté until tender. Add to the pot of hambone stock. Add potatoes, and remaining ingredients.

Bring to a rapid boil then reduce heat to simmer till all veggies are tender.

Always better the next day as left over. Serve with corn bread. YUM

Brussels Sprouts Gratin

2 tablespoons unsalted butter, cut into pieces
 Kosher salt
 1 pound Brussels sprouts cut in half, outer leaves and stems removed
 Pinch of Red Pepper flakes
 Freshly ground pepper
 1/2 cup heavy cream
 1/2 cup grated white cheddar cheese

Drizzle Brussels sprouts with olive oil and roast at 425 for 25-30 minutes or until tender.

Preheat oven to 400 degrees and butter a 2-quart baking dish. Transfer the Brussels sprouts to the baking dish and toss with red pepper flakes.

Sprinkle with salt and pepper to taste. Spread evenly in the baking dish then pour the cream over the Brussels sprouts. Sprinkle with cheese and dot with the butter. Bake until bubbly and golden brown, about 15 minutes.

Potato Soup

4 tablespoons butter
 4 cups potatoes, peeled and cubed
 1/2 cup chopped parsley
 1 cup finely chopped onion
 1 cup sliced leeks
 1 cup thinly sliced celery
 1 bay leaf

1 1/2 teaspoon salt
 1/2 teaspoon white pepper
 5 cups chicken stock
 2 cups half and half cream
 4 tablespoon corn starch
 1 cup sour cream

Melt butter. Saute vegetables with seasonings. Cook on low heat for 20 minutes. Add chicken stock cook till vegetables are tender. In a separate bowl, mix half and half with corn starch for thickener. Stir into soup with a wire whisk. In separate bowl place the sour cream adding hot not boiling soup to the sour cream whisking till smooth half a cup at a time. (This is done so the sour cream doesn't curdle) Add sour cream mixture to the soup and heat through. Do not boil,

Pumpkin Bread Pudding (Crock Pot Style)

8 slices bread, cubed (stale bread is better)
 2 1/2 cups whole milk
 4 eggs
 1/2 cup sugar
 1/2 cup melted butter
 1/4 cup raisins
 1 can pumpkin pie filling
 1/4 teaspoon cinnamon
 1/4 teaspoon ground nutmeg

Sauce
 2 tablespoons butter
 2 tablespoons flour
 1 cup water
 1/4 cup sugar
 1 teaspoon vanilla

Place bread in a greased crock pot. Beat together milk and eggs. Stir in sugar,

butter, raisins, pumpkin, cinnamon and nutmeg. Pour over bread in crock pot and stir. Cover cook on high one hour. Reduce heat to low and cook three to four hours or until temperature is 160 F.

Make sauce just before pudding is done. Begin by melting butter in a saucepan. Stir in flour until smooth. Gradually add water, sugar and vanilla. Bring to a boil. Cook, stirring constantly for 2 minutes or until thickened.

Pour sauce over hot bread pudding.

- Dear Arkansas Rural Water Association:

On behalf of everyone at Bauxite Utilities, we would like to thank you for all the support and help we received from the representatives of Arkansas Rural Water that were here during the last few weeks. Arkansas Rural Water Association helped us with the following problems we have been experiencing; water leaks throughout the city, fire hydrants in need of repairs, water meters, RVS computer billing systems, and determining monthly water loss. Again, thank you for all the support. We look forward to a continuing a working partnership with Arkansas Rural Water Association.

Sincerely,
Bauxite Utilities

- To whom it may concern;

I would like to thank the Arkansas Rural Water Association for taking care of the water in Tucker, AR. The water is somewhat better. Hoping for the water to be better as the time goes by. My thanks to Deputy Director Jeff Ford on his work of love.

Thank you,
Christine McDonnell

- David Quattlebaum, Arkansas Rural Water,
Source Water Technician

11/6/2017

I wanted to take the time to thank David Quattlebaum for the outstanding service he has provided the City of Dierks while working under the USDA Farm Services Agency contract. David worked with the City of Dierks to help develop our Source Water Protection Plan. With the help of David, we were able to put a plan together at no cost to our system. This plan would have cost our system several thousand dollars if we would have hired an engineer or consultant to do the plan. In 2009, our water plant was hit by a tornado that destroyed the water system. The Source Water Protection Plan would have been a great help as we worked through this disaster. Thank you again David for the plan we now have in place. The Dierks Water Works System has around 650 customers in Howard and Sevier County. Our water source comes from the Dierks Lake.

Terry Mounts, Mayor
City of Dierks

- Dear Mr. Sternberg,

11/6/2017

The City of Ashdown has long relied on the training and technical assistance provided by the Arkansas Rural Water Association, and I wanted to share my input with you. More than 12 years ago, I obtained my water training classes under the USEPA Training and Technical assistance provider, Mr. James Philipp. He was fairly new to your group but seemed to have the experience and natural speaking skills necessary for instructing classes. With the information Mr. Philipp provided, I passed both the Treatment and Distribution IV on the first attempt. Mr. Philipp brings humor to his instruction and gives students every opportunity to learn, inquire, and ask questions during class. During one of the first series of classes with Jim, he made the comment that I would be a good manager someday. I laughed it off thinking like many young professionals, "that will never happen." However, through a series of events and a few years, his prediction proved true. During my tenure as Utility Manager, I have called Jim at home, during working hours and on the weekends. Every time he picks up the phone to provide assistance. While there is another training center in the southern part of the state, our city gets better results from the professional people your organization employs and from the passion your staff has for every student. The City of Ashdown is a proud member of the ARWA, and we consider it the best insurance policy our water and wastewater system can have. Ensuring the funding that enables the USEPA Training and Technical Assistance program is vital for Arkansas water systems, small and large, and we will voice our support to area congressional and senate representatives. Thank

you and your staff for all you do for the Arkansas utilities and the public that rely on them.

Sincerely,
Jason Tomlinson, Manager
The City of Ashdown

- Dear Dennis Sternberg,

11/8/2017

My name is Charlotte Hitt, the wastewater operation specialist for the City of Augusta, Arkansas. Currently we have 1,000 customers on our system which is located in the northeastern part of Arkansas. We at Augusta, are very thankful to be a member of Arkansas Rural Water Association. Your staff is very knowledgeable and is always willing to lend a hand when needed. I wanted to recognize Tee Easley, the Energy Technician for ARWA. She came to our facility eager and willing to show us ways to save on energy costs. Here at Augusta, we have 9 lift stations and a wastewater treatment plant. Tee spent a couple of days here at our facility. She had me take her to every lift station and the treatment plant. She examined all the motors at every location, took pictures, and asked a lot of questions about how we operate on a daily basis. She was very thorough and eager to gather as much information as she could to accomplish her job. We are currently waiting for the utility bills for the 9 lift stations and the wastewater treatment plant to have our audit completed. I am looking forward to the opportunity of saving our utility money on energy costs. Thank you, Mr. Sternberg for providing such a great staff for the state of Arkansas.

Thank you,
Charlotte Hitt, Wastewater Operator
City of Augusta

- Dear Mr. Dennis Sternberg,

11/9/2017

I am Rodney Baldwin, the Wastewater Operator for the City of Haynes, Arkansas. We currently have 100 customers on our system. We are a very small town in eastern Arkansas with one lift station. I wanted to share the adventure I had with Tee Easley, your Energy Technician for ARWA. Tee came to visit our facility for a few days to conduct an energy assessment of our lift station. At the time of her visit, we were currently using a diesel powered by-pass pump, loaned to us by Arkansas Rural Water Association, because the 2 submersible pumps we had were not keeping up with the current intake of wastewater. We had ordered 2 new pumps, assuming the ones we had were going bad. Tee had taken the time to look over the past 12 months worth of utility bills for that lift station. She noticed the usage varied substantially throughout the year at the lift station. Tee also took the initiative to have us pump down the lift station, so she could check the amperage of the motors. Upon doing this, she noticed both pumps were wired wrong and running in reverse. Instead of pumping at the maximum of 60 gpm, they were only pumping 20-30 gpm in reverse causing our pumps to run constantly. After making the changes with the wires, the motors pumped more efficiently and used half the running time. Tee not only saved our utility on energy costs but she saved us from getting rid of 2 perfectly fine motors and spending hundreds of dollars on motors we did not need.

Many Thanks,
Rodney Baldwin, Wastewater Operator
City of Haynes

- Mr. Sternberg,

11/10/2017

The City of Clarksville is a long-time member of Arkansas Rural Water Association. I have been the General Manager of Clarksville Light and Water (CLW) since July 2013. My first exposure to your organization was through the USEPA Training and Technical Assistance provider, Mr. James Philipp. I have attended several training courses instructed by Mr. Philipp, and I found he has a unique ability to explain the material, not only in ways everyone can understand, but when needed, he also has the ability to cover the subject

matter in-depth using his knowledge and practical experience. I have also found his delivery of the material, with some levity, that keeps students engaged, asking questions, and learning. I am aware that CLW has relied upon ARWA to provide water certification courses at our training center for the past 15+ years for our employees and other drinking water operational specialists from the surrounding area. We estimate during that 15-year period, CLW alone has saved over \$100,000 by not having to send students offsite, which involves a hotel, meals, and transportation. These savings do not even include the money we have saved on training itself. Finally, I have also had the opportunity to attend multiple ARWA annual technical conferences, and each time I was provided with valuable information during the sessions and had the opportunity to network with my peers. I have always found that in this industry learning best practices from our peers are just as important as technical skills. Thank you for what your organization does to assist water and wastewater utilities throughout the state of Arkansas. Having funding that supports programs like the USEPA Training and Technical Assistance is critical in order to ensure small and rural systems get the training and assistance many so desperately need. Your efforts are of great value!!

Sincerely,
John D. Lester, General Manager
Clarksville Light & Water Co.

• Dear Dennis Sternberg, 11/13/2017

I wanted to let you know of something that happened to me that means a lot. We operate a surface water treatment plant. We were experiencing quite a bit of issues during flooding event. The issues that we were having were combined to create a situation that was limiting our production of water. We were operating just enough to keep our head above water and our customers with clean, potable water, in adequate supply. We would work through one problem just to discover another. I was on my third day at the plant and two nights with very little, if any sleep. We were short handed at the time. I had been at the plant for some time by myself. I was constantly second guessing my decisions and chasing my tail to make sure we were on the right track. In the midst of all of this, one of your Circuit Riders, Tim Carey, had heard that we were having issues. He called and asked if there was anything he could do to help. I told him that it was possible that we were on the right track but still in a critical situation. He asked if he could stop by anyway. I told him sure. He showed up shortly after and asked if I cared to fill him in. During a walk through of the plant I told him of the issues, sharing the critical points and limiting factors we were dealing with. Upon returning to the control room, he asked an odd question. He asked me what I had had to eat today. I don't remember what I told him, but obviously, it wasn't much. He said he would be back in a few minutes. Less than thirty minutes later he comes back with a burger and fries from a diner near by. Over lunch he stated that it did not take him long to see that we were on the right track. The plant was starting to come around and the issues seemed to be close to being resolved. He said that in his experience most operators know their plant better than anyone else. He said that he could tell that I was second guessing myself and that was the cause for my current grief. He said jokingly that the plant seemed to be fixed, and it was time to fix the operator. A good meal, someone to bounce ideas off of and give reassurances was the fix that I needed. He spent the rest of the afternoon with me doing those things. We were fully operational in auto mode and caught up by late that evening. Tim left when he saw that things were working out and other personnel showed up to work the remainder of the evening. He didn't leave, though, until he was sure to scold me for not calling him for help in the first place. I will never forget Tim's help that day or how good that burger was. If asked, he would probably tell you that he didn't do much, but that will not be true in my eyes. Thank you for the services that you provide and the people that help keep rural water flowing in Arkansas.

Thank you,
Joseph Jansen, Manager
Northeast Arkansas Public Water Authority

• Dear Mr. Sternberg, 11/14/2017

I would like to take the time to write to you concerning your new addition to your staff Mr. Shelby Townsley, Wastewater Trainer/Technician under the USDA Rural Development Program. He assisted with the recent Class II Training for Wastewater held here at Mountain Home near us and our employee was pleased how he was able to help assist the student's one on one with math problems. The extra help was beneficial for our employee, Chance Sumpter to pass his Class II Wastewater with flying colors, and he appears to be a good addition to the program. We also truly appreciate that classes are held in this part of the state which helps us save approximately \$900.00 to not have to send an employee clear across our state to get needed training. Shelby also was present at our last City Council Meeting when your staff member, Susan Poe, was making a presentation on rates to our Board. Shelby took the time to visit with the individual Council Members and the Mayor and helped stress the importance of keeping up with our rates. He has also, since, stopped by to check on us for any additional assistance we may need. We are looking forward to working with him in the future. We appreciate all you and your staff do for us at Arkansas Rural Water Association, and please don't hesitate to call on us if we may be of further assistance.

Sincerely,
J. L. Wagoner, Public Works Director
City of Flippin

• To Whom it May Concern, 11/16/2017

For some years now, Arkansas Rural Water Circuit riders and other aspects of Rural Water have helped the City of Sulphur Springs and saved the City a great deal of money in many ways. To list some of the recent ways that ARWA has saved the city money. Our Circuit Rider Jim Barkie, USDA Wastewater Technician, has been outstanding in support of the City: 1. Smoke test done 2012 approximate savings \$35,000 2. Smoke test done 2014 approximate savings \$25,000 3. Smoke Test Done 2017 approximate savings \$10,000. We are making more progress each time. The savings show up in Electric bills, pump usage and wear, affiliated appurtenances saved, and compliance with ADEQ. Past rate studies, engineering costs saved for Vulnerability and Assessments over the past 10 yrs \$20,000, schooling for licensing instead of college, over the past 20 yrs \$50,000. We are a small town of only 500 and could not survive without the help of someone like Arkansas Rural Water Association.

Sincerely,
Sherman R. Buckley, Superintendent
City of Sulphur Springs Potable Water and W.W.T.P.

• Dear Dennis, 11/16/2017

I want to thank you and your staff for again being a great help to us this past year. I would specifically like to thank your Wastewater Trainer/Technician that is funded under the USDA Rural Development Program for helping with our wastewater issues continually again this past year. Recently, I had an issue with a main line that we were receiving customer complaints on, and Susan showed up the next day after we called her with a smoke machine to help us solve the problem. It would have cost us at least \$5,000 to have someone come do this type of job, but she performed the test, found the problem, and provided us with a solution quickly, all for no charge, of course. She offered to check some additional lines while she was there. This was a tremendous help in solving some of our infiltration problems. She has helped us so much again this past year when we have had process problems at our plant and worked closely with us when we have had inspections from Arkansas Department of Environmental Quality to keep us in compliance and save us money on solutions that the agency has agreed upon. We don't know what we would do without her and your staff to continually help us when we need assistance. We always enjoy the training classes that she puts on for renewal hours and specialty training. I am always pleased to find she is a speaker at our meetings to update us on important issues that face our system. Again, we wish you the best in your endeavors and hope to see the continued funding for these vital programs. If we

may be of assistance, please don't hesitate to call us as Arkansas Rural Water Association always rises to the occasion when needed.

Sincerely,
Homer Reeves, Manager
McCrary Water & Sewer

• Dear Director, 11/16/2017
The board and community of North Howard Co. would like to thank Arkansas Rural Water for their continued help and support through a very tough, twelve months. Your circuit riders (Roy Richards, Josh Freeman, and Jim Barkie) have truly been a monumental help in the struggle we are having with our system. Not only have they been available to help locate leaks and potential leaks with the advanced equipment they have. They have also helped repair several leaks including three State Highway road crossings that North Howard County Water has replaced this year. Director Dennis Sternberg has also made our system issues a priority and provided North Howard as much help as possible. Thanks so much Dennis. We have made progress. The system has a long way to go to be solvent. We are not sure we could have made the progress we have without your help. Thanks from all of us.

Jerry Mounts
Wayne Kestrrson
Butch Morris
Cody Tedford
Mason Green

• Dear Dennis, 11/16/2017
The City of Quitman and I want to thank you and your staff for all you do for our water and wastewater systems. We are grateful that there is a USDA funded Wastewater Trainer/Technician Program and it has been a pleasure working with Ms. Susan Poe from Arkansas Rural Water Association. She has helped me so much this year as a new Manager for the Quitman System. I first met her when I was working with Heber Springs and always enjoyed taking her classes. I was shocked by how much she could do for me in my new position when I made the switch to a smaller utility. She has taken calls from me on nights and weekends, helped me with locating sewer line issues, and has troubleshooted our sewer plant for us several times. It's really nice to have someone when the issues come up and you're not quite sure what to do that will give you good answers or find them for you. Ms. Poe has saved us thousands of dollars over the last year with her expertise, guidance and willingness to stop in and give me a hand with the overwhelming regulatory issues and new rules. She spent several days with me when I started going through my new office and helped me sort out what was priority and what could wait, which made it less overwhelming for me. I've been able to do my job more efficiently because of people like Ms. Poe and your staff. We appreciate you so much and look forward to working with you in the future.

Sincerely,
Tommy Thomas, Manager
Quitman Water

• Dear Sirs, 11/17/2017
I am submitting this letter to inform you of how much help Arkansas Rural Water has been to our water system. Over the past few years with the help of ARWA, we have managed to save thousands of dollars on lost water in our system. We have an older system with many different types of pipes in the ground. We have had numerous leaks that needed repair but were either unable to locate them or just didn't have the man power to repair. With the help of Tim, Roy, Rodney, and Dennis, from ARWA we have been able to drop our lost water from about 120,000 gallons a day to about 20,000 gallons a day. We would not have been able to do this without the use of specialized equipment. They have equipment that a small water system could not afford. Arkansas Rural Water has also been extremely important in helping us acquire funding to improve our water system. They have

knowledge about funds that we as local water systems would not have. I highly recommend that funding be continued for this agency.

Jeff Graefe, Operator
Ozark Acres Water Assn.

• To whom it may concern 11/20/2017
I am writing this letter to express our appreciation for the services provided by Arkansas Rural Water Association & USDA. We consider your help and services a valuable asset. We work in a close relationship with Tim Carey. He always provides our company with an abundance of help and service any time we call. Again, we'd like to say "Thank You" for your services.

Sincerely,
Tabitha Johnson, City Clerk
Swifton Water Works

• Dear Mr. Ford, 12/2017
As a member of the Tucker Community, I would like to thank you for your help in getting the water in the community back to an acceptable state for us to use. Before you got involved, the water that was drawn from the tap was subject to be any color from yellow to gold, to brown or rust, at any given time. It stained the clothing when washed and turned whites to dingy or brown. I was afraid to use it to cook with and on many occasions, purchased water to drink and cook with, and would boil it before washing dishes. Sometimes I would think twice before using it for bathing or showering. You never knew what to expect when you turned on the faucet. Sometimes it was so discolored. Now the water is so much better and clearer that I can wash my white clothes again. Again, thank you for helping.

Sincerely,
Tucker Community Members,
Alonzo Hayes, Jr.
Helen B. Thomas
Dwight

• Dear Mr. Sternberg, 12/19/2017
This summer past, Susan Poe came to Ash Flat to perform a smoke test on our water system. Susan's professionalism and experience allowed the city to ascertain the condition of its sewer system. Very few leaks were found and the condition was found to be quite good for its age. The services provided by Susan and ARWA are a tremendous help and a great cost-saving measure for many of Arkansas water and sewer systems. I could not do this job without the knowledge and assistance of your great people. Thank you so much for all that you and your people do for us. God Bless.

Tracy Breckenridge, Water/Sewer Supt.
City of Ash Flat

• Dear Dennis, 12/28/2017
I just wanted to stop for a minute to send out a big thanks to Arkansas Rural Water Assoc. for all that you do for our water and wastewater systems in the state. We have three new employees who are in the middle of training to be operators, and we have one in training for his wastewater license. The training Classes that ARWA offers are invaluable to getting our new guys trained. I would also like to say a big thanks to David Quattlebaum, with ARWA, for coming by and updating our vulnerability assessments and emergency response plan. David was very professional and knowledgeable. He stayed a little longer to visit with my new guys about the water test and what it takes to pass it. Again, thank you for ARWA's leadership and professionalism that has been shown to us.

Sincerely,
Jeff Ward, Utility Manager
City of Greenbrier

PRV Maintenance

By Jimmy Ogden, Circuit Rider

As everyone knows there are a multiple things working together to make a water system run correctly. One of these things are PRVs or pressure reducing valves. A lot of systems have either one or multiple PRVs. Sometimes when the pressure is extreme, there are PRVs back to back. One thing I see with systems are their PRVs are ignored and treated like they are unexplained magic.



difficult or extravagant program. It can be as simple as a sheet that should include date, upstream pressure and downstream pressure, name of inspector, and water in vault/pit or dry. Of course, the list would need to be adapted for you and your situation. Mainly, just be on the lookout for pressures that are suddenly changing. This could lead you to a valve needing work or a possible leak on the line. Is water in the vault/pit normal? If it is not normal, further investigation may once again find a leak.

Proper maintenance and inspections of PRVs will save costly leaks from high pressures. These leaks may show up immediately, stress pipe that will result in future leaks or both. I understand we are all stretched for time, but a little time spent on these valves can save a middle of the night emergency.

Proper PRV maintenance is a commonly overlooked issue that cannot only help prevent leaks, but can also help identify leaks and prevent future damage to the system. If ARWA can help you with anything please call.

A maintenance program does not have to be a



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WATER OPERATOR LICENSE EXAMINATIONS MAY – DECEMBER 2018 PAPER BASED EXAM 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 at:

https://health.arkansas.gov/wa_engTraining/ExamType.aspx.

Listed below are the dates and locations of examination sessions as scheduled, as of **September 18, 2017**. 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
5/2/2018	3/19/2018	Hot Springs	AWW&WEA Annual Conf, HS Convention Center	9:00 AM
6/1/2018	4/17/2018	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
6/1/2018	4/17/2018	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
6/1/2018	4/17/2018	Nashville	Carter Day Center, 200 Lake Nichols Drive	9:00 AM
6/8/2018	4/24/2018	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM
6/8/2018	4/24/2018	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
6/8/2018	4/24/2018	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM
9/6/2018	7/24/2018	Mtn. Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	9:00 AM
9/7/2018	7/24/2018	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
9/7/2018	7/24/2018	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
9/12/2018	7/30/2018	Hot Springs	ARWA Conference, HS Convention Center	9:00 AM
9/14/2018	7/31/2018	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM
9/14/2018	7/31/2018	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
9/14/2018	7/31/2018	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM
12/7/2018	10/23/2018	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
12/7/2018	10/23/2018	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
12/7/2018	10/23/2018	Nashville	Carter Day Center, 200 Lake Nichols Drive	9:00 AM
12/14/2018	10/30/2018	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM
12/14/2018	10/30/2018	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
12/14/2018	10/30/2018	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM

The above 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> >.

ARWA TRAINING AND EVENTS 2018

BACKFLOW TESTER CERTIFICATION CLASSES IN 2018

7/16-20/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry
10/8-12/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry

BACKFLOW TESTER RE-CERTIFICATION CLASSES IN 2018

4/9/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry
7/16/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry
10/8/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry

BACKFLOW REPAIR CLASSES IN 2018

5/15-17/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry
8/14-16/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry
11/6-8/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Jeff Ford/Terry Fortenberry

ARWA WATER TRAINING SCHEDULE 2018

4/3/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Drive-Midway	Basic Water Math	Jim Philipp
4/5/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Drive-Midway	Applied Water Math	Jim Philipp
4/17-18/2018	8:00 am – 5:00 pm	Shooting Complex	323 Bradley Co Rd 38-Warren	Water License Renewal	Jim Philipp
4/24-26/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Advanced Treatment	Jim Philipp
5/8-10/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Drive-Midway	Basic Distribution	Jim Philipp
5/22/2018	8:00 am – 5:00 pm	Operations Center	710 E. Main-Clarksville	Basic Water Math	Jim Philipp
5/24/2018	8:00 am – 5:00 pm	Operations Center	710 E. Main-Clarksville	Applied Water Math	Jim Philipp
5/30/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Distribution Exam Review	Jim Philipp
5/31/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Treatment Exam Review	Jim Philipp
6/12-13/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Water License Renewal	Jim Philipp
6/19-21/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Drive-Midway	Intermediate Distribution	Jim Philipp
7/17-19/2018	8:00 am – 5:00 pm	Operations Center	710 E. Main-Clarksville	Basic Treatment	Jim Philipp
7/31/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Basic Water Math	Jim Philipp
8/2/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Applied Water Math	Jim Philipp
8/14-15/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Drive-Midway	Water License Renewal	Jim Philipp
8/21-23/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Basic Distribution	Jim Philipp
9/5/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Distribution Exam Review	Jim Philipp
9/6/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Treatment Exam Review	Jim Philipp
10/2-4/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Intermediate Distribution	Jim Philipp
10/23-25/2018	8:00 am – 5:00 pm	Operations Center	710 E. Main-Clarksville	Intermediate Treatment	Jim Philipp
11/6-8/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Advanced Distribution	Jim Philipp
11/27-29/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Advanced Treatment	Jim Philipp
12/5/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Distribution Exam Review	Jim Philipp
12/6/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Treatment Exam Review	Jim Philipp
12/18/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Basic Water Math	Jim Philipp
12/20/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Applied Water Math	Jim Philipp

ARWA WASTEWATER TRAINING SCHEDULE 2018

4/18-19/2018	8:00 am – 5:00 pm	Shooting Complex	323 Bradley Co Rd 38-Warren	WW License Renewal	Susan Poe
4/23-26/2018	8:00 am – 5:00 pm	Community Center	100 Woodland Trail-Bono	Class II WW	Susan Poe
5/8-10/2018	8:00 am – 5:00 pm	Operations Center	710 E. Main-Clarksville	Class I WW	Susan Poe
5/16-17/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Microbiology Class	Toni Glymph-Martin
6/13-14/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	WW License Renewal	Susan Poe
6/18-22/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Class III WW	Susan Poe
7/23-26/2018	8:00 am – 5:00 pm	Springdale Water Utilities	525 Oak Ave-Springdale	Class II WW	Susan Poe
8/15-16/2018	8:00 am – 5:00 pm	Charles R Newton Center	170 Dillard Dr-Midway	WW License Renewal	Susan Poe
9/10-12/2018	8:00 am – 5:00 pm	H.S. Convention Center	134 Convention Blvd-Hot Springs	Class I WW	Susan Poe
10/15-18/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Class II WW	Susan Poe
12/10-14/2018	8:00 am – 5:00 pm	ARWA Training Center	240 Dee Dee Lane-Lonoke	Class III WW	Susan Poe

SPRING 2018

By James Philipp, USEPA Training Specialist

Great day to all the fellow water operational specialists from across our great state, and thank heavens we made it through winter! As a new year begins and nicer weather will be upon us soon, I'd like to welcome the new readers and thank the long time followers and supporters of ARWA. In case you are not familiar with ARWA, we are a training and technical organization that assists water and wastewater systems throughout the state with a wide variety of services.

I trust everyone in need of training for this year has reviewed our calendar at arkansasruralwater.org. There you will find the water, wastewater, backflow class, and renewal classes for 2018. The three water & wastewater license renewal classes will be in Warren, Lonoke, and Mountain Home. This is a convenient way for operators that have both a licenses to obtain renewal hours in one convenient location saving your utility money, and hopefully, making your training scheduling easier.

The Arkansas Rural Water Association's Annual Golf



Scholarship Tournament is scheduled for June 27, 2018, and with your support, will be bigger and even better this year. Please get your teams together now and plan on fantastic weather, golf, fellowship, and a great time. In addition, with the rapid growth of the September Technical



Conference, it might be wise to make your hotel reservations now for Hot Springs.

The staff at ARWA is here to help. We like to help. We want to help. We hope should your facility be in need of assistance that we are your first call; 501-676-2255 will get you the help you need to get started. Please remember that one duty of an operational specialist is to continue to educate yourself on changing rules, regulations, permits, and a variety of other topics. Education is the key. So, until I write again, please continue to work safely, educate yourself and your public, and continue to keep that water flowing.

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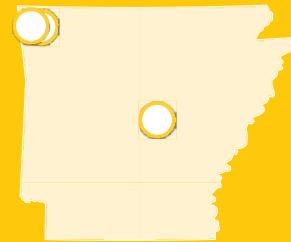
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LAB CLASS REGISTRATION

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SYSTEM _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____

_____ PERSON(S) @ \$99.00 EACH FOR TWO DAYS OF LAB

NUMBER OF MICROSCOPES YOU WILL BE BRINGING _____

IT IS NOT MANDATORY TO BRING A MICROSCOPE
HOWEVER WE CANNOT GUARANTEE ONE WILL BE
AVAILABLE FOR YOU TO SHARE. SPACE IS LIMITED FOR
THIS CLASS. PAYMENT FOR THIS CLASS IS NON-REFUND-
ABLE.

Forms available at www.arkansasruralwater.org

BACKFLOW CLASS REGISTRATION



(See Page 32 for Schedule of Classes)

Class time: 8:00 am - 5:00 pm

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.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____

EMPLOYER _____

ARWA MEMBER YES _____ NO _____

NAME OF CLASS _____

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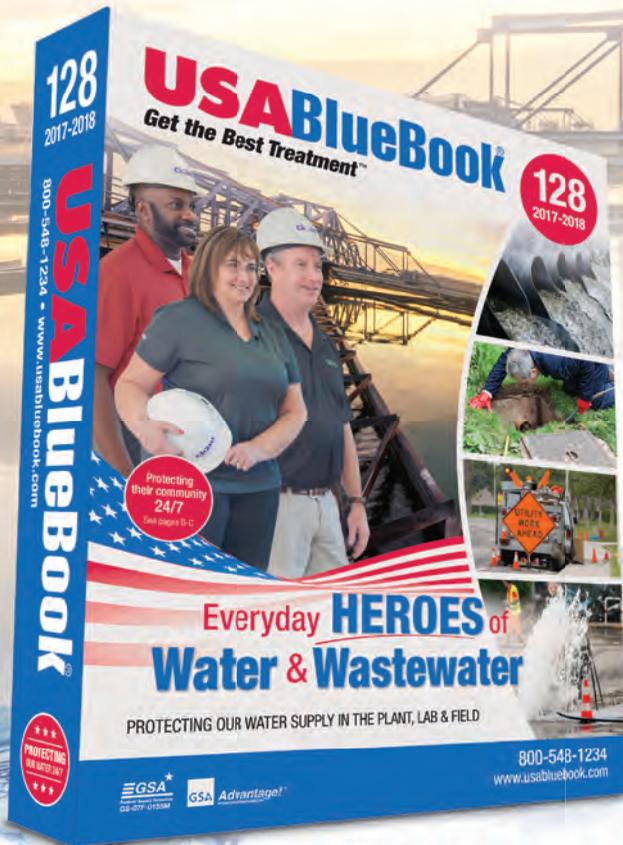
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