



# ARKANSAS DRINKING WATER UPDATE

Volume 34, No.1

ENGINEERING SECTION – DEPARTMENT OF HEALTH

Spring 2020

## Drinking Water Systems are Critical Infrastructure

Jeff Stone, P.E., Director

The provision of safe drinking water during both normal periods and in times of crisis is essential to the continued health and safety of the public. Proper disinfection of drinking water supplies must continue uninterrupted. Drinking water systems and wastewater collection and treatment systems are both identified as critical infrastructure and the people that operate these systems are identified as essential personnel.

On March 19, 2020, Mr. Christopher C. Krebs, Director of the Cybersecurity and Infrastructure Security Agency of the U.S. Department of Homeland Security released a memorandum and guidance containing a list of essential infrastructure workers for the purpose of helping state and local officials as they cope with the current crisis.

The memorandum and guidance are titled “Advisory Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response”. The updated memorandum can be found here <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce>

This memorandum and guidance indicate “Functioning critical infrastructure is imperative during the response to the COVID-19 emergency for both public health and safety as well as community well-being. Certain critical infrastructure industries have a special responsibility in these times to continue operations.” Critical infrastructure sectors include:

- Healthcare/Public Health
- Law Enforcement, Public Safety, First Responders
- Food and Agriculture
- Energy
- Water and Wastewater
- Transportation and Logistics
- Public Works
- Communications and Information Technology
- Community Based Government Operations and Essential Functions
- Critical Manufacturing
- Hazardous Materials
- Financial Services
- Defense and Industrial Base

Under the Water and Wastewater Sector the memorandum details essential employees as employees needed to operate and maintain drinking water and wastewater/drainage infrastructure. These essential employees include:

- Operational staff at water systems and water authorities and distribution systems
- Workers performing required sampling or monitoring at water and wastewater systems
- Operational staff at wastewater treatment facilities and collection systems
- Workers repairing and maintaining water and wastewater pumps, pipes, etc.
- Operational staff and technical support for SCADA systems
- Chemical disinfectant suppliers
- Suppliers of personnel protection equipment
- Workers that maintain digital systems infrastructure supporting water and wastewater systems

In case the general public inquires, properly disinfected drinking water supplies are not considered a risk to the public regarding COVID-19. On March 19, 2020 the World Health Organization issued interim guidance titled “Water, sanitation, hygiene, and waste management for the COVID-19 virus”. That guidance states “Conventional, centralized water treatment methods that use filtration and disinfection should inactivate the COVID-19 virus”. That guidance can be found here <https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>

Additionally, the following links provide additional COVID-19 related information.

- EPA Drinking Water Related Questions: <https://www.epa.gov/coronavirus/coronavirus-and-drinking-water-and-wastewater>
- EPA Broadly COVID-19 Related Questions: <https://www.epa.gov/coronavirus>
- CDC COVID-19 Information: <https://www.cdc.gov/coronavirus/2019-nCoV/index.html>

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# Arkansas Training for Risk Assessments and Emergency Response Plans Due in 2020 and 2021

Jatin H. Mistry, U.S. EPA, Region 6  
Fatina Dodson, Arkansas Rural Water Association

On October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law. The law requires applicable community water systems (CWS) serving a population more than 3,300 to conduct risk and resilience assessments and, if necessary, update emergency response plans (ERP) based on their findings. The law includes specific components that the risk assessment and ERPs must address and establishes deadlines by which water systems must certify to the United States Environmental Protection Agency (EPA) completion of the risk assessment and ERP.

To assist Arkansas CWS with this requirement, EPA in partnership with the Arkansas Department of Health and the Arkansas Rural Water Association is hosting a free one-day training to Arkansas water systems. This training will take place on Wednesday, September 30, 2020, at the Arkansas Rural Water Association Headquarters, Ernie Faucett Room/Big Training Room at 240 Dee Dee Lane in Lonoke, Arkansas. Arkansas drinking water operators in attendance will be eligible to receive Direct Credit hours. Registration is now open.

## Arkansas Training for Risk Assessment and ERP

Wednesday, September 30, 2020, 8 AM to 4 PM

ARWA Headquarters  
Ernie Faucett Room/Big Training Room  
240 Dee Dee Lane  
Lonoke, AR 72086-8156

Logistic Information: Fatina Dodson 501-676-2255

Registration Link:

[https://epa\\_erp\\_arkansas.eventbrite.com](https://epa_erp_arkansas.eventbrite.com)

For the risk and resilience assessments, water systems must now consider risks from malevolent acts and natural hazards. These can include the following:

- Pipes/conveyances, source water, water collection/intake, pretreatment, treatment, storage and distribution, electronic, computer, or other automated systems (including security);
- Monitoring practices;
- Financial infrastructure;
- Use, storage or handling of chemicals;
- Operation and maintenance; and
- May include capital and operational needs for risk management.

For the ERPs, prepare or revise the document that incorporates findings from the risk assessment. This can include the following:

- Strategies and resources to improve resilience, including physical security and cybersecurity;
- Plans, procedures, and equipment for responding to a malevolent act or natural hazard;
- Actions, procedures, and equipment to lessen the impact of a malevolent act or natural hazard, including alternative source water, relocation of intakes, and flood protection barriers; and
- Strategies to detect malevolent acts or natural hazards.

It is recommended that water systems coordinate with local emergency planning committees and federal, state, local, and private sector partners when preparing or revising the risk assessment and ERP. Water systems must maintain the risk assessment and ERP for 5 years after the due date for certification.

Each CWS must certify to EPA that the CWS has completed the risk assessment and ERP. There is no need to send the actual risk assessment or ERP to EPA. All that is required is the name of the CWS, date of completion, and a statement of completion.

The certification due date for the **risk assessment** is as follows for the population served:

- ≥100,000 = March 31, 2020
- 50,000-99,999 = December 31, 2020
- 3,301-49,999 = June 30, 2021

The certification for the **ERP** is no later than 6 months after the completion of the risk assessment. The certification due dates for the **ERP** is as follows for the population served:

- ≥100,000 = September 30, 2020
- 50,000-99,999 = June 30, 2021
- 3,301-49,999 = December 31, 2021

Each CWS serving a population more than 3,300 must certify the completion of its risk and resilience assessment or emergency response plan for every individual Public Water System Identification (PWSID) number.

EPA is providing three options for the submission of the certifications. The options are as follows:

- Regular US Mail
- Email
- Secure online portal

The U.S. EPA strongly recommends CWS to electronically submit their water system's certification statements. This will be the only reporting method where the U.S. EPA will be able to provide an acknowledgement of receipt of the CWS's certification statement, as well as providing a simple process to address the return or destruction of the vulnerability assessment CWS likely submitted to the U.S. EPA under the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. If a CWS has specific questions regarding the electronic certification process, call EPA's Help Desk at 888-890-1995 (Option 2), all other inquiries can be emailed to U.S. EPA at [dwresilience@epa.gov](mailto:dwresilience@epa.gov).

To electronically certify the Community Water System's Risk and Resilience Assessment, use this link:

<https://encromerr.epa.gov/registrationrequest/OW--AWIA--Certifying%20Official%20-%20Risk%20Assessment?theme=awia>

To electronically certify the Community Water System's Emergency Response Plan, use this link: <https://encromerr.epa.gov/registrationrequest/OW--AWIA--Certifying%20Official%20-%20Emergency%20Response%20Plan?theme=awia>

If a CWS wishes to email or regular mail their certification statement, the certification statement for the Risk and Resilience Assessment can be

obtained from the following link: [https://www.epa.gov/sites/production/files/2019-07/documents/awia\\_risk\\_assessment\\_certification\\_form.pdf](https://www.epa.gov/sites/production/files/2019-07/documents/awia_risk_assessment_certification_form.pdf).

The certification statement for the Emergency Response Plan can be obtained from the following link:

[https://www.epa.gov/sites/production/files/2019-07/documents/awia\\_erp\\_certification\\_form\\_0.pdf](https://www.epa.gov/sites/production/files/2019-07/documents/awia_erp_certification_form_0.pdf).

For email submission: Fill out and sign the appropriate certification form and email the signed copy to [awiasupport@epacdx.net](mailto:awiasupport@epacdx.net). In the subject line please state "Risk and Resilience Assessment certification statement" or "Emergency Response Plan certification statement" along with the PWSID number.

For mail submission, mail the certification statement to the following address:

U.S. EPA Data Processing Center  
Attn: AWIA  
C/O CGI Federal  
12601 Fair Lakes Circle  
Fairfax, VA 22033

Each CWS must review and, if necessary, revise the risk assessment every 5 years after the certification deadline. Submit a certification to EPA that the CWS has reviewed and, if applicable, revised the risk assessment.

Each CWS must review and, if necessary, revise the ERP every 5 years following the review of the risk assessment. Submit a certification to EPA that the CWS has reviewed and, if necessary, revised the ERP no later than 6 months after the CWS has reviewed the risk assessment.

For additional information, please visit the following website:

<https://www.epa.gov/waterresilience/americas-water-infrastructure-act-2018-risk-assessments-and-emergency-response-plans>

For questions regarding AWIA Section 2013 (a) – (f), please contact EPA's Water Security Division at [WSD-outreach@epa.gov](mailto:WSD-outreach@epa.gov) or you may contact Teresa Lee at [teresa.lee@arkansas.gov](mailto:teresa.lee@arkansas.gov) or 501-280-4128.

The date of the meeting is subject to change due to the ongoing COVID-19 situation.

# Public Water System Rules Finalized

Jeff Stone, P.E., Director

On January 27, 2020, the revised Rules Pertaining to Public Water Systems became effective. This completed the rule revision process which began on August 1, 2019 when the Board of Health approved a request from staff to revise the rules. A copy of the revised rules can be viewed and downloaded from the Arkansas Department of Health's website at <https://www.healthy.arkansas.gov/rules-regs>

Specific changes made to the revised rules are as follows.

First, Section VII.G Approved Chemicals, Materials, Equipment, and Processes was modified so that, for very small water systems, product standards equivalent to ANSI/NSF 60 or 61 can be used for selecting equipment if those equivalent standards are issued by the FDA or ANSI/NSF. In plain language this means that certifications intended for residential use and residential sized products can be referenced when very small water systems need to select equipment of a similar small size. This size issue is most common when small transient public water systems such as a country store or camping area might need to make improvements to their water system. As a general rule of thumb, community water systems are usually large enough to find appropriate products and equipment that is certified according to ANSI/NSF 60 or 61.

Second, Section XI.H Cleaning and Disinfection was modified to correctly refer to the most recent version of the referenced AWWA Standard C652-11. This AWWA standard governs the disinfection of drinking water storage tanks prior to placing such a tank into service.

Third, Section XIV.E Disinfection of Pipe was modified to refer to the most recent version of the referenced AWWA Standard C651-14. This AWWA standard governs the disinfection of pipe. Language was struck concerning bacteriological sampling so that the rules will not be in conflict with the current standard. In plain language, the latest revision of this standard allows for two options concerning bacteriological sampling. One of those options allows for collection of bacteriological samples on the same day. The revised rule allows the use of either bacteriological sampling option.

Fourth, Section XXV Annual Fees was modified to update the required public water system service fee to \$0.40 per service connection per

month in accordance with the change in the service fee made by Act 788 of the 2019 legislative session. This change in service fee will enable the ADH to continue to provide laboratory services to public water systems as new and additional monitoring requirements become effective. Also, the ADH Public Health Laboratory is planning to develop an in-house capacity for cyanotoxin and PFAS analysis. The ADH drinking water program staff is very much appreciative of the support the regulated community has shown for continuation of this service.

Lastly, it became a legislative requirement that referring to "rules and regulations" should be discontinued and replaced with simply "rules". This was done for the sake of eliminating confusion that may have resulted by the use of "rules and regulations". Thus, reference to "regulations" was struck from the rule.

For your reference, a marked-up version of the sections modified is presented on the next page (page 2).

The ADH is implementing the changes in requirements. Billing for public water system service fees now reflect the changes in the required fee rate. Other changes to the regulations were more of a "housekeeping" nature and do not have immediate affects upon the regulated community.

If you have any questions concerning these changes, please feel free to contact me at [jeffery.stone@arkansas.gov](mailto:jeffery.stone@arkansas.gov)

## Staff News:



Eric Richter joined the Engineering Section as an Engineer Technician. Eric will be working in the sample collection program and will primarily work in north central Arkansas



Kyle Johnson is the new Environmental Health Specialist in the Source Water Protection Program. Kyle has worked along side the ADH in the past with mapping rural water utilities. He has experience in the utility sector using his GIS skills.



The Engineering Section welcomes Shada Roberts, P.E., who will be working in our Area-wide Optimization Program. Shada is a registered professional engineer with 18 years of experience in civil and environmental engineering.

## **PWS RULE CHANGES BY SECTION**

### *G. Approved Chemicals, Materials, Equipment, and Processes*

All chemicals added to the water and all materials in contact with in-process or treated water shall be certified as being in compliance with ANSI/NSF Standards 60 and 61, as applicable. In addition, all products required to be "lead free" as determined through Section 1417 of the Safe Drinking Water Act (42 U.S.C. 300g-6) shall be certified as being in compliance with NSF/ANSI 372 or Annex G of NSF/ANSI 61. Certification shall be made by an independent agency. Self-certification by the manufacturer will not be accepted.

All unit processes, equipment, chemicals and appurtenances shall be in accordance with the latest edition of the applicable AWWA standards, and approved by the Arkansas Department of Health.

For treatment facilities utilized for treating water solely for bottled water or very small water systems, at its discretion, the Department may allow certification with the equivalent U.S. Food and Drug Administration food contact or food additive standard or other ANSI/NSF drinking water standards in lieu of certification with the appropriate ANSI/NSF 60/61 and AWWA standards.

### *H. Cleaning and Disinfection*

Potable water storage tanks shall be cleaned as often as necessary. They shall be effectively disinfected before being placed into service in accordance with the "American Water Works Association Standard for Disinfection of Water Storage Facilities" (the latest edition of AWWA ~~C652-92~~ C652-11 or the latest revision thereof). Before the storage tank is placed in service, two consecutive series of samples that are not collected on the same day must show that the water is bacteriologically safe for drinking purposes.

### *E. Disinfection of Pipe*

Before being placed in service, all new water distribution systems, extensions to existing systems, any valved section of such extension or any replacement of the water distribution system shall be properly disinfected. Prior to disinfection, all dirt shall be removed by thorough flushing. All valves and appurtenances affected shall be operated while the pipeline is filled with the disinfecting agent. Following disinfection, all treated water shall be thoroughly flushed from the pipeline and bacteriological samples shall be taken to determine the efficiency of the disinfection procedure. Before the system or line is placed in service, two consecutive series of samples ~~that are not collected on the same day~~ must show that the water is bacteriologically safe for drinking purposes. Disinfection shall conform with American Water Works Association, "Standard Specifications for Disinfecting Water Mains," ~~C651-92~~ C651-14, or the latest revision thereof.

## **XXV. ANNUAL FEES**

The annual fees for public water systems provided for in Arkansas Statutes § 20-28-101 et seq are established at ~~\$0.30~~ \$0.40 per service connection per month for community and nontransient noncommunity water systems, with a minimum fee of \$250; and at \$125 for transient noncommunity water systems.

# ASDWA Submits Comments Concerning the Proposed Revisions to the Lead and Copper Rule

Jeff Stone, P.E., Director

On November 13, 2019 EPA published the long-awaited proposed revision to the lead and copper rule (LCRR) of the Safe Drinking Water Act. The proposed revisions to the lead and copper rule can be found here <https://www.epa.gov/ground-water-and-drinking-water/proposed-revisions-lead-and-copper-rule>. A public comment period followed that closed February 12, 2020. During this public comment period, the Association of State Drinking Water Administrators (ASDWA) submitted comments concerning the proposed rule revision. The lead and copper rule and the proposed revisions are both controversial and it is expected that the public comment period gathered a significant number of comments from many stakeholders.

The comments submitted by ASDWA totaled 80 pages in length and contained a large number of detailed comments on a variety of aspects of the proposed revision. However, a cover letter included with ASDWA's detailed comments provided a highlight of four main themes of the detailed comments. Those four main themes as presented by ASDWA are as follows (LSLR is an acronym for Lead Service Line Replacement).

- 1. Get the Lead Out:** Getting the lead out of the distribution system by requiring lead service line (LSL) removal is the long-term solution for certainty in reducing exposure to lead in drinking water, and the first step towards removal is a complete inventory of all service lines.
- 2. Continue to Reduce Exposure from Lead in Drinking Water:** To continue to reduce lead exposure during LSLR, ASDWA recommends Tier 1 sampling sites at locations with LSL's, appropriate corrosion control treatment (CCT), and water quality parameter (WQP) monitoring to ensure appropriate water quality is maintained throughout the distribution system, particularly when water sources or treatment processes are changed.

- 3. Work to Increase Transparency and Public Education and Clarify Public Notification:** Public education and communication are key to successful LCRR implementation. Public access to lead service line inventories will demonstrate water system transparency and is critical to help utilities establish their role as a trusted source of information.
- 4. Minimize the Implementation Burden and Increase Funding for States:** The proposed LCRR significantly increases the complexity of the rule and the burden on staff to implement the rule. The proposed LCRR will substantially increase the states' data management burden.

In addition to these main highlights, ASDWA provided 50 additional and more specific comments concerning the proposed revisions. ASDWA's comments concerning the LCRR can be accessed at this webpage <https://www.asdwa.org/2020/02/10/asdwa-submits-comments-on-proposed-lead-and-copper-rule-revisions-lcrr/>

Alarming, ASDWA estimates that the burden of state implementation of the LCRR if finalized in its current form would increase required state level staff hours by a factor of 12. Also, the volume of lead and copper analysis may more than double on an annual basis. The cost of nationwide lead service line replacements is estimated to be many billions of dollars. The proposed revisions would be expensive to implement and the cost ultimately will be paid by the taxpayer, ratepayer, or both.

It is expected that many other stakeholders other than ASDWA submitted extensive comments during the public comment period. A congressional hearing was held by the House Subcommittee on Environment and Climate Change concerning the proposed revisions on February 11<sup>th</sup> and was live streamed. EPA did not testify before that committee, but testimony was provided by drinking water industry groups, ASDWA, and by non-drinking water groups concerned with social and health concerns. It appears it would be safe to summarize the comments made during the hearing by indicating that the proposed revisions have not been well received by stakeholders.

It is uncertain when EPA will issue a final revision to the Lead and Copper Rule. Given the controversy of the rule and proposed revision and the extensive comments that were submitted during the comment period, it would be reasonable to assume that it might take EPA some time to issue a final rule revision.

# EPA Proposes to Regulate PFOA and PFOS in Drinking Water

Jeff Stone, P.E., Director

On February 20, 2020, the Environmental Protection Agency (EPA) announced their preliminary regulatory determinations concerning 8 of the 109 chemicals that were listed as part of the 4<sup>th</sup> Contaminant Candidate List (CCL4). The preliminary regulatory determinations allow for a public comment period prior to final regulatory determinations.

In the announcement of February 20, EPA proposes to regulate two perfluorinated compounds, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). EPA also proposes to not regulate 6 other chemicals. The compounds that are not going to be regulated are: 1,1-dichloroethane, acetochlor, methyl bromide (bromomethane), metolachlor, nitrobenzene, and Royal Demolition eXplosive (RDX). The criteria for determining to regulate a contaminant in drinking water are: a) the contaminant may have an adverse effect on the health of persons, b) the contaminant is known to occur or there is substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public concern, and c) in the sole judgement of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.

The two chemicals proposed to be regulated are perfluorinated compounds that are part of a group of chemicals called polyfluoroalkyl substances (PFAS) that have recently generated public concern and have been described as “forever chemicals” due to their persistence in the environment. These chemicals are associated with a wide variety of products that include: firefighting foam, production of non-stick cookware, and stain resistant coatings to name a few.

The presence of PFAS chemicals in drinking water first came to widespread attention during the monitoring conducted as required by the third unregulated contaminant monitoring rule (UCMR3) during the 2013 to 2015 time period. In one instance, PFAS contamination was discovered in a water system that had been contaminated from previous industrial activity. Treatment was relatively quickly installed to address the PFAS contamination. Cases like this triggered intense

public concern and national media attention. Since UCMR3, many more drinking water monitoring efforts have been conducted by various stakeholders, and analytical methodologies have improved with lower detection levels becoming possible. It appears that PFAS chemicals are ubiquitous and persistent in the environment and can be found in higher levels near contamination sites. Common sites of contamination include certain military or civilian airports where aviation firefighting training occurred using foams that contained PFAS compounds and industrial sites where these types of chemicals were produced.

Removal of PFAS compounds from drinking water involves utilization of nonconventional/advanced treatment schemes. Typically, granulated activated carbon (GAC) filtration is utilized. This treatment scheme comes with a high capital equipment and operations cost as well as the cost of regular replacement of the activated carbon media. Other possible treatment alternatives include ion exchange and reverse osmosis.

EPA has previously issued a drinking water health advisory for PFOA and PFOS. This advisory indicates a health advisory level of 70 parts per trillion for either PFOA or PFOS or both combined. This health advisory level is subject to change by EPA as more health effects information might become available. It is possible that a potential Maximum Contaminant Level set by a future regulation may be different than the initial health advisory level. The EPA health advisory for PFOA and PFOS can be found here <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

It is expected that the upcoming 5<sup>th</sup> Unregulated Contaminant Monitoring Rule (UCMR5) will require further monitoring for perfluorinated compounds including PFOS and PFOA. These additional occurrence data will be utilized to inform any potential regulation concerning these compounds.

The announcement made February 20, serves as a notice that the proposed determinations to regulate will soon be published in the Federal Register. Publication in the Federal Register will begin a 60 day comment period. At some point following the end of the public comment period, a final determination to regulate will be made. Information concerning this regulatory determination can be accessed here. <https://www.epa.gov/ccl/regulatory-determination-4>

# Corona Virus Impacts for Water Operator Training & Licensing

Martin Nutt, Training and Certification Officer

Steps taken to mitigate the effects of the COVID-19 (Corona Virus) pandemic have had far reaching impacts on our daily lives. It is critical that the water operator community stay focused on our very critical mission of maintaining a safe water supply to our customers & communities. Staying the course and meeting this critical mission is paramount.

On March 19, 2020 when this article was written:

Training providers are taking appropriate steps of cancelling mandatory license exams courses, and renewal hour training courses. Water systems will need to address how this action will impact their efforts in maintaining licensed staff.

Renewal training courses will return, needed renewal hours should be obtainable by June 30, 2020. Operators may have to modify how they get those hours. The use of on-line training may be one great resource. This website can be of assistance: <https://www.healthy.arkansas.gov/eng/autoupdates/oper/opcertlinks.htm>

Should mandatory courses be needed to meet critical licensing needs they are offered online, and there are limited alternative ways to meet the course requirements. Please see this website [www.healthy.arkansas.gov/water-license](http://www.healthy.arkansas.gov/water-license) for more information on online courses and alternate ways to meet the training requirements. When the pandemic subsides courses will return and general licensing needs will need to be met.

License exam sessions remain available for those that meet training requirements. Paper-based exam sessions are still scheduled in June, September and December, but subject to status change. Computer based exams continue to be offered by the contract exam vender PSI Services, some sites, but not all, have closed. The above "Water-License" website has information on utilizing computer-based licenses. Unfortunately, there are additional cost to taking computer-based exams (\$69.00). To sit for any license exam, paper or computer, will still require documenting you meet the mandatory course requirements, filing of an application, paying required fees, and the exam scheduled.

## REPORT OF THE

### Arkansas Drinking Water Advisory and Operator Licensing Committee

The Arkansas Drinking Water Advisory and Operator Licensing Committee met January 9, 2020 for its quarterly meeting. Please see next edition of the Drinking Water Update for a full report.

## NOTICE

The Arkansas Department of Health/Office of Oral Health has grant money available to upgrade old and outdated water fluoridation equipment. If you are interested, please send the following documents: engineering plans/schematic for engineering approval, a list of materials to be purchased for the project, and a letter of interest printed on municipal stationary. For more information, contact the director of the Office of Oral Health:  
Lindy Bollen, Jr., DDS  
[Lindy.Bollen@arkansas.gov](mailto:Lindy.Bollen@arkansas.gov) 501.280.4111

## WATER OPERATOR LICENSES ISSUED

LICENSEE NAME	GRADE/TYPE	SYSTEM NAME	ISSUE DATE
AGEE WADE	D - II	REYNO WATERWORKS & BIGGERS WATERWORKS	12/13/2019
ALLEN PATRICK	D - I	SEARCY WATERWORKS & N E WHITE COUNTY PFB	12/6/2019
AMBORT ERIC	D - III	CENTRAL ARKANSAS WATER	1/31/2020
ANDERSON JOSHUA	D - IV	CABOT WATERWORKS	12/6/2019
BARNES WILLIAM	D - I	HOLIDAY ISLAND WATERWORKS	12/5/2019
BATEMAN FRANK	D - VSS	COMMUNITIES UNLIMITED	11/25/2019
BATSON DONALD	D - II	REDFIELD WATERWORKS	1/28/2020
BREEDLOVE NICHOLAS	D - II	LIBERTY UTILITIES	2/19/2020
BYERLEY JEFFREY	T - IV	JACKSONVILLE WATERWORKS & US AIR FORCE BASE LITTLE ROCK	12/5/2019
CAMPBELL DENNY	D - I	DELL WATERWORKS	11/25/2019
CARNAHAN BRANDON	D - IV	ROGERS WATER UTILITIES	12/6/2019
CARTER KENNETH	D - IV	MARION COUNTY REG WATER DIST	12/7/2019
COLE STEVEN	D - III	LONOKE WHITE PUBLIC WATER AUTH	1/7/2020
CRAIN JAMES	D - III	CENTRAL ARKANSAS WATER	2/7/2020
DIXON RONNY	D - VSS	GREENWAY WATERWORKS	12/13/2019
EDWARDS WARREN	D - IV	FAYETTEVILLE WATERWORKS	1/25/2020
FISHER JAMES	D - I	BENTONVILLE WATER UTILITIES	1/9/2020
FLETCHER JOHN	D - IV	CABOT WATERWORKS	1/24/2020
FORST STEPHEN	D - IV	RIVERSOUTH RURAL WATER DIST	1/2/2020
FREEMAN TANNER	D - I	MARSHALL WATERWORKS	12/6/2019
GARNER JACOB	T - IV	JONESBORO WATER SYSTEM	2/1/2020
GRANDERSON COREY	D - IV	FAYETTEVILLE WATERWORKS	12/5/2019
HILL EDDIE	D - II	CORNING WATERWORKS	11/27/2019
HOLLOWAY KENT	T - IV	BEAVER WATER DISTRICT	12/19/2019
JOHNSON HENRY	D - I	HORATIO WATERWORKS	12/6/2019
KEY THOMAS	D - II	HARMONY GROVE WATER ASSOC	12/13/2019
KOSKA ALAN	D - III	BELLA VISTA P.O.A.	12/6/2019
LACKEY BRANDON	T - IV	CENTRAL ARKANSAS WATER	11/26/2019
LAWSON DEVAN	D - IV	TUMBLING SHOALS WATER ASSOC	12/6/2019
LOWDER JASON	T - IV	CENTRAL ARKANSAS WATER	1/25/2020
LUSINGER KYLE	T - II	EVERGREEN PACKAGING INC, PINE BLUFF	12/16/2019
LUTZ MARK	D - IV	BEEBE WATERWORKS	12/6/2019
MCCAULEY JUSTIN	D - II	DEQUEEN WATER WORK	12/11/2019
MCILROY ALLEN	D - I	NO PWS OF RECORD	12/13/2019
MCPMAHAN MICHAEL	T - III	EL DORADO WATERWORKS	1/23/2020
MITCHELL JASON	D - II	DOTA PUBLIC WATER AUTHORITY	12/6/2019
MORAN KEVIN	D - IV	SOUTHSIDE PUB WATER AUTHORITY	1/23/2020
MORGAN CHRISTOPHER	T - I	USCOE OC - BRADY MTN & LITTLE FIR	1/28/2020
NELSON CHRISTOPHER	D - II	AUSTIN WATERWORKS	12/6/2019
OCHS LARRY	D - VSS	LURTON-PELSOR WATER ASSOC	12/6/2019
PUMPHREY MARK	D - VSS	IDAHO TIMBER COMPANY	12/13/2019
RILEY KEITH	D - IV	MOUNT OLIVE WATER ASSOCIATION	12/6/2019
SHOCKLEY HAYDEN	D - I & T - I	ATKINS WATER SYSTEM	12/6/2019

## WATER OPERATOR LICENSES ISSUED

LICENSEE NAME	GRADE/TYPE	SYSTEM NAME	ISSUE DATE
SHOOK DANNY	T - II	CLARKSVILLE CONNECTED UTILITIES	2/12/2020
SHORT AARON	D - IV	ROGERS WATER UTILITIES	1/25/2020
SIMKINS VERNON	D - I	NEAPWA & POCAHONTAS WATERWORKS	11/13/2019
SKINNER JUSTIN	T - II	COTTON PLANT WATERWORKS	11/26/2019
SMITH CARL	D - I	MAGNOLIA WATERWORKS	12/13/2019
STEELY BRYSON	D - II	BEE BRANCH WATER	1/22/2020
TALKINGTON TONYA	T - IV	CHARLESTON WATERWORKS	2/3/2020
TATE STEVEN	D - III	PIGGOTT WATERWORKS	12/6/2019
THOMAS MURPHY	D - II	YORKTOWN WATER ASSOCIATION	11/20/2019
TRAVIS ROBERT	D - I	NORTH CROSSETT UTILITIES	12/13/2019
VANHOOSE JASON	D - II	DEQUEEN WATER WORK	2/7/2020
WATKINS LINARD	D - IV	NORTH WHITE CO RURAL WATER PFB	1/23/2020
WHITFIELD JOE	T - II	ALMA WATERWORKS	11/25/2019
WIAND JAMES	D - III	CENTERTON WATERWORKS & HIGHFILL WATER DEPARTMENT	12/5/2019
WILLIAMS BYRON	T - IV	HOPE WATER LIGHT COMM	2/3/2020
WILLIAMS MATTHEW	T - II	BONO WATERWORKS	12/13/2019
WOOLDRIDGE PAYTON	D - II	CAVE CITY WATERWORKS	1/21/2020
WRIGHT RICHARD	D - II	PERRYVILLE WATERWORKS	1/17/2020

### Lead Testing in Schools and Daycare Facilities to Begin this Summer

Teresa Lee, P.E., Chief Technical Services

In February, the Arkansas Department of Education (DOE) received federal funding appropriated under Section 1464(d) of the Safe Drinking Water Act as amended by the Water Infrastructure Improvement Act (WIIN) Section 2107. In accordance with the WIIN Act, the DOE will assist schools and daycare facilities in voluntary testing for lead contamination in drinking water. Any school or daycare center is eligible for the program, but priority will be given to facilities serving younger children (ages 6 and under), underserved and low-income communities, and facilities that are older and more likely to contain lead plumbing or solder.

It is the DOE's goal to reduce lead exposure at these facilities by testing for lead, identifying potential lead sources, and taking action. This includes testing all outlets used for consumption, providing education about lead and the importance of testing to all school districts, and taking action by addressing potential elevated lead levels, if found.

The DOE will send information about the program to each school district and daycare facility. Additional educational materials will be sent to facilities that volunteer for the testing. This includes videos describing how to prepare a sample site plan, a site plan form, instructions on how to collect samples, and ways to communicate results to parents and other stakeholders.

The Department of Health, Engineering Section, will work closely with the DOE on the lead testing program. If you have any questions or know of any facility that would like to be tested, please contact Kenneth Johnson with the Facilities and Transportation Division of the DOE at (501) 683-1295, or you may contact Aaron Hilborn, Engineer Supervisor, at the Department of Health. Aaron can be reached at (501) 661-2623.

## Mandatory Training Course Schedule

Most Current Listing is at: [www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrngall.htm](http://www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrngall.htm).  
Please contact the course sponsor to register for course well in advance of course date.

Mandatory Course Name	Start Date	Ending Date	Time	CITY	LOCATION	SPONSOR
When this Newsletter went to press training classes were being cancelled due to Corona Virus concerns The below classes may also be cancelled						
Applied Math	04/13/20	04/27/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Intermediate Distribution	04/14/20	4/16/20	8:00 Am	Texarkana	Texarkana Water Utility, 801 Wood St. Texarkana	AETA
Intermediate Treatment	04/21/20	4/23/20	8:00 Am	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	ARWA
Intermediate Treatment	04/21/20	4/23/20	8:00 Am	Lowell	Beaver Water Dist, 301 N Primrose Rd	AETA
Basic Math	04/27/20	4/27/20	CANCELLED	Hot Springs	AWWWEA Conf, Hs Convention Center	AETA
Basic Treatment	04/27/20	05/11/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
ADH PWS Compliance	04/28/20	4/28/20	CANCELLED	Hot Springs	AWWWEA Conf, Hs Convention Center	ADH
Applied Math	04/28/20	4/28/20	CANCELLED	Hot Springs	AWWWEA Conf, Hs Convention Center	AETA
Intermediate Treatment	06/01/20	06/15/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Basic Distribution	06/02/20	06/04/20	8:00 Am	Mtn. Home	Charles R Newton Emer Serv Trng Center, Midway	ARWA
Basic Distribution	06/02/20	6/4/20	8:00 Am	Springdale	Springdale Training Facility, 525 Oak Ave	AETA
Advanced Distribution	06/09/20	6/11/20	8:00 Am	Jonesboro	Operations Facility, 105 W Johnson Ave	AETA
Intermediate Distribution	06/15/20	06/29/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Basic Math	06/23/20	6/23/20	8:00 Am	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr	ARWA
Basic Treatment	06/23/20	6/25/20	8:00 Am	Little Rock	Caw Clearwater Complex, 11 Clearwater Drive	AETA
ADH PWS Compliance	06/24/20	6/24/20	8:00 Am	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr	ADH
Applied Math	06/25/20	6/25/20	8:00 Am	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr	ARWA
Advanced Treatment	06/29/20	07/13/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Basic Distribution	07/07/20	7/9/20	8:00 Am	Van Buren	TBA (Contact AETA)	AETA
Intermediate Distribution	07/07/20	7/9/20	8:00 Am	Mtn. Home	Charles R Newton Emer Serv Trng Center, Midway	ARWA
Advanced Distribution	07/13/20	07/27/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
ADH PWS Compliance	07/14/20	7/14/20	8:00 Am	N Little Rock	1500 W. Maryland Ave., NLR	ADH
Basic Math	07/15/20	7/15/20	8:00 Am	N Little Rock	1500 W. Maryland Ave., NLR	AETA
Applied Math	07/16/20	7/16/20	8:00 Am	N Little Rock	1500 W. Maryland Ave., NLR	AETA
Advanced Treatment	07/21/20	7/21/20	8:00 Am	Camden	AR Env Training Academy, 6287 Spellman Road	AETA
Basic Treatment	07/28/20	07/30/20	8:00 Am	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr	ARWA
Basic Math	08/03/20	08/17/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Advanced Distribution	08/11/20	08/13/20	8:00 Am	Mtn. Home	Charles R Newton Emer Serv Trng Center, Midway	ARWA
Intermediate Distribution	08/11/20	08/13/20	8:00 Am	Little Rock	Caw Clearwater Complex, 11 Clearwater Drive	AETA
Applied Math	08/17/20	08/31/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Basic Math	08/18/20	8/18/20	8:00 Am	Siloam Spgs	Community Building, 110 North Mt. Olive Street	ARWA
Intermediate Treatment	08/18/20	8/20/20	8:00 Am	Maumelle	TBA (Contact AETA)	AETA
ADH PWS Compliance	08/19/20	8/19/20	8:00 Am	Siloam Spgs	Community Building, 110 North Mt. Olive Street	ADH
Applied Math	08/20/20	8/19/20	8:00 Am	Siloam Spgs	Community Building, 110 North Mt. Olive Street	ARWA
Basic Math	08/25/20	08/25/20	8:00 Am	Hot Springs	TBA (Contact AETA)	AETA
Applied Math	08/26/20	08/26/20	8:00 Am	Hot Springs	TBA (Contact AETA)	AETA
ADH PWS Compliance	08/27/20	08/27/20	8:00 Am	Hot Springs	TBA (Contact AETA)	ADH
Basic Treatment	08/31/20	09/14/20	TBD	Internet	<a href="http://www.sautech.edu/aeta/">www.sautech.edu/aeta/</a>	AETA
Advanced Distribution	09/01/20	09/03/20	8:00 Am	Little Rock	Caw Clearwater Complex, 11 Clearwater Drive	AETA
Intermediate	09/08/20	9/10/20	8:00 Am	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA

Distribution						
Basic Distribution	09/14/20	09/28/20	TBD	Internet	www.sautech.edu/aeta/	AETA
Basic Treatment	09/15/20	9/17/20	8:00 Am	Greers Ferry	Community Water System, 299 Lakeshore Drive	AETA
Basic Distribution	09/22/20	9/24/20	8:00 Am	Rogers	Rogers Water Utility, 521 South 2nd Street	AETA
Intermediate Treatment	09/22/20	9/24/20	8:00 Am	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr	ARWA
Intermediate Treatment	09/28/20	10/12/20	TBD	Internet	Www.sautech.edu/aeta/	AETA
Intermediate Distribution	09/29/20	10/1/20	8:00 Am	Fayetteville	Utilities Operations Center, 2435 S Industrial Dr	AETA
Advanced Treatment	10/05/20	10/7/20	8:00 Am	Greers Ferry	Community Water System, 299 Lakeshore Drive	AETA
Basic Math	10/06/20	10/6/20	8:00 Am	Lonoke	AR Training Facility, 240 Dee Dee Ln	ARWA
ADH PWS Compliance	10/07/20	10/7/20	8:00 Am	Lonoke	AR Training Facility, 240 Dee Dee Ln	ADH
Applied Math	10/08/20	10/8/20	8:00 Am	Lonoke	AR Training Facility, 240 Dee Dee Ln	ARWA
Intermediate Distribution	10/12/20	10/26/20	TBD	Internet	www.sautech.edu/aeta/	AETA
Advanced Treatment	10/20/20	10/22/20	8:00 Am	Lonoke	AR Training Facility, 240 Dee Dee Ln	ARWA
Basic Distribution	10/20/20	10/22/20	8:00 Am	Camden	AR Env Training Academy, 6287 Spellman Road	AETA
Basic Treatment	10/27/20	10/29/20	8:00 Am	Little Rock	Caw Clearwater Complex, 11 Clearwater Drive	AETA
Advanced Treatment	11/02/20	11/16/20	TBD	Internet	www.sautech.edu/aeta/	AETA
Basic Distribution	11/03/20	11/5/20	8:00 Am	Siloam Sprgs	Siloam Springs Public Library, 205 E Jefferson St	ARWA
Basic Math	11/03/20	11/03/20	8:00 Am	Fayetteville	Utilities Operations Center, 2435 S Industrial Dr	AETA
Applied Math	11/04/20	11/04/20	8:00 Am	Fayetteville	Utilities Operations Center, 2435 S Industrial Dr	AETA
ADH PWS Compliance	11/05/20	11/05/20	8:00 Am	Fayetteville	Utilities Operations Center, 2435 S Industrial Dr	ADH
Advanced Distribution	11/16/20	11/30/20	TBD	Internet	www.sautech.edu/aeta/	AETA
Advanced Distribution	11/17/20	11/19/20	8:00 Am	Rogers	Rogers Water Utility, 521 South 2nd Street	AETA
Basic Treatment	11/17/20	11/19/20	8:00 Am	Lonoke	AR Training Facility, 240 Dee Dee Ln	ARWA
Applied Math	12/01/20	12/14/20	TBD	Internet	Www.sautech.edu/aeta/	AETA
Basic Math	12/01/20	12/14/20	TBD	Internet	www.sautech.edu/aeta/	AETA
Intermediate Treatment	12/01/20	12/3/20	8:00 Am	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Intermediate Distribution	12/08/20	12/10/20	8:00 Am	Siloam Sprgs	Community Building. Olive Street	ARWA
Intermediate Distribution	12/08/20	12/10/20	8:00 Am	Camden	AR Env Training Academy, 6287 Spellman Road	AETA

**Most current and future training schedule is posted at this website:**

<http://www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrngall.htm>

**2020 training schedule will be posted at above website when available from trainers.**

[www.awwwea.org](http://www.awwwea.org)

## 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 with License application filed at least 60 days before the exam.** To register on the internet go to [www.healthy.arkansas.gov/eng](http://www.healthy.arkansas.gov/eng) and click on Operator Certification, then select Register- Water License Exam.

Listed below are the dates and locations of examination sessions as scheduled, as of **September 20, 2019**. 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
When this Newsletter went to press Exam Sessions were being Cancelled due to Corona Virus Concerns				
Below Sessions may also be cancelled				
4/29/2020	CANCELLED	Hot Springs	AWW&WEA Annual Conf, HS Convention Center	9:00:00 AM
6/4/2020	4/21/2020	Rogers	Rogers Water Utility Training Rm, 521 South 2nd St	1:00:00 PM
6/5/2020	4/21/2020	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00:00 AM
6/5/2020	4/21/2020	Nashville	Carter Day Center, 200 Lake Nichols Drive	9:00:00 AM
6/5/2020	4/21/2020	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00:00 AM
6/12/2020	4/28/2020	Camden	AR Environmental Training Academy, 100 Carr Road	9:00:00 AM
6/12/2020	4/28/2020	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00:00 AM
6/12/2020	4/28/2020	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00:00 AM
9/3/2020	7/21/2020	Mtn. Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	9:00:00 AM
9/3/2020	7/21/2020	Rogers	Rogers Water Utility Training Rm, 521 South 2nd St	1:00:00 PM
9/4/2020	7/21/2020	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00:00 AM
9/4/2020	7/21/2020	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00:00 AM
9/11/2020	7/28/2020	Camden	AR Environmental Training Academy, 100 Carr Road	9:00:00 AM
9/11/2020	7/28/2020	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00:00 AM
9/11/2020	7/28/2020	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00:00 AM
9/16/2020	8/3/2020	Hot Springs	ARWA Conference, HS Convention Center	9:00:00 AM
12/3/2020	10/20/2020	Rogers	Rogers Water Utility Training Rm, 521 South 2nd St	1:00:00 PM
12/4/2020	10/20/2020	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00:00 AM
12/4/2020	10/20/2020	Nashville	Carter Day Center, 200 Lake Nichols Drive	9:00:00 AM
12/4/2020	10/20/2020	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00:00 AM
12/11/2020	10/27/2020	Camden	AR Environmental Training Academy, 100 Carr Road	9:00:00 AM
12/11/2020	10/27/2020	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00:00 AM
12/11/2020	10/27/2020	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00:00 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 file application at least 60 days prior to the exam. If repeating same exam please remit \$25.00 exam fee using provided invoice at time of exam registration.**

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, Oct. – Dec. 2019

ADC EAST ARKANSAS REG.	Bmon 10	LAKE VIEW MUNICIPAL	Bmon 10,12
AMITY WATERWORKS	CCR 10	LAKE VIEW MUNICIPAL	Dmon 11,12
AR DEPT OF CORRECTION	Bmon 10, Dmon 10	LAKE VIEW MUNICIPAL WA	GWRmon 10
IZARD CO		LAKESHORE ESTATES	Bmon 11
ARKANSAS CITY WATER	GWRmon 11	LAKESIDE WATER ASSN	DBPR 10, 11, 12
AUTUMN ACRES MHP	CCR 10	LEE COUNTY WATER ASSN	DBPR 10, 11, 12
BANKS WATERWORKS	Bmon 10, 11	LEE COUNTY WATER ASSN	PN 10, 12
BEARDEN WATERWORKS	CCR 10	LEOLA WATERWORKS	OperLic 10
BELLEVILLE WATER	DBPR 10, 11, 12	LESLIE WATER SYSTEM	CCR 10
BELLEVILLE WATER	Bmon 12	LITTLE PORTION	OperLic 11
BLACK OAK WATERWORKS	CCR 10	HERMITAGE	
BLUE MOUNTAIN WATER	DBPR 10, 11, 12	MAGNOLIA WATERWORKS	PN 11, 12
BOIS D'ARC WATER	Bmon 10, 11, 12	MANILA WATERWORKS	PN 12
BOIS D'ARC WATER	OperLic 10, 11, 12	MARVELL RURAL WATER	Bmon 12
BOIS D'ARC WATER	PN 10	MARVEL WATERWORKS	Bmon 12
BRECKENRIDGE-UNION	Bmon 10, PN 12	MCGEHEE WATERWORKS	Bmon 10
CALHOUN COUNTY WATER	CCR 10	MIDWAY WATER ASSN	Bmon 10
CALION WATERWORKS	Bmon 11	MILLTOWN-WASHBURN	DBPR 10, 11, 12
CAMPBELL STATION	CCR 10	MONTGOMERY COUNTY	DBPR 10, 11, 12
CASA WATER DEPT	PN 12	MORO WATERWORKS	DBPR 10, 11, 12
CAVE SPRINGS WATER	CCR 10, Bmon 12	MOUNT IDA WATERWORKS	DBPR 10, 11, 12
CHIDESTER WATERWORKS	Bmon 10, GWRmon 11	MULBERRY WATERWORKS	Bmon 12
CLARKEDALE-JERICHO	Bmon 10	NASHVILLE RURAL WATER	DBPR 10, 11, 12
COLLINS WATERWORKS	CCR 10	NACTR	Dmon 12
COTTON PLANT	OperLic 10, 11	NEW HOPE WATER ASSN	Bmon 11
COTTON PLANT	PN 12	NEW LONDON WATER	DBPR 10, 11, 12
CRABAPPLE POINT WATER	Bmon 11	NORMAN WATERWORKS	Bmon 10
CROSS COUNTY RURAL	DBPR 10, 11, 12	NORTH WHITE CO RURAL	OperLic 10, 11, 12
DEER WATER ASSN	Bmon 11	ODEN PENCIL BLUFF	DBPR 10, 11, 12
DIAMOND CITY WATER	Bmon 10, 11	OLD BELL VISTA POA	Dmon 12
DIAMOND CITY WATER	OperLic 10, 11, 12	PERRYTOWN WATER	Bmon 10, CCR 10
EAST MONROE COUNTY	PN 12	PICKENS WATERWORKS	Bmon 10, 11
ELAINE WATERWORKS	Bmon 10, 12, Dmon 11	PICKENS WATERWORKS	OperLic 10, 11, 12
FORDYCE RURAL WATER	CCR 10	PICKENS WATERWORKS	PN 10, 11, 12
FORDYCE WATER CO	CCR 10	POLLARD WATERWORKS	CCR 10
GILMORE WATERWORKS	Bmon 10	RAMBO WATER DISTRICT	IMCL 10, 11, 12
GOULD MUNICIPAL WATER	Bmon 11	#1	
GRANGE-CALAMINE	CCR 10	RAMBO WATER DISTRICT	Bmon 11
GREEN HILL-BROOKS	OperLic 10, 11, 12	#1	
CHAPEL WATER		RIDGEFIELD ESTATES	CCR 10, Bmon 11
GUM SPRINGS MUNICIPAL	CCR 10	SPG WATER ASSN	Bmon 11
HACKETT WATERWORKS	DBPR 10, 11, 12	SELMA WATER ASSN	Bmon 10
HAMBURG WATERWORKS	Bmon 12	SHADY ACRES MHP	Bmon 10, 11, 12
HAVANA WATERWORKS	CCR 10	SHADY ACRES MHP	OperLic 10, 11, 12
HEAFER-BLACK OAK	Bmon 10	SHADY ACRES MHP	PN 10, 11, 12
HERMITAGE WATERWORKS	Bmon 11	SOUTH LOGAN COUNTY W	Dmon 12, OperLic 10
HOLLY GROVE	Bmon 10	SOUTHWEST ARKANSAS	DBPR 10, 11, 12
HOSANNA HEIGHTS WATER	Bmon 11	WATER	
HUMPHREY WATERWORKS	Bmon 10, 11, 12	SPADRA-GOOSE CAMP	Bmon 12
HUMPHREY WATERWORKS	OperLic 12	STRONG WATERWORKS	Bmon 12
HWY 64 WATER ASSN	Bmon 11	STRONG WATERWORKS	CCR 10
INDIAN SWITCH RURAL WA	Bmon 10	STRONG WATERWORKS	PN 11
JAMES FORK REGIONAL W	DBPR 10, 11, 12	STRONG WATERWORKS	GWRmon 12
JOHNSON TWP WATER	DBPR 10, 11, 12	SUNSET WATER ASSN	Bmon 11
KEISER WATERWORKS	CCR 10	SYLAMORE VALLEY WATER	Bmon 10, 11, 12
KEO WATERWORKS	Bmon 12, Dmon 12	TANKSLEY APARTMENTS	CCR 10

TOLLETTE WATER	GWRmon11
TONTITOWN WATER	DBPR 10, 11, 12
TURRELL WATERWORKS	Bmon 10
ULM WATERWORKS	Bmon 12
VANDERVOORT WATER	Bmon 10, 11, 12
WABBESEKA WATER	Bmon 10, 12
WABBESEKA WATER	OperLic 10, 11, 12
WABBESEKA WATER	PN 10, 12
WALNUT RIDGE WATER	DBPR 10, 11, 12
WARD WATER	Dmon 10
WASHINGTON WATER AUTHORITY	CCR 10
WESTERN GROVE	Bmon 11, 12
WHEATLEY WATERWORKS	CCR 10
WICKES WATERWORKS	Bmon 12
WILMOT WATERWORKS	DBPR 10, 11, 12
WILTON WATERWORKS	Bmon 11, 12
WRIGHT-PASTORIA WATER	Bmon 12

**[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; 10 = October 2019, 11 = November 2019, 12 = December 2019

## Exam Reference Manuals – A Necessity?

Martin Nutt, Training and Certification Officer

The present water license exams scoring indicate that significant preparation by the exam candidate (operator) is a necessity/required. The format (three days in a row) and allowed time for the mandatory courses are not adequate to be the only exam preparation performed. If candidates are not doing significant reference manual study prior to and during the process of attending the mandatory courses, then their ability to retain and remember the course material is significantly reduced. A quick internet search on “retention rates for learners” provides many links to helpful documents on how to improve your learning retention but also troubling information on the average retention rates of information, such as “after one hour, people retain less than half of the information presented, and after one day, people forget more than 70 percent of what was taught in training.

Retention rates can be improved by understanding how our brains retain information in

multiple ways, such as: reading, seeing, and hearing information, repeated exposure to the same information, or adding new information to what we already know. Studying the reference manuals, watching instructional videos (internet search topics), performing the tasks, etc. will all increase the effectiveness of classroom instruction retention. As you retain information, the brain has somewhere to attach/retain the new information. The more ways we stimulate our brains to learn something, the more likely we are to retain the information and accomplish our goal of passing the license exam, or other goals.

The reference manual list is only a small selection of the overall amount of reference materials available in the drinking water industry. I know costs are a major influencer in obtaining references but the manuals are critical. The reference manual list is included in this newsletter and at this webpage: <http://www.healthy.arkansas.gov/images/uploads/pdf/drinking-water-operref.pdf>.

The list now recommends both the AWWA “Water Supply Operations” (WSO) series, with its alignment with ABC NTK Criteria, and the Office of Water Programs, SacState manuals as primary resource manuals. Both sets of the manuals are heavily utilized in the development of new exam items, including the ABC 2017 exam questions.

At a bare minimum, you should have access to the AWWA WSO series or the SacStae manual series. The list has several additional manuals, all-helpful in preparing for license exams. The number of manuals needed can be reduced when preparing for a treatment exam versus a distribution exam. In addition, when using the WSO manuals the use of Grade 1, etc. can be misleading for Arkansas operators. The ABC NTK Criteria is based on ABC licensing concept which requires an operator to hold a grade 1 license before you can take the grade 2, 2 before 3, 3 before 4, so if you are starting with a higher-grade exam you still must study the lower grade manuals. Most likely, you will not understand the higher-grade manuals without the lower grade manual’s knowledge. In visiting with operators who struggled passing their exam, when they did pass their exam, three common patterns have become evident. First, the operators attitude converted from some type of “I have to have” this license attitude to “I want” this license attitude. Second, they obtained access to the manuals and actually studied them with a desire to learn the materials. Many times, the third change was additional manuals were obtained to expand their knowledge base.

Return Service Requested

PRINTED ON RECYCLED PAPER

### AWW&WEA District Meetings

See also the Division's web site [www.healthyarkansas.com/eng/](http://www.healthyarkansas.com/eng/) for updates.

DATE	TIME	CITY	LOCATION	SPONSOR
<u>May 2020</u>				
No Meeting Scheduled for May				Western District, AWW&WEA
No Meeting Scheduled for May				Northwest District, AWW&WEA
7	5:30 PM	TBA	TBA	Central District, AWW&WEA
14	5:00 PM	Crawfordsville	TBA	Eastern District, AWW&WEA
14	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
19	6:00 PM	Watson Chapel	Water Shop	Southeast District, AWW&WEA
21	12:30 PM	Rector	Community Center	Northeast District, AWW& WEA
28	6:00 PM	Arkadelphia	TBA	Southwest District, AWW&WEA
<u>Monthly Meetings Discontinued</u>				
<u>June 2020</u>				
4	5:30 PM	TBA	TBA	Central District, AWW&WEA
4	5:30 PM	Fort Smith	Columbus Acres	Western District, AWW&WEA
10	8:30 AM	Holiday Island	Club House	Northwest District, AWW&WEA
11	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
11	6:00 PM	Stuttgart	Open Season's	Eastern Central District, AWW&WEA
16	6:00 PM	TBA		Southeast District, AWW&WEA
18	12:30 PM	Paragould	Iron Horse BBQ	Northeast District, AWW&WEA
25	6:00 PM	Foreman	TBA	Southwest District, AWW& WEA
<u>Monthly Meetings Discontinued</u>				
<u>July 2020</u>				
2	5:30 PM	TBA	TBA	Central District, AWW&WEA
2	5:30 PM	Fort Smith	Western Sizzlin	Western District, AWW&WEA
8	8:30 AM	Pea Ridge	Emergency Services Bldg.	Northwest District, AWW&WEA
9	5:00 PM	Des Arc	Donie's	Eastern District, AWW&WEA
9	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
16	12:30 PM	Walnut Ridge	Wonderful Chinese Buffet	Northeast District, AWW&WEA
21	6:00 PM	Star City	Country Village	Southeast District, AWW&WEA
23	6:00 PM	El Dorado	TBA	Southwest District, AWW&WEA
<u>Monthly Meetings Discontinued</u>				
<u>AR Valley District, AWW&amp; WEA</u>				