



ARKANSAS DRINKING WATER UPDATE

ADH Engineering Section Reorganizes District Staff

Lance Jones, P.E., Chief Engineer

The Field Surveillance Group (District Engineers and Specialists) in the Engineering Section recently underwent a change in organization. This change is in an effort to better direct technical assistance efforts to water systems while maintaining our existing regulatory and review efforts.

The first change was reducing the number of Engineering Districts from 9 to 8. In the late 1990s a ninth District was added to address the increased plan review submittals and new EPA regulations at the time. Since then, the economic downturn has apparently permanently reduced the number of plan submittals. While NW Arkansas and Central Arkansas real estate development has recovered to some extent, the level of activity has not returned to pre-recession levels. Also, the EPA has reduced the frequency of new regulation implementation. The Engineering Section has recently completed implementation of the Revised Total Coliform Rule and no additional new rule implementation is eminent.

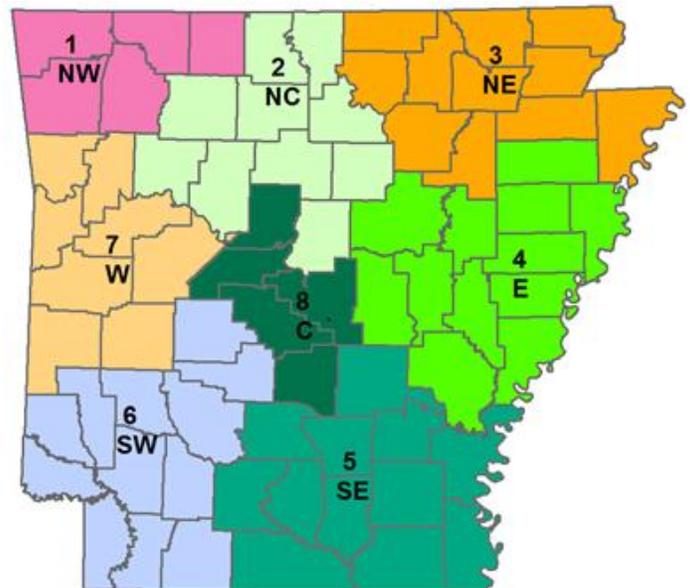
The boundaries for Districts 2, 3, 4 and 8 were revised to absorb the counties previously covered by District 9 (Conway, Cleburne, Faulkner, Johnson, Pope and Van Buren). The revision of District boundaries occurred at a time of staff vacancies to minimize the impact to existing staff and water systems. The staff changes included Gerald Saunders moving to District 4 from the old District 9 Environmental Health Specialist position and District 1 moved under the supervision of Raymond Thompson.

The other change with the reorganization is expanding the optimization and assistance program efforts under the direction of Craig Corder. These currently include activities such as Comprehensive Performance Evaluations (CPEs), Performance Based Training (PBT) and the Area Wide Optimization Program (AWOP). Previous experience has shown that the Area Wide Optimization Program, Performance Based Training, and Comprehensive Performance evaluations can meaningfully focus staff resources

on non-compliance issues with regards to the Surface Water Treatment Rules and the challenging Disinfection-By-Product rules. Expanded activities will include further review and evaluation of operational and sample data from water systems to identify any areas that could benefit from additional training or technical assistance to ensure compliance and improve the overall quality of water being delivered to consumers.

The Optimization and Assistance staff will also assist District staff with water system specific technical assistance efforts as they arise and also conduct District plan review, sanitary surveys and other duties when vacancies occur to ensure consistency in providing service to water systems, consultants and the public.

These changes did not result in a change in the number of employees at the Engineering Section. The current Engineering Staff list can be found on our website at <http://www.healthy.arkansas.gov/eng>



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Annual Compliance Report Available

Jeff Stone, P.E., Director

The Engineering Section has completed the Annual Compliance Report (ACR) pertaining to calendar year 2015. As the primacy agency in Arkansas for the federal Safe Drinking Water Act (SDWA), the ACR is required to be completed and made available for each calendar year. The deadline for making this report available is July 1 of the following year. This most recent ACR is available via the Engineering Section website <http://www.healthy.arkansas.gov/programsServices/environmentalHealth/Engineering/Pages/ReportsandForms.aspx> or a paper copy is available by request.

The ACR contains detailed information concerning the violations that public water systems have incurred and overall statistics concerning compliance with SDWA requirements for public water systems in the state. Highlights of the report are as follows:

Population of Arkansas	2,978,204
% of Arkansans Served by Public Water	95.4 %
Community Public Water Systems	695
Transient, Non-Community PWSs	354
Non-Transient, Non-Community PWSs	33
Monitoring Compliance	99.8 %
SDWA Water Quality Compliance	96.6 %
Overall SDWA Compliance	96.5 %

It is important to understand that overall compliance rates rise and fall incrementally as new SDWA requirements become effective and public water systems then make adjustments to maintain compliance. The overall compliance rate of 96.5% for 2015 is slightly down from the 2014 level of 98.0%.

If an electronic copy of the ACR is desired, please utilize the internet link provided above. If a paper copy is desired, please send a request to jeffery.stone@arkansas.gov or via regular mail to Jeff Stone, Engineering Section, Arkansas Department of Health, 4815 West Markham, Slot 37, Little Rock, AR 72205.

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Appointment to Water License Committee

Martin Nutt, Certification Officer

On April 28, 2016, the State Board of Health appointed Dr. Lashun K. Thomas, P.E., Program Coordinator, Department of Construction Management & Civil and Construction Engineering, University of Arkansas at Little Rock, to the Arkansas Drinking Water Advisory and Operator Licensing Committee. Her strong background in the drinking water industry will allow her to be a valued member of the Committee.

Nominations were requested from the: Arkansas Water and Wastewater Managers Association, Arkansas Rural Water Association, Arkansas Water Works and Water Environment Association, the Arkansas Environmental Training Academy Advisory Board, Arkansas Society of Professional Engineers, Arkansas State University, University of Arkansas Fayetteville, and University of Arkansas Little Rock. Dr. Yeonsang Hwang, P.E., Associate Professor of Civil Engineering, Arkansas State University was also nominated.

The Committee thanks Dr. Findlay Edwards, P.E. Associate Professor, University of Arkansas Fayetteville for his six years of service to the Committee. He served as the Committee Chair during his last year of service.

The Committee advises the Department of Health and its Engineering Section on matters affecting Public Water Systems and the administration of the Water Operator Licensing Program.



Dr. Lashun Thomas, P.E.

Tips for Communicating with the News Media

Meg Mirivel, MA
Public Information Officer
Arkansas Department of Health

With the recent events in Flint, Michigan, the news media and the public have turned their attention to drinking water quality across the nation. This is understandable. Public drinking water affects millions of Americans, and those people want to make sure that the water coming out of their faucets is safe. With this increased attention to drinking water, many of you may have found yourselves talking with the news media for the first time. This can be uncomfortable for people, even when you are used to it. In this article, I cover a few basic tips for communicating with the news media. Hopefully these tips will help you to feel more comfortable the next time a reporter calls you.

1. Be Open and Honest

The number one rule for talking with the media is to be open and honest. Lying or evading a question will always come back to haunt you. If the media are interested in talking with you, it is because they think their listeners or readers are interested in what you have to say. Being honest with reporters means being honest with the public and your customers. Building trust with the media and your customers is important for any water system. View the interview as an opportunity to do that. If there is something you can't comment on, refer to tip number two, which is...

2. You Can Always Talk Process

One of the worst things you can say to a reporter is "no comment." Not commenting on a question makes you and your organization look like you are hiding something, even if you are not. Remember that each interview is an opportunity to connect with your community. Even if something is confidential, or you do not want to comment on it, you can always talk about the process that surrounds the issue.

Focus on what you can say. Explain why you can't share something. Or talk about what happens next. The average citizen does not understand how their drinking water gets to their faucet, or how it is tested or processed. Explaining these processes can help them understand, and has the added bonus of helping you to never say "no comment."

3. Know Your Message

It is not unusual for someone being interviewed to let the reporter run the show – after all, the reporter is the one asking questions. However, you will feel more confident and the interview will go more smoothly if you take the time before the interview to think about what *your* message is.

This is important for two reasons. One, an interview is an opportunity for you to make sure that the important information gets across. Sometimes reporters are not very familiar with the topic they are asking you about, so they may need direction from you. If you already have a message in your mind, you can more easily redirect and say something like, "I don't know the answer to that, but what I do know is..." Second, almost all reporters end an interview by asking if they have missed anything or if there is anything you would like to add. Be prepared for that question. Use it to reiterate your main point, or restate something to make sure you have said it clearly. If you know your message going into the interview, you can make sure to get it across when you have the opportunity.

4. It's OK to Say You Don't Know

Sometimes we do not want to admit that we don't know something. We don't want to look like we are uninformed. But, when talking with the media, it is ok to say you don't know an answer. This keeps you from filling in details that you don't know for sure. Instead, offer to follow up with the reporter soon with the answer. If you say you will follow up, then be sure to do it. Again, interviews are an important opportunity to build relationships with the media and your customers. Being honest about what you do and don't know, and following up with answers, is a good way to do that.

5. You Can't Control the Story

We all worry after an interview. Did we say the right thing? Did we make ourselves and our organization look good? This anxiety is normal. I often remind myself and the subject matter experts that I work with that you cannot control the outcome of the story. Ultimately, the reporter will choose what to include and what angle to take. It's best to focus on what you can control. You can make sure that you give the reporter accurate information and enough context that they have all the information they need to understand the issue. You can do what I've suggested in this article and try to create a good relationship with the reporter. While you can't control the outcome, there is still a lot you can do!

Cyanobacteria and Microcystins

Don Fiegel, ADH Engineering

Cyanobacteria, also known as blue-green algae, naturally occur within marine and freshwater ecosystems. Some cyanobacteria are capable of producing toxins, called cyanotoxins, which can pose a risk to human health under certain conditions. Some strains of cyanobacteria produce toxins, the most common of which is microcystin. Although microcystin is most commonly associated with the cyanobacteria species *Microcystis aeruginosa*, other cyanobacteria genera, such as *Anabaena*, *Planktothrix* and *Nostoc* genera also produce the toxin. Over 50 different microcystins have been discovered, of which Microcystin-LR is the most common. Microcystins are hepatotoxic (able to cause serious damage to the liver).

Cyanobacteria can grow rapidly, producing cyanobacterial blooms, often referred to as HABs (Harmful Algae Bloom). A bloom is a rapid and excessive growth of cyanobacteria. It is not possible to determine solely upon visual observation if a bloom is producing toxins, thus any bloom is potentially dangerous. When blooms occur, the risk of cyanotoxin contamination of the surface water increases, placing potential risk to drinking water sources.

Under the Safe Drinking Water Act (SDWA), EPA may publish Health Advisories (HA) for contaminants that are not subject to any national primary drinking water regulation. EPA HA provide technical guidance on health effects, analytical methodologies and treatment technologies associated with contaminants that are known or expected to occur in drinking water. HA are not legally enforceable under SDWA, but serve as technical guidance to assist federal, state, and local officials and drinking water system owners and operators in managing drinking water resources and achieving public health goals.

Typically, HA values are developed for One-Day, Ten-Day, and (or) Lifetime exposure durations. HA values are an estimate of the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for the period of exposure. HA are intended to serve as informal recommendations for federal, state, and local officials and water system managers during emergency spills or contamination situations for a specific chemical that is otherwise not often found in drinking water supplies. A HA value is determined using the best available information on health effects, exposure and other relevant data.

EPA recommends that systems take actions to protect the public from exposure to microcystins

and cylindrospermopsin as soon as practicable, recognizing that the response to the detection of cyanotoxins may take a few days. Development of a system-specific management plan can help water systems prevent cyanotoxin levels from reaching levels of public health concern in drinking water. The Ten-day HA recommended concentrations for total microcystins are 0.3 µg/L for bottle-fed infants and young children of pre-school age (less than six years of age) and 1.6 µg/L for all other ages. The HA for microcystins was developed based on studies of microcystin-LR; for the purposes of the HA, microcystin-LR is considered a surrogate for all microcystins. The Ten-day HA recommended concentrations for cylindrospermopsin are 0.7 µg/L for bottle-fed infants and young children of pre-school age and 3.0 µg/L for all other ages.

The World Health Organization (WHO) suggests a drinking water guidance value for microcystin-LR of 1 µg/L.

Systems that are potentially vulnerable to HABs should consider developing a system-specific cyanotoxins management plan prior to any projected algal bloom. Managers know their system and when such occurrences happen.

Seasonal changes in microcystin-LR concentration were positively correlated to the abundance and biomass of the *M.aeruginosa*, total and total dissolved phosphorus concentration, pH, and chlorophyll.

Positive identification of the cyanobacteria should be confirmed by observing water samples of the plankton under a microscope. A regular program of phytoplankton identification can assist in knowing when a potential HAB will occur for a specific system.

Cyanobacteria contain accessory pigments from the phycobiliprotein family. The primary phycobilin pigments are phycocyanin (PC) and phycoerythrin (PE) that happen to have strong fluorescent signatures that do not interfere with the fluorescence of the chlorophylls. PC fluoresces at a peak of 540 nm (nanometer) and PE at 600 nm. This allows for the in-vivo fluorometry (IVF), and is based on the direct measurement of the fluorescence of the chlorophyll in the living algal cells detection of cyanobacteria without interference from other groups of algae. PC is the predominant phycobilin in freshwater environments and PE is the predominant pigment in marine environments.

There are several companies that produced a line of fluorescence instruments that can be used to detect the IVF of cyanobacterial pigments in natural waters. This technology represents a practical and robust tool for water resource managers to improve monitoring systems and improve water quality in order to prevent the occurrence of potentially hazardous conditions.

A Secchi disk is another simple method for a water resource manager to monitor the bloom and

stay aware of what is going on in his supply water. It is generally accepted that a “good” bloom is present at 18 inches or less with a Secchi disk reading. Studies have shown that the potential for microcystins could be of concern when readings are 15 inches or less.

The amount of algae in a lake depends on the amount of nutrients available for growth, mostly phosphorus. Long-term management of algae involves nutrient reduction to the water body. However, long-term nutrient reduction can be costly and take many years for significant improvement in water quality. There are some short-term algae control treatment options and some “home remedies” available for managing algae problems in the meantime.

Phosphorus generally limits the growth of freshwater algae. A direct relationship exists between the amount of phosphorus in a lake and the amount of algae growing in the lake. As phosphorus levels increase, the amount of algae increases too. At very high levels of phosphorus, other nutrients or light may limit the growth of algae. Long-term management of excessive algae requires the removal of phosphorus sources to the water body. Reducing phosphorus sources removes a key algal nutrient.

External sources of phosphorus such as storm water runoff, septic system effluents, fertilizers, pet wastes, waterfowl, agriculture, and even rainfall can contribute phosphorus to a lake. Remove or modify as many of these phosphorus sources as possible. Sometimes even removing external sources is not enough. Phosphorus-enriched sediments can release phosphorus to the water through a process known as internal loading. When sediments are contributing phosphorus to the lake, lake managers can use nutrient inactivation techniques to remove phosphorus from the water column and to retard its release from the sediments.

On EPA’s webpage concerning control and management of cyanobacteria, several control methods are presented. This web page can be found here: <https://www.epa.gov/nutrient-policy-data/control-and-treatment> Discussed further here is the use of flocculants and copper sulfate.

Lake managers use aluminum, iron, or calcium salts for phosphorus inactivation of lake sediments. Aluminum sulfate (alum) is the most commonly used nutrient inactivation chemical for lake projects. Managers may also apply alum in small doses to precipitate water column phosphorus. When applied to water, alum forms a fluffy aluminum hydroxide precipitate called a floc. As the floc settles, it removes phosphorus and particulates (including algae) from the water column. The floc settles on the sediment where it forms a layer that acts as barrier to phosphorus. As sediments release phosphorus, it combines with the alum and is not released into the water to fuel algae blooms. Algal levels decline after

alum treatment because alum addition reduces phosphorus levels in the water.

Nutrient inactivation is only appropriate where internal loading is a significant phosphorus source. If most phosphorus comes through external sources, alum treatment will not be effective. For appropriate nutrient inactivation projects, the length of treatment effectiveness varies with the amount of alum applied and the depth of the lake. Alum treatment in shallow lakes for phosphorus inactivation may last for eight or more years. In deeper lakes, alum treatment may last far longer.

Some lake managers use copper sulfate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$) application at the rate of 1 mg/L for the top 2 feet of the lake surface, where algal growth predominantly occurs. This amount is equivalent to 5.4 pounds per acre of lake surface. For example, for a lake with 50 acres of surface area, 270 pounds of copper sulfate should be used per application. The application rate should be calculated on the basis of the top 2 feet of the lake surface, not on the basis of the entire volume of the lake. Note that 1 mg/L of copper sulfate expressed as $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is equivalent to 0.26 mg/L as Cu^{2+} . The literature indicates that a concentration of 0.05 to 0.10 mg/L as Cu^{2+} is effective in controlling blue-green algae in pure cultures under laboratory conditions. This is equivalent to 0.2 to 0.4 mg/L as $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$. For field applications, however, concentrations of about 0.26 mg/L as Cu^{2+} are generally suggested. Applying far more copper sulfate than necessary is uneconomical and ecologically undesirable. Excessive amounts of copper can kill fish and other bottom organisms and copper tends to accumulate in bottom sediments. It should be noted that copper solubility decreases as pH and alkalinity increase. Only the copper in solution (and not the copper precipitate) is effective in controlling floating algae.

Before conducting any source water treatment, contact your ADH District Engineer (501-661-2623) concerning approval of changes to the drinking water treatment scheme. Only products that are certified according to NSF Standard 60 will be approved by the ADH for control of algae. Also, verify with the Arkansas Department of Environmental Quality (ADEQ) and the Arkansas State Plant Board (ASPB) that all applicable environmental requirements are being met.

Use of any chemicals according to the manufacturers’ specific instructions on the product label is important to comply with ADEQ and ASPB rules. Treatment of reservoirs incurs responsibility and potential liabilities if environmental damage occurs.

For further information on cyanobacteria/microcystins contact the ADH or visit the EPA website: <https://www.epa.gov/nutrient-policy-data/cyanobacteriacyanotoxins>

EPA Requests Greater Diligence Concerning the Lead and Copper Rule

Jeff Stone, P.E., Director

The recent events in Flint, Michigan, have resulted in a heightened focus and scrutiny on compliance with the Lead and Copper Rule. Part of EPA's response to this incident was a letter sent to all states concerning administration and enforcement of this rule.

In a letter received February 29, 2016, and addressed to Dr. Nathaniel Smith, Director of the Arkansas Department of Health, Mr. Joel Beauvais, Deputy Assistant Administrator, EPA, outlined actions that EPA requests the Arkansas Department of Health take in an effort to restore public confidence and increase transparency in our shared effort to ensure safe drinking water.

The letter of February 29, 2016, itemized 5 requests as follows:

- 1) Confirm that the state's protocols and procedures for implementing the LCR are fully consistent with the LCR and applicable EPA guidance;
- 2) Use relevant EPA guidance on LCR sampling protocols and procedures for optimizing corrosion control;
- 3) Post on your agency's public website all state LCR sampling, protocols and guidance for identification of Tier 1 sites (at which LCR sampling is required to be conducted);
- 4) Work with public water systems – with a priority emphasis on large systems – to increase transparency in implementation of the LCR by posting on their public website and/or your agency's website: the materials inventory that systems were required to complete under the LCR, including the locations of lead service lines, together with any more updated inventory or map of lead service lines and lead plumbing in the system; and LCR compliance sampling results collected by the system, as well as justifications for invalidation of LCR samples;
- 5) Enhance efforts to ensure that residents promptly receive lead sampling results from their homes, together with clear information on lead risks and how to abate them, and

that the general public receives prompt information on high lead levels in drinking water systems.

In a letter dated March 2, 2016, Dr. Nathaniel Smith, Director of the Arkansas Department of Health and State Health Officer, responded in writing to the letter from Mr. Beauvais. In that letter, the ADH indicated that:

- 1) The ADH will utilize up to date procedures and protocols relating to the LCR.
- 2) The ADH follows EPA guidance regarding corrosion control.
- 3) The ADH will utilize its internet web pages to provide to the public and regulated community the LCR protocols and guidance documents.
- 4) The ADH will provide on its internet web pages the results of lead and copper monitoring and will work with water systems to make accessible to the public the materials inventory documentation.
- 5) The ADH provides information to the public to assist in understanding lead results and is open to ways that might enhance this effort.

The recent problems in Flint, Michigan, have damaged the trust that Americans have in their drinking water systems. Rebuilding confidence will take time and it is important that on both a utility and regulatory level that we "get it right". The Arkansas Department of Health will continue to work as a partner with public water systems to properly monitor according to the lead and copper rule and to follow up with both public education and corrosion control when appropriate.

The ADH has fulfilled the commitments made to the EPA concerning the Lead and Copper Rule. Monitoring results and relevant materials have been made available on our website. Latest protocols for sampling and corrosion control are utilized. The ADH is encouraging water systems to make material inventory documentation available to their customers.

Copies of the letters mentioned in this article can be obtained by emailing jeffery.stone@arkansas.gov

Updating your Lead and Copper Rule Site Plan

Teresa Lee, P.E., Engineer Supervisor

According to the Lead and Copper Rule (LCR) water systems are required to select lead and copper tap sample sites according to different tiers. These tiers are based on materials used in the distribution system, plumbing materials used in indoor plumbing, and the age of installation. Many water systems in Arkansas have LCR sample site plans dating back almost 25 years! We are asking that community water systems review your sample sites and see if they are still applicable. Many will need to be updated. We have scheduled your update to coincide with the year preceding your next round of tap samples. In other words, if you will sample for lead and copper in 2017, then we requested that you update your sample site plan this year. So far, approximately one-third of the water systems have updated their materials inventories and site plans.

When requested to update, you will receive a material survey, a site plan form, a helpful definitions sheet, and information for researching sampling sites. This information is also available on our website at <http://www.healthy.arkansas.gov/programsServices/environmentalHealth/Engineering/drinkingWater/Pages/leadandcopper.aspx>. Please inventory your distribution system for lead service lines, including goosenecks and pigtails. Lead pipes and lead service lines were replaced with copper and galvanized steel around the middle of the century, but the dates vary widely from city to city.

You should have a sufficient number of sample sites to be able to sample during routine monitoring, which may double the number of samples you collect now. Always have a large enough pool of sample sites in case people vacate residences or are on vacation. We recommend having one and a half times the number of routine monitoring samples you collect. All samples collected must come from your sample site plan on file at our office.

In order to update your plan, review the sources of information listed on the research form and gather information. You may be able to select sites based on dates of construction. Also, review your inspection reports, building plans, plumbing codes, permits, and records in the files of your city's building department.

Try to collect as many Tier 1 sites as possible. A Tier 1 site is one that has lead pipe, a

lead service line, or contains copper pipes with lead solder installed after 1982. (In 1986, Congress passed the Lead Ban prohibiting the use of pipe and solder in public water systems that was not "lead free" according to the 1986 definition.) If you cannot find enough Tier 1 sites, then locate Tier 2 sites. The definition of a Tier 2 site is the same as a Tier 1 site, except that it applies to multi-family residences. Tier 3 sites are single-family residences that contain copper pipes with lead solder installed before 1983. Lastly, if you don't have any Tier 1, 2, or 3 sites, a Tier 4 site is one that doesn't fit into any of the above categories.

EPA recently requested that community water systems increase transparency by making materials inventory information, including the locations of lead service lines, available to your customers by placing it on your website. If you don't have a website, then please make these materials readily available for public viewing in your office.

The Lead and Copper Rule is currently under revision. Recommendations being discussed focus on replacing lead service lines, having a greater emphasis on managing water quality parameters, enhancing public education and increasing transparency. If you have any questions, please feel free to contact Gerald Ward or Teresa Lee at (501) 661-2623.

Arkansas Rural Water Association Annual Technical Conference & Exhibition

September 18 - 21, 2016 – Hot Springs
Convention Center – Hot Springs, Arkansas
www.arkansasruralwater.org

The conference consists of two (2) full days of training. Each day has four (4) training sessions with multiple concurrent training topics offered each session. An exhibit hall with a wide selection of water industry related companies displaying their latest and best products is available. The conference is approved for up to 16 contact hours of directly applicable water license training credit. The Conference will track attendance credit hours by scanning your conference badge barcode at stations Monday and Tuesday with a morning and afternoon scan. You must scan each morning and afternoon to receive full credit.

No mandatory water training courses for exam purposes are offered during this conference. License Exams are held Wednesday at 9:00 am in the convention center.

Obtaining a Water License – The Process

Martin Nutt, Certification Officer

The obtaining of a water operator license is a multi-step process. The steps are:

- A license application must be submitted,
- The exam must be reserved, exam registration is a separate step from application,
- License (\$10.00) & Exam (\$25.00) fees must be paid, first time exam is taken for each license. Must be paid before or when exam registration is done,
- If an exam must be repeated just a re-exam (\$25.00) fee must be paid,
- Mandatory Training must be attended, and attendance certificate copies submitted,
- The exam must be taken and passed,
- The license experience requirement must be met.

License Application

An Application for Water System Operator License form should be thoroughly completed and submitted to the Water License Program at least 60 days prior to sitting for a license exam. The two most overlooked areas of the application form are the experience section not providing detailed experience description and the application signatures of both needed individuals. In the experience section you should show all work experience present and past that you wish considered for experience credit. The experience must have a start date and end date (to present if current job) so experience time can be calculated. The description of work experience should be sufficiently detailed to provide a clear understanding of the work being performed or managed. Cryptic descriptions requiring the reviewer to make assumptions will not be provided credit and possibly require an experience update form be submitted to obtain credit for your experience.

License and Exam Fees Paid

The initial license application requires \$35.00 in fee payments to be included. This fee consists of the \$10.00 license fee and a \$25.00 initial exam fee. Additional exams for the same license grade and type require a \$25.00 re-exam fee. An invoice is provided with the failed license exam report and must be used to pay the re-exam fee. Required exam fees must be paid prior to the exam.

License Exam Registration

License exam registration is the most critical step in the process. Exam registration is an additional step not part of a license application. The most straightforward method to register/schedule the exam is by utilizing this webpage (www.health.arkansas.gov/eng) then select exam registration. The webpage allows registration for the paper based exam or the computer based exam.

You must be registered for a paper based exam 45 days or more before the exam session date. Failure to register for the exam will result in no exam available at the exam session. The registration process is not completed until an exam registration confirmation number is provided.

The computer based license exam can be scheduled in 1-2 weeks provided exam fees and training is documented prior to registering. The process requires registering for the exam using our webpage. Submittal of the request will result in an ADH confirmation email. You will then receive a follow-up email or postcard from the exam provider, AMP, notifying you to visit their website for exam registration/scheduling procedures and acceptable methods of paying exam facility use fees of \$67.00. The use of email notification, AMP's website, and payment by credit card significantly decreases the processing time to sit for an exam.

Mandatory Training Must Be Attended

Each license grade and type (distribution or treatment) has specific curriculum based courses that must be attended prior to sitting for an exam. The table on the next page shows the required courses for each license exam

TRAINING HOUR REQUIREMENTS FOR EXAMS										
COURSE NAME	LENGT H	VS S	D-1	D-2	D-3	D-4	T-1	T-2	T-3	T-4
RULES, REGS, COMPLIANCE	8 hr.	X	X	X	X	X	X	X	X	X
BASIC MATH	8 hr.	X	X	X	X	X	X	X	X	X
APPLIED MATH	8 hr.			X	X	X		X	X	X
DISTRIBUTION BASIC	24 hr.	X	X	X	X	X				
DISTRIBUTION INTERMEDIATE	24 hr.			X	X	X				
DISTRIBUTION ADVANCED	24 hr.					X				
TREATMENT BASIC	24 hr.						X	X	X	X
TREATMENT INTERMEDIATE	24 hr.							X	X	X
TREATMENT ADVANCED	24 hr.								X	X
	Total hrs.	40	40	72	72	96	40	72	96	96

Alternative methods to meet mandatory training are available. They include college degree substitution for certain courses, credit for courses based on licenses held, and California State University Sacramento, Office of Water Programs correspondence courses substitutions. Please see Engineering Section’s webpage (www.healthy.arkansas.gov/eng) and download document titled “Meeting Mandatory Training Requirements” for additional information about training substitutions.

After determining the license needed, determine what mandatory courses are required and map out an attendance plan. A schedule of all available courses (includes Arkansas Environmental Training Academy, Arkansas Rural Water Association, and ADH sponsored courses) is available on the Engineering Section’s webpage (www.healthy.arkansas.gov/eng). While visiting the webpage download available preparation aids, such as the exam Needs To Know, list of reference manuals, ADH PWS Compliance Summary, etc. Also, download a license application to start the license process with the Water Licensing Program. The Needs to Know, AWWA Certification Study Guide and reference manuals should be used extensively in preparing for the license exam. The active attendance of the classes must be re-enforced through studying the manuals, etc. to improve drastically the opportunity to pass the license exam.

License Issued

The passing of the licensing exam results in the issuing of either a license or operator in training designation. The License is issued when the experience requirement has been documented as met. If the experience requirement was not documented as met, the Operator in Training (OIT) designation is issued.

The OIT is issued when an applicant either has not performed countable experience for the length of time the license requires, is not performing job duties that can be used to meet the experience, or failed to properly describe work experience. An Experience Update form should be submitted when the applicant/OIT holder meets the experience requirement or to correct any of the above described oversights. The application response letter details your experience status.

**REPORT OF THE
Arkansas Drinking Water Advisory and Operator Licensing Committee**

The Arkansas Drinking Water Advisory and Operator Licensing Committee cancelled its April 14, 2016 quarterly meeting. The Committee’s next scheduled meeting is July 14, 2016.

Water Operator Licenses Issued

March 1, 2016 through May 31, 2016

NAME	LICENSE	WATER SYSTEM NAME
ASHER GREGORY	D - IV	BRYANT WATERWORKS
BARNES ALVIN	D - II	TRI-COUNTY WATER DISTBR DIST & TRI COUNTY RWDD -MOORES CHAPEL
BARNHART RANDY	D - I	NO PWS PROVIDED
BOND JAMES	D - II	NAT CTR FOR TOXOLOGICAL RES
BRIGHT ZACH	D - III	CENTRAL ARKANSAS WATER
BROWN DOUGLAS	D - III	BULL SHOALS WATER SYSTEM
BROWN JEFFREY	T - III	DEQUEEN WATER WORK
BURLEY CHRISTOPHER	T - IV	MAGNOLIA WATERWORKS
BUTLER JAMES	D - I	MARSHALL WATERWORKS
BYERS CALEB	D - IV	HOT SPRINGS UTILITIES
BYRD NORMAN	D - II	SALEM WATER ASSOCIATION & SOUTHWEST WATER ASSOCIATION
BYRD TRACY	D - II	SALEM WATER ASSOCIATION & SOUTHWEST WATER ASSOCIATION
CASH DONALD	D - I	MARSHALL WATERWORKS
CLEVELAND EUGENE	D - I	NO PWS PROVIDED
CRAVENS MICHAEL	D - I	ELAINE WATERWORKS
DEBES JACOB	D - I	OZARK WATERWORKS
DORN MICHAEL	D - I	ARSENAL WATER SYSTEM
DOUGLAS BILLY	D - IV	WYNNE WATERWORKS
DOVER JOE	T - I	EL DORADO WATERWORKS
DOWNEY DANIEL	D - I	OLD UNION WATER ASSOCIATION
DUCKETT WILLIAM	T - II	ASHDOWN WATERWORKS
DUNLAP ROBERT	D - I	TONTITOWN WATERWORKS
EDERINGTON JAMES	D - I	HERMITAGE WATERWORKS
ERICKSON JOHNATHAN	T - II	DEQUEEN WATER WORK
EUDY TERRY	T - I	NASHVILLE WATERWORKS
FARMER DEREK	D - VSS	AHTD HARRISON 9 HEADQUARTERS & AHTD MARION COUNTY
FLOYD CASEY	D - IV	FORT SMITH WATER UTILITIES
HARVEY CHRISTOPHER	D - II	SHUMAKER PUBLIC SERVICE CO
HUNTER MATTHEW	D - II	MC CRORY WATERWORKS
KEETON JAMES	D - VSS	AHTD HARRISON 9 HEADQUARTERS
KIMBRELL JOSHUA	D - I	SW WHITE COUNTY WATER ASSN
LONG REX	D - I	HAZEN WATERWORKS
LONG TERRY	D - III	EUREKA SPRINGS WATERWORKS
LYLES TOMMY	D - I	ACORN RURAL WATER ASSN
MASON TOMMY	T - IV	BLYTHEVILLE WATERWORKS
MASSEY DILLON	D - II	TRI-COUNTY WATER DISTBR DIST & TRI COUNTY RWDD -MOORES CHAPEL
MCILROY ALLEN	T - I	OARK SCHOOLS
NEWCOMB CHRISTOPHER	D - III	BLACK OAK WATERWORKS & LAKE CITY WATERWORKS
NIX JACOB	T - IV	BENTON WATERWORKS
OBERT BUDDY	D - II	BENTON-WASHINGTON REGIONAL PWA
PITTS JESSE	D - I	EL DORADO WATERWORKS
RUSSELL TRAVIS	D - VSS	KINGWOOD MHP
SBANOTTO JAMES	T - IV	SILOAM SPRINGS WATERWORKS
STEVENS JESSE	D - I	TRUMANN WATERWORKS

Water Operator Licenses Issued

(Continued)

March 1, 2016 through May 31, 2016

NAME	LICENSE	WATER SYSTEM NAME
SUGG ROGER	DII	SALEM WATER ASSOCIATION & SOUTHWEST WATER ASSOCIATION
THORNTON ADAM	D - I	ST. VINCENT INFIRMARY & VETERANS HEALTH CARE SYSTEM OF THE OZARKS
THORNTON PERRY	T - II	MAUMELLE WATER MANAGEMENT
WARFORD TERRY	D - III	BENTON WATERWORKS
WEAVER JOSHUA	T - I	WYNNE WATERWORKS
WELLBORN MICHAEL	T - I	NEAPWA
WOODRUFF KRISTOPHER	D - I	NASHVILLE WATERWORKS

License Exams Reference Manuals

Martin Nutt, Certification Officer

The Association of Boards of Certification, provider of the licensing exams, utilizes two different publishers of reference manuals. They utilize American Water Works Association (AWWA) manuals and Sacramento State (formally California State University – Sacramento), Office of Water Program (OWP) manuals. The Arkansas Water Operator Licensing Program's Recommended Study Reference Materials recommends the OWP manuals with the AWWA manuals listed as an alternate set. In reviewing the exams and in conversations with exam candidates both sets of manuals may be beneficial for the upper license levels. In reviewing exam questions with comments, I have been able to find sufficient information to answer the question in the OWP manuals but in some instances, the AWWA manuals have a more straightforward approach to the question. In other instances, the OWP manuals were more straightforward.

The reference manuals are not cheap but are a vital part of the exam preparation process. When taking into consideration the related cost of a candidate preparation for exams, if the manuals reduce the number of repeated exams, the manual cost become much more reasonable.

The present license exams, as you move up in grades, rely on questions that go beyond recalling a fact. They move to questions that require a candidate to recall multiple pieces of information, analyze the recalled information and formulate an outcome. This type question is referred to as analysis questions. Preparing for analysis questions require significant depth of knowledge and attending the mandatory courses must be augmented by studying the reference manuals.

American Water Works Association Southwest Section Annual Meeting

October 23 - 25, 2016 – Embassy Suites – Rogers, AR

www.swawwa.org

The conference consists of two (2) full days of training. Each day has six (6) training sessions with multiple concurrent training topics offered each session. An exhibit hall with a wide selection of water industry related companies displaying their latest and best products. The conference is approved for up to 16 contact hours of directly applicable water license training credit is available. No mandatory water training courses for exam purposes or license exams are available.

Mandatory Training Course Schedule

Most Current Listing is at: www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrngall.htm.

Please contact the course sponsor to register for course well in advance of course date.

WATER LICENSE EXAM SESSION NOT HELD END OF MOST COURSES.

(Please note all mandatory courses begin at 8:00 a.m.)

Mandatory Course Name	Start Date	Ending Date	Time	CITY	LOCATION	SPONSOR
Basic Water Distribution	7/5/2016	07/07/16	8:00	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Advanced Water Distribution	7/11/2016	07/25/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
ADH PWS Compliance	7/12/2016	07/12/16	8:00	Greers	Community Water System, 299 Lakeshore	ADH
Basic Water Distribution	7/12/2016	07/14/16	8:00	Mtn. Home	Charles R Newton Emer Serv Trng Center,	ARWA
Basic Water Math	7/13/2016	07/13/16	8:00	Greers	Community Water System, 299 Lakeshore	AETA
Applied Water Math	7/14/2016	07/14/16	8:00	Greers	Community Water System, 299 Lakeshore	AETA
Intermediate Water	7/19/2016	07/21/16	8:00	Greers	Community Water System, 299 Lakeshore	AETA
Intermediate Water	7/26/2016	07/28/16	8:00	N Little	CAW Maryland Complex, 1500 W	AETA
Intermediate Water	7/26/2016	07/28/16	8:00	Springdale	Springdale Water Training Facility, 525	ARWA
Basic Water Math	8/1/2016	08/15/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Basic Water Math	8/2/2016	08/02/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
ADH PWS Compliance	8/3/2016	08/03/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ADH
Applied Water Math	8/4/2016	08/04/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Applied Water Math	8/15/2016	08/29/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Advanced Water Distribution	8/16/2016	08/18/16	8:00	N Little	CAW Maryland Complex, 1500 W	AETA
Basic Water Math	8/23/2016	08/23/16	8:00	Springdale	Springdale Water Training Facility, 525	AETA
Intermediate Water	8/23/2016	08/25/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Applied Water Math	8/24/2016	08/24/16	8:00	Springdale	Springdale Water Training Facility, 525	AETA
ADH PWS Compliance	8/25/2016	08/25/16	8:00	Springdale	Springdale Water Training Facility, 525	ADH
Basic Water Treatment	8/29/2016	09/12/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Intermediate Water	8/30/2016	09/01/16	8:00	Lowell	Beaver Water Dist, 301 N Primrose Rd	AETA
Basic Water Math	9/6/2016	09/06/16	8:00	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Applied Water Math	9/7/2016	09/07/16	8:00	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
ADH PWS Compliance	9/8/2016	09/08/16	8:00	Russellville	Tri-County Water, 5306 N Arkansas Ave	ADH
Basic Water Distribution	9/12/2016	09/26/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Basic Water Treatment	9/20/2016	09/22/16	8:00	Camden	AR Env Training Academy, 4615 Spellman	AETA
Basic Water Distribution	9/27/2016	09/29/16	8:00	Rogers	TBA (Contact AETA)	AETA
Intermediate Water	10/3/2016	10/17/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Basic Water Math	10/4/2016	10/04/16	8:00	Fayetteville	Utilities Operations Center, 2435 S	AETA
Applied Water Math	10/5/2016	10/05/16	8:00	Fayetteville	Utilities Operations Center, 2435 S	AETA
ADH PWS Compliance	10/6/2016	10/06/16	8:00	Fayetteville	Utilities Operations Center, 2435 S	ADH
Basic Water Math	10/10/2016	10/13/16	8:00	Little Rock	TBA (Contact AETA)	AETA
Advanced Water Distribution	10/11/2016	10/13/16	8:00	Springdale	Springdale Water Training Facility, 525	ARWA
Intermediate Water	10/17/2016	10/31/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Intermediate Water	10/18/2016	10/20/16	8:00	Hot	HS Transportation Depot, 100 Broadway	AETA
Basic Water Treatment	10/25/2016	10/27/16	8:00	N Little	CAW Maryland Complex, 1500 W	AETA
Advanced Water Treatment	10/31/2016	11/14/15	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Basic Water Math	11/1/2016	11/01/16	8:00	Hot	HS Transportation Depot, 100 Broadway	AETA
Applied Water Math	11/2/2016	11/02/16	8:00	Hot	HS Transportation Depot, 100 Broadway	AETA
ADH PWS Compliance	11/3/2016	11/03/16	8:00	Hot	HS Transportation Depot, 100 Broadway	ADH
Basic Water Math	11/8/2016	11/08/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Intermediate Water	11/8/2016	11/10/16	8:00	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
ADH PWS Compliance	11/9/2016	11/09/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ADH
Applied Water Math	11/10/2016	11/10/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Advanced Water Distribution	11/14/2016	11/28/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Advanced Water Distribution	11/15/2016	11/17/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Advanced Water Treatment	11/15/2016	11/17/16	8:00	Little Rock	TBA (Contact AETA)	AETA
Intermediate Water	11/29/2016	12/01/16	8:00	Fayetteville	Utilities Operations Center, 2435 S	AETA
Basic Water Math	12/5/2016	12/19/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Applied Water Math	12/5/2016	12/19/16	TBD	Internet	http://www.sautech.edu/aeta/schedule.aspx	AETA
Basic Water Math	12/6/2016	12/06/16	8:00	Jonesboro	Operations Facility, 105 W Johnson Ave	AETA
Advanced Water Treatment	12/6/2016	12/08/16	8:00	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA

Mandatory Course Name	Start Date	Ending Date	Time	CITY	LOCATION	SPONSOR
Applied Water Math	12/7/2016	12/07/16	8:00	Jonesboro	Operations Facility, 105 W Johnson Ave	AETA
ADH PWS Compliance	12/8/2016	12/08/16	8:00	Jonesboro	Operations Facility, 105 W Johnson Ave	ADH

The most current and complete Mandatory Training Schedule with location information is available at <http://www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrngall.htm>

WATER OPERATOR LICENSE EXAMINATIONS SCHEDULE

The most current Exam Schedule is at: <http://www.healthy.arkansas.gov/eng/autoupdates/oper/operexam.htm>

You must register for the exam 45 days in advance. To register on the internet go to www.healthy.arkansas.gov/eng and click on Operator Certification, then select Register- Water License Exam. To register by e-mail provide name, license exam desired, exam session site, and exam date in an email addressed to ADH.Water.Licensing@arkansas.gov. You may register by phone with the Water Licensing Program at (501) 661-2623. Call (501) 661-2623, ask for Water Licensing Program.

Listed below are the dates and locations of examination sessions as scheduled, as of **March 1, 2016**. 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
9/2/2016	7/19/2016	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
9/2/2016	7/19/2016	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
9/2/2016	7/19/2016	Mtn. Home	Baxter Co OEM Training Facility, 170 Dillard Dr,	9:00 AM
9/9/2016	7/26/2016	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
9/9/2016	7/26/2016	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM
9/9/2016	7/26/2016	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM
9/21/2016	8/8/2016	Hot Springs	ARWA Conference, HS Convention Center	9:00 AM
12/2/2016	10/18/2016	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
12/2/2016	10/18/2016	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
12/2/2016	10/18/2016	Nashville	Carter Day Center, 200 Nichols Drive	9:00 AM
12/9/2016	10/25/2016	Camden	AR Environmental Training Academy, 100 Carr Road	9:00 AM
12/9/2016	10/25/2016	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
12/9/2016	10/25/2016	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 and complete exam schedule information can be viewed on the Internet at: < <http://www.healthy.arkansas.gov/eng/autoupdates/oper/operexam.htm> >.

Remember, you must register for the exam 45 days in advance. Application for License is not registration for an exam

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 manuals/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

Major Monitoring, MCL, Treatment Technique, & Licensing Violations

Community & Nontransient Noncommunity Public Water Systems, Jan- Mar, 2016

ADC TUCKER UNIT MAINT	GWRmon 2	HORATIO WATERWORKS	Bmon 1
ADC TUCKER UNIT MAINT	BMCL 2	HOSANNA HEIGHTS WATER	BMCL 1, 2
ADC TUCKER UNIT MAINT	Dmon 2	HOSANNA HEIGHTS WATER	Bmon 3
ASP QUEEN WILHELMENA	DBPR 1, 2, 3	HOSANNA HEIGHTS WATER	GWRMCL 3
ARKDELDELPHIA	DBPR 1,2,3	HOSANNA HEIGHTS WATER	GWRmon 3
AURELLE WATER SYSTEM	OperLic 1	HUGHES WATERWORKS	Bmon 2
AURELLE WATER SYSTEM	Dmon 1, 2	HWY 4 24 WATER ASSN	DBPR 1, 2, 3
BEDFORD FALLS MHP	Bmon 1	JAMES FORK REGIONAL WD	DBPR 1, 2, 3
BEDFORD FALLS MHP	GWRmon 2	LAKE VILLAGE WATERWORKS	Bmon 1
BEDFORD FALLS MHP	BMCL 3	LEE COUNTY WATER ASSN	DPBR 1, 2, 3
BEN LOMOND WATERWORKS	PN 3	LOCKESBURG WATERWORKS	BMCL 1
BENTON COUNTY WATER	DBPR 1, 2, 3	LOCKESBURG WATERWORKS	Dmon 2
BENTON-WASHINGTON REG	DBPR 1, 2, 3	LOST BRIDGE VILLAGE WAT- SEW DIST	DBPR 1, 2, 3
BODCAW RURAL WATER	DBPR 1, 2, 3	MILLTOWN-WASHBURN	DBPR 1, 2, 3
BRUNO PYATT SCHOOL	OperLic 1, 2, 3	MONTGOMERY CO REGIONAL	DBPR 1, 2, 3
BRUNO PYATT SCHOOL	Bmon 2	MONTROSE WATERWORKS	DBPR 1, 2, 3
CASA WATER DEPARTMENT	DBPR 1, 2, 3	MORO WATERWORKS	DBPR 1, 2, 3
CAVE CITY WATERWORKS	Bmon 3	MOUNT IDA WATERWORKS	Bmon 3
CENTERTON WATERWORKS	BMCL 1	MOUNTAINBURG	Bmon 2
CHICOT JUNCTION WATER	DBPR 1, 2, 3	N GARLAND CO REG WATER D	BMCL 1
CHRISTIAN MINISTRY ACADEMY	Bmon 3	NASHVILLE RURAL WATER	DBPR 1, 2, 3
COTTON PLANT	Bmon 2	NORTH HOWARD RURAL WA	PN 3
COTTON PLANT	PN 3	OLA WATERWORKS	DBPR 1, 2, 3
DEER RUN WATER COMPANY	OperLic 1, 2, 3	OPPELO WATER DEPT	Bmon 1
DEER RUN WATER COMPANY	PN 1, 2, 3	PANGBURN WATERWORKS	BMCL 3
DIAZ WATERWORKS	Bmon 2	PARIS WATERWORKS	Tmon 2
EAST LOGAN CO RURAL	DBPR 1, 2, 3	PARON-OWENSVILLE WA	DBPR 1, 2, 3
EASTSIDE HOA	BMCL 3	PARON-OWENSVILLE WA	PN 3
FIXTY SIX WATERWORKS	Bmon 3	PERRYTOWN WATERWORKS	OperLic 3
FLIPPIN WATERWORKS	Bmon 1	PICKENS WATERWORKS	Dmon 1
FOUKE WATERWORKS	OperLic 1, 2, 3	PICKENS WATERWORKS	Bmon 3
FOUKE WATERWORKS	PN 2, 3	POTTSVILLE WATER ASSN	Bmon 2
FREE HOPE WATER ASSN	Bmon 3	RVAF TEXARKANA	Bmon 3
FRENCHPORT WATER ASSN	PN 3	RIVIERA UTILITIES	DBPR 1, 2, 3
GARFIELD WATERWORKS	Bmon 1	SMACKOVER WATERWORKS	BMCL 1
GENTRY WATERWORKS	DBPR 1, 2, 3	SOUTH PIKE CO WATER	DBPR 1, 2, 3
GEORGIA PACIFIC PAPER LAB	Bmon 3	SOUTHWEST ARKANSAS WS	DBPR 1, 2, 3
GILLHAM REGIONAL WATER	TMCL 3	STRONG WATERWORKS	Dmon 1, 2
GILLHAM WATERWORKS	Tmon 1	STRONG WATERWORKS	OperLic 1
GLEN ACRES	PN 3	SULPHUR SPRINGS	Bmon 3
GREENWAY WATERWORKS	PN 1, 2, 3	TEXARKANA WATER UTILITIES	DPBR 1, 2, 3
HAVANA WATERWORKS	DBPR 1, 2, 3	VAN BUREN WATERWORKS	Bmon 1
HERMITAGE WATERWORKS	GWRmon 3	WABBASEKA WATERWORKS	PN 1
HERMITAGE WATERWORKS	BMCL 3	WABBASEKA WATERWORKS	Bmon 2
HIGHFILL WATER	DBPR 1, 2, 3	WALKER WATER ASSN	BMCL 1
HOPE WATER LIGHT COMM	DBPR 1, 2, 3	WALKER WATER ASSN	Dmon 2
HORATIO WATERWORKS	OperLic 1, 2, 3	WASHINGTON WATER	DBPR 1, 2, 3

AUTHORITY WW	
WASHINGTON WATER AUTHORITY WW	PN 3
WIEDERKEHR VILLAGE	PN 11, 12
WESTERN GROVE MUNICIPAL	PN 3
WESTERN GROVE MUNICIPAL	Bmon 3
WICKES WATERWORKS	Tmon 3
WIEDERKEHR VILLAGE	TMCL 1, 2
WIEDERKEHR VILLAGE	PN 1, 2, 3
WILMOT WATERWORKS	DBPR 1, 2, 3
WINCHESTER WATERWORKS	BMCL 1

KEY: Bmon = Bacti Monitoring; BMCL = Bacti MCL; CCR = Consumer Confidence Rule; Dmon = Disinfection By Product Rule Monitoring; DBPR=Disinfection By Product Rule MCL or Treatment Technique; GWRMCL=GWR Treatment Technique; GWRmon= GWR Monitoring or Reporting; PN = Public Notice Rule Tmon = SWTR Major Monitoring; TMCL = SWTR Treatment Technique; SWTR= Various SWTR requirements; Failure to Filter; RMCL = Radiochemical MCL; FMCL = Fluoride MCL; IMCL=Inorganic Chemical MCL; SMCL = Synthetic Chemical MCL; OperLic = Operator Licensing; 1 = January 2016, 2 = February 2016, 3 = March 2016

Staff News:



The Engineering Section welcomes Randall Puckett as a new Environmental Supervisor working in the source water protection

program area. Randall has been in state government for almost 20 years. He is a graduate from the University of Central Arkansas with a BS in Geography and a minor in Information Systems. Randall’s background is in the spatial disciplines of land surveying, drafting and GIS (geographic information systems).



The Engineering Section welcomes Adam Parker, E.I., as the new District 1 Engineer. Adam received his B.S. in Civil Engineering from the University of

Alabama in 2013. Before joining the Engineering Section, he worked in the oil and gas industry as a field engineer.

Water Licensing Renewal

Martin Nutt, Certification Officer

We have reached the mid-point of the 2017 Water Operator License renewal period. Water Operator’s with licenses or operator in training cards, are expected to obtain at least 24 hours of ADH approved continuing education training hours. At least 12 hours must be Direct training hours. The remaining 12 hours may be Direct or In-direct to complete the minimum renewal requirement of 24 training hours. A license received after July 1, 2015, may have the hours prorated to meet the License renewal requirements. All efforts are being made to update the ADH training website to reflect the Water Operator’s training credit.

To help serve Operators better sign-in sheets should contain the Training ID (last four digits of SSN and first three letters of last name) and/or attendance should be scanned to receive training credit. The lists below are training options that may be used towards renewal hours.

Direct Training Hours

- ARWA and AWW&WEA Annual Conferences
- AWW&WEA District Meetings
- All mandatory training for licensing exams
- Training related to system operating
-

In-direct Training Hours

- Wastewater courses
- Personal safety seminars (including SCBA, HazMat, Confined Space, etc.)
- Backflow Assembly Repair and Tester
- Plumbing Inspection

Return Service Requested

PRINTED ON RECYCLED PAPER

AWW&WEA District Meetings
 See also the Division's web site www.healthyarkansas.com/eng/ for updates.

DATE	TIME	CITY	LOCATION	SPONSOR
<u>August 2016</u>				
4	5:30 PM	Fort Smith	Western Sizzlin	Western District, AWW&WEA
4	5:00 PM	TBA	TBA	Central District, AWW&WEA
10	8:30 AM	Siloam Springs	Community Hall	Northwest District, AWW&WEA
11	5:00 PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
11	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
11	5:30 PM	Des Arc	Dondie's Restaurant	Eastern District, AWW&WEA
16	6:00 PM	Watson Chapel	Leon's	Southeast District, AWW&WEA
18	12:30 PM	Paragould	Grecian Steakhouse	Northeast District, AWW&WEA
25	6:00 PM	Prescott	Casa Carlos	Southwest District, AWW&WEA
<u>September 2016</u>				
1	5:00 PM	TBA	TBA	Central District, AWW&WEA
2	5:30 PM	Fort Smith	Columbus Acres Picnic	Western District, AWW&WEA
8	5:30 PM	Des Arc	Dondie's Restaurant	Eastern Central District, AWW&WEA
8	5:30 PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
8	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
14	8:30 AM	Springdale	Rodeo of the Ozarks Mtg. Rm	Northwest District, AWW&WEA
15	12:30 PM	Paragould	Iron Horse BBQ	Northeast District, AWW&WEA
20	6:00 PM	Monticello	Cowboys	Southeast District, AWW&WEA
22	6:00 PM	Camden	AETA Grand Ballroom, #2r	Southwest District, AWW&WEA
<u>October 2016</u>				
6	5:00 PM	TBA	TBA	Central District, AWW&WEA
12	8:30 AM	Eureka Springs	Best Western, Mtg. Rm.	Northwest District, AWW&WEA
13	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
13	5:30 AM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
13	5:30 PM	West Memphis	Utilities Office	Eastern District, AWW&WEA
14	5:30 PM	Fort Smith	Golden Corral	Western District, AWW&WEA
18	6:00 PM	Monticello	Western Sizzlin	Southeast District, AWW&WEA
17	6:00 Pm	Waldo	C.W. Easter Center	Southwest District, AWW&WEA
20	12:30 PM	Lake City	Winwater	Northeast District, AWW&WEA