



ARKANSAS DRINKING WATER UPDATE

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ENGINEERING SECTION – DEPARTMENT OF HEALTH

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UCMR3 Rule Finalized

Jeff Stone, P.E., Director &
Susan Corder, R.S., Environmental Specialist Supervisor

On May 1, 2012, the U.S. Environmental Protection Agency (EPA) announced the final Unregulated Contaminant Monitoring Rule 3 (UCMR3). The final rule was published in the Federal Register on May 2nd. Key changes to the proposed rule, included:

1. Addition of hexavalent chromium (Cr-6), removal of sec-butylbenzene and n-propylbenzene from the list
2. Hormones are now listed as part of the Screening Survey vs. Assessment Monitoring
3. Laboratories now have 120 days (vs. 60) to post results to the electronic reporting system Safe Drinking Water Accession and Review System (SDWARS)
4. Public water systems now have 60 days (vs. 30) to review/approve results in SDWARS

The finalized list is comprised of 28 chemicals and 2 viruses. Nationwide, approximately 6,000 public water systems will monitor from 2013 to 2015. EPA will spend approximately \$20 million dollars primarily assisting water systems below 10,000 service population.

In the state of Arkansas, the monitoring costs for systems serving 10,000 people or greater will be covered by the Engineering Section utilizing funds obtained from the public water system service fees. EPA will pay the monitoring costs for public water systems serving less than 10,000 people. Over a three year period, the additional costs to the Engineering Section are estimated at approximately \$400,000.

Approximately 70 water systems in Arkansas have been selected for monitoring under the UCMR3. Systems will monitor on a schedule as dictated by EPA during the 2013 to 2015 monitoring cycle. Systems utilizing a surface source will monitor for 4 consecutive quarters and systems utilizing a ground source will monitor for 2 quarters (6 months apart).

The Engineering Section will coordinate and collect all UCMR3 compliance samples. Public Water Systems will be contacted by an Arkansas Department of Health Engineer Technician one week in advance of their scheduled sampling date.

The reporting requirements for UCMR3 will be similar to those for the previous UCMR2. Laboratories responsible for sample analysis under UCMR3 will post data to EPA's web based SDWARS. Public water

systems will then review and act upon data submitted to SDWARS. After PWSs have reviewed and approved their data, analytical results are released to State agencies and EPA as official UCMR3 results.

To register as an approver go to <http://cdx.epa.gov/preregistration>, enter the Customer Retrieval Key (CRK) provided by EPA on June 16, 2012, and follow the online directions to complete registration. Registration should be completed as soon as possible as the CRK expires in 90 days.

Once a Central Data Exchange (CDX) account for SDWARS is established, you may nominate other individuals to serve as representatives for your organization by using the nominate user link in the left sidebar on the main SDWARS page. A CRK will be generated within SDWARS for the nominee to use in establishing their own account. If PWSs plan to request assistance approving and reviewing data in SDWARS, Susan Corder must be listed as a nominee in order for her to access data. ADH will assist and advise water systems concerning monitoring, scheduling, collection and/or SDWARS, etc. Susan Corder is the ADH point of contact for UCMR3 (susan.corder@arkansas.gov).

As a review of the constituents included in the final rule, the UCMR design divides contaminants into three types of monitoring, (1) Assessment Monitoring, (2) Screening Survey and (3) Pre-Screen Testing.

- (1) Assessment Monitoring utilizes common analytical method technologies. The final Assessment Monitoring List includes: seven (7) Volatile Organic Compounds, one (1) Synthetic Organic Compound, six (6) metals including chromium-6, chlorate, and six (6) perfluorinated compounds.

(See UCMR3, page 4)

Inside the <i>Update</i>	Page
Annual Compliance Report	2
Fluoridation Program Update	2
Geology & Drinking Water Sources	3
Nitrosamines	4
Stage 2 DBP Rule	5
Security/Climate Change	6
IFTMR Forms	7
Organizational Chart	8
Licensing Committee Report	11

Annual Compliance Report Available

Jeff Stone, P.E., Director

The Engineering Section has completed the Annual Compliance Report (ACR) pertaining to calendar year 2011. As 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 Engineer Section website (<http://www.healthy.arkansas.gov/programsServices/environmentalHealth/Engineering/Pages/ReportsandForms.aspx>) or a paper copy is available if requested.

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	2,937,979
% of Arkansans Served by Public Water	92.5%
Number of Community Public Water Systems	711
Number of Transient, Non-Community Public Water Systems	375
Monitoring Compliance (person months)	99.7%
SDWA Water Quality Compliance	98.0%
Overall SDWA Compliance (person months)	97.7%

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 97.7% for 2011 compares favorably with the 2010 overall compliance rate of 95.5%. This is largely a reflection of the progress that public water systems have made in complying with the Stage 1 Disinfection By Product Rule requirements. We are now nearing the implementation time frame for Stage 2 requirements and as a result there is likely to be an incremental decrease in overall compliance rates in the next few years.

If an electronic copy of the ACR is desired,

ARKANSAS DRINKING WATER UPDATE is published quarterly by the Engineering Section, Arkansas Department of Health to inform readers of issues and activities affecting this industry. Articles and information in the newsletter can be reproduced without restriction if credit is given for the source. Potential contributors of articles for the *UPDATE* and persons wishing to be added to the mailing list should contact the Section at the address listed on the last page.

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

Fluoridation Program Update

Glenn Greenway, P.E., Engineer Supervisor

The Arkansas Department of Health conducted a water operator fluoridation training school on June 13th and 14th at the Arkansas Rural Water Association training center at Lonoke. Eight water operators attended and received 12 hours of direct training on water fluoridation.

Carol Amerine of the Arkansas Department of Health Office of Oral Health gave a short session on the importance of fluoridation in maintaining good oral health. The bulk of the training concentrated on teaching the participants how to calculate chemical dosages, how to produce calibration curves for a chemical feed pump or dry feeder, proper and safe chemical handling, and how to analyze the concentration of fluoride in drinking water.

The Arkansas Department of Health has conducted two fluoridation training schools this year. Currently, there are no plans for another fluoride school in the immediate future. However, ADH Engineering Section District Staff will, upon request, provide individual training on fluoridation to any public water system that fluoridates or plans to fluoridate. Also, the Engineering Section conducts site visits prior to the startup of any new fluoridation system.

The Engineering Section would like to thank the Arkansas Rural Water Association for use of their training center as the site for the two fluoridation short schools conducted this year.

The Engineering Section has chosen to primarily focus the efforts of one full time employee to fluoridation related program efforts. Brad Bodman is poised to take up these duties. We are able to accomplish this through a minor reorganization of responsibilities. The Engineering Section is assigning a full time position previously focusing on implementation of the Ground Water Rule to fluoridation related technical assistance. This change reflects that the Ground Water Rule has been successfully implemented and incorporated into the overall program and no longer requires the dedication of a full time position. Recently, fluoridation program related tasks have increased. It is intended that in this new position, Brad will provide annual inspections of most fluoride feed systems and be able to provide on-site technical assistance when needed. Fluoridation related inspections will focus on fluoride feed system safety, NSF 60 compliance, and analytical instrumentation accuracy. These changes have not resulted in an increase in Engineering Section staffing levels.

Geology & Drinking Water

Sources in Arkansas: An Overview

Darcia Routh, P.G., Geologist Supervisor



Arkansas can be split into two regions divided by Interstate 30 US Highway 67. Public Drinking Water use mirrors this divide. As a rule, the Northwestern region can be thought of as Surface Water Country. It is composed of ancient Paleozoic rocks and very thin poor soils, while the Southeastern region can be thought of as Groundwater Country. It is composed of fertile soils deposited predominantly by rivers along the Gulf Coast in the recent geologic past. Interior Highlands and Gulf Coastal Plain are terms used to describe Arkansas' great divide. The rocky Interior Highlands include the Ouachita Mountains, Ozark Plateaus, and the Arkansas River Valley. The soil-rich Gulf Coastal Plain contains the Mississippi Alluvial Plain, Crowley's Ridge, and the West Gulf Coastal Plain. The distinct physiographic regions of Arkansas profoundly impact history, land use, ecology, and water use.

SURFACE WATER COUNTRY: The Highlands consist of mountainous topography, scenic beauty, upland oak-hickory and oak-pine forests, and an economy emphasizing retirement and recreation, timber production and mineral extraction. The ancient Paleozoic sedimentary rocks of the highlands consist of clastics—sandstones and shales, and carbonates—the limestones and dolostones of the northernmost Ozarks. After deposition in ancient seas, the rocks have been gently uplifted in the Ozarks, folded into broad upwarps and downwarps in the Arkansas River Valley, and greatly compressed into the faulted, fractured, and folded rocks of the Ouachitas. The Paleozoic rocks of the Arkansas Highlands have been exposed above sea level and the water table for vast periods of geologic time. As a consequence, weathering has continually reshaped the topography of the Highlands, creating the rugged peaks, highly dissected terrain, and the wild natural beauty of the region.

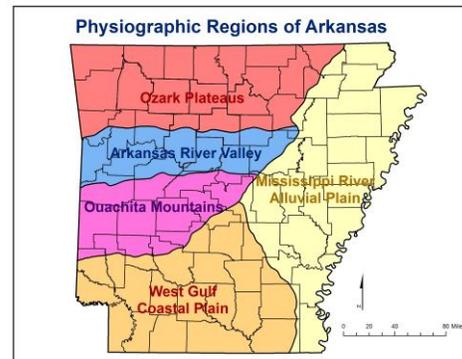
Weathering has also enhanced the ability of some rocks to produce groundwater. The development of solution features or karst in the carbonates of north Arkansas has enhanced the ability of these rocks both to

store and to release groundwater. These are the Ozark Plateaus Aquifers. Some community water in north Arkansas is supplied by these carbonate aquifers. However, in much of the Highlands, the poor natural quality and reduced quantity of groundwater limit its use for public water supplies. Fortunately, abundant, high quality surface water is available throughout the Highlands and is the predominant source of drinking water for the rocky northwest half of the state. More than 100 surface water intakes and around 100 wells are in use in the Interior Highlands of Arkansas.

GROUNDWATER COUNTRY: The Gulf Coastal Plain of Arkansas consists of the Mississippi River Alluvial Plain which contains Crowley's Ridge, and West Gulf Coastal Plain. The Gulf Coastal Plain is an area of gently sloping lowlands extending across the southern US from Georgia to south Texas, with the Mississippi River Embayment extending to southeast Missouri. The Gulf Coastal Plain is composed both of older (Cretaceous and Tertiary) sediments deposited along the shoreline of the Gulf of Mexico as it has formed and of recent (Quaternary) sediments left behind by the Mississippi River and its tributaries. Crowley's Ridge, a line of loess hills, rises from the alluvial plain in northeast Arkansas. Loess is windblown silt—glacial flour—deposited about 20,000-30,000 years ago. Crowley's Ridge extends from Philips to Clay County.

Deep, fertile soils of the Arkansas lowlands were transported via streams from eroding highlands in Arkansas and much further away. These river sediments are composed of unconsolidated silts, clays, and sands. The Tertiary and Cretaceous shoreline deposits of southwestern and south central Arkansas consist of unconsolidated sands, gravels, clays, and silts of mostly marine origin. In southwest Arkansas, a small outcrop belt of shallow marine limestone and gypsum is present and are the only consolidated rocks in the lowlands. Gypsum is mined in this area. In south Arkansas, some of the Cretaceous marine rocks and the underlying Jurassic Smackover Formation in the subsurface have produced petroleum and bromine brines since the early 20th century. The lowlands support agriculture and timber production; wetlands are common and support extensive hunting and fishing.

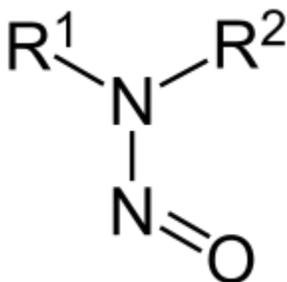
Abundant, high quality groundwater is available and is the primary source of water for public supply in the southeast half of Arkansas. The Sparta and Memphis Sands of the Claiborne Group, and Cockfield Sands of the Claiborne are the most widely used in the region. The sands and gravels of the Wilcox group and the Cretaceous Nacatoch sand are also used.



(See Sources, page 4)

EPA Expected To Eventually Regulate Nitrosamines

Jeff Stone, P.E., Director



On April 17, 2012, the American Water Works Association (AWWA) issued a Regulatory Advisory notifying its members that the U.S. Environmental Protection Agency (EPA) is expected to soon announce its intention to regulate nitrosamines. The advisory from AWWA indicated it expects that, in late 2012,

EPA will issue a regulatory determination (Reg Det) indicating its preliminary decision to regulate nitrosamines as a group of contaminants. This approach, regulation as a group, is similar to EPA's regulation of trihalomethanes as a group.

Nitrosamines are considered by EPA to be probable human carcinogens with 10^{-6} cancer risks at low nanogram per liter concentrations. EPA obtained occurrence data for six (6) nitrosamines by virtue of their inclusion in the Unregulated Contaminant Monitoring Rule 2 (UCMR2). One of those nitrosamines, N-nitrosodimethylamine (NDMA), was found in concentrations above the minimum detection limit at 26.4% of the 1,196 community water systems reporting UCMR2 data.

Nitrosamines can be present in untreated source waters. Some groundwater supplies in southern California are contaminated with NDMA which is an intermediate product in liquid rocket fuel production. NDMA has also been identified in treated wastewater effluents that are disinfected with chloramines and to a lesser extent chlorine. More commonly, nitrosamines are formed during the disinfection process when nitrosamine precursors are present and to a greater extent when chloramines are being utilized in the disinfection process. The possible sources of nitrosamine precursors can include: soluble microbial products from wastewater treatment, the pharmaceutical ranitidine, quarternary amines found in shampoos, and the herbicide diuron, among others.

The AWWA Regulatory Advisory gave a likely timetable for Preliminary Regulatory Determination in late 2012, Final Regulatory Determination in mid 2014, publication of a proposed regulation in 2016, and publication of a final rule in 2017 (18 months following proposal). However, factors complicating development of a final regulation could include incomplete availability of data concerning nitrosamine formation control and risk management. According to the article "A Preview of Regulations for 2012 – and Beyond" by J. Alan Roberson and published in the March 2012 issue of the AWWA Journal, "significant data gaps exist for nitrosamine formation and control that will make defining appropriate risk management challenging, i.e., what would water

systems have to do to lower nitrosamine levels?"

Previous investigations of nitrosamines, especially NDMA, have shown that utilization of chloramination disinfection is an important factor as compared to systems that utilize chlorine disinfection. This implies that presence or absence of nitrosamine precursors could influence the decision to utilize chloramination versus free chlorine disinfection. For those interested in further reading on this topic, the following article is suggested: "Nationwide Assessment of Nitrosamine Occurrence and Trends" by Caroline G. Russel, Nicole K. Bute, Steve Via, and Xueying Wu, published in the AWWA Journal, March 2012.

(UCMR3, continued from page 1)

- (2) Screening Survey utilizes specialized analytical method technologies not as commonly used by drinking water laboratories. The final Screening Survey list includes seven (7) hormones.
- (3) Pre-Screen Testing utilizes newer method technologies not as commonly used by drinking water laboratories. The final Pre-Screen Testing list includes enteroviruses and noroviruses.

UCMR3 chemicals of particular note include hexavalent chromium (Cr-6) and perfluorochemicals. The inclusion of hexavalent chromium by the U.S. Environmental Protection Agency is controversial. While Cr-6 is considered a health risk via inhalation, there is an acknowledged lack of health risk information via ingestion. On the other hand, perfluorochemical health concerns via ingestion involve liver and thyroid effects. Perfluorochemicals are highly stable, manmade chemicals that have been utilized in a variety of products including non-stick cookware, etc.

In depth information concerning the final UCMR3 rule can be found at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/methods.cfm>

(Sources, continued from page 3)

The Quaternary Alluvial Aquifer is a primary source for irrigation wells and some public supply wells.

Few public water systems in the Gulf Coastal Plain utilize surface water as a source. Unfortunately, the lowland areas of Arkansas surface waters in general have much lower natural water quality, more non-point and point source pollution sources, and consequently higher treatment costs. Less than twenty surface water intakes and more than 600 wells are in use in the Gulf Coastal Plain of Arkansas.

Want to learn more? Specifics of geology and public water use for each of the five physiographic regions of Arkansas (see map) will be featured in upcoming issues of the *Arkansas Drinking Water Update*. As always, ADH-Source Water Protection staff welcomes your questions and stand ready to provide geological, hydrogeological, or technical assistance. For more information, contact Darcia Routh via email: Darcia.routh@arkansas.gov or phone: 501-661-2623.

Stage 2 D/DBP Rule: Technical Assistance

Christine Kirkendoll, D/DBPR Technical Support Engineer

In the second article of this three-part series, Stage 2 D/DBPR: Operational Evaluations – Benefit or Burden, stressed the benefit of evaluating your system but did not identify the technical assistance available to systems who are required to perform an operational evaluation or develop a plan that will place them on the path toward compliance with the Stage 1 and Stage 2 D/DBPRs. This article provides a broad overview of the services provided by the Arkansas Department of Health (ADH) and its contractors.

The ADH Engineering Section is ready and willing to assist all water systems to ensure compliance with current and future regulations. Technical support for the Stage 1 and 2 D/DBPR is currently provided by the DDBPR Technical Support Engineer, Christine Kirkendoll, the D/DBPR Environmental Specialist, Jack Wilson, the Area Wide Optimization Program (AWOP) Engineer, Austin Lee, and the District Engineers and Environmental Specialists. The ADH Engineering Section can assist with developing sampling site plans and completing operational reports. The section can provide assistance with evaluating and improving current operational practices including but not limited to sampling and testing techniques, equipment calibrations, enhanced coagulation jar test procedures, filter backwash procedures, primary disinfection calculations, tank management, distribution chlorine control, and flushing programs and techniques. The Section can also provide all of this assistance through performance based training. The Section can facilitate additional investigative sampling and testing by the Public Health Laboratory on a limited basis. If you are interested in obtaining assistance for Stage 1 or 2 D/DBPR compliance or optimization from the ADH Engineering Section contact Christine Kirkendoll at 501-661-2672 or by email at Christine.Kirkendoll@arkansas.gov

The ADH Engineering Section offers assistance, free of charge, to small public water systems serving fewer than 10,000 under its Capacity Development Program. The Capacity Development Program currently offers assistance with infrastructure mapping, rate studies, budget analysis, capital improvement plans, asset management plans, long range plans, emergency response plans, consolidation and restructuring, leak detection, cross-connection programs, equipment, sampling techniques and site plans, operational reports, on-site peer-to-peer training, and board member or city council training. If you are interested in obtaining assistance from the Capacity Development program contact Greg Alexander, Capacity Development Coordinator, at 501-280-4023 or by email at Greg.Alexander@arkansas.gov.

For further information regarding the Stage 1 and Stage 2 DBP Rules contact Christine Kirkendoll or Jack Wilson of the Engineering Section.

PWS Service Connection Fees Billing Cycle Begins July 1

Gregory Treadway, Public Water System Fee Coordinator

In accordance with Act 95 of 1987 (as amended)¹, fees are collected each year from public water systems for the state Public Water System Supervision Program. This program is administered by the Arkansas Department of Health, Engineering Section, and includes the oversight of all public water systems. The activities under this program include, but are not limited to: conducting sanitary surveys, collecting and analyzing water samples and interpreting the results, training water system operators, investigating water complaints, reviewing applications, engineering reports, construction plans for water facilities, and implementing the myriad of rules under the EPA Safe Drinking Water Act. The fees are calculated annually based on the state fiscal year which begins July 1. Systems are billed based on the number of active service connections, and whether or not persons are served year round or only a few months of the year. Fire sprinkler connections, dry taps (even where a meter exists), commercial and residential lawn sprinklers, used solely for those purposes, are excluded from each system's meter count. The calculations are derived from the following:

- "Community public water system" means a public water system which serves at least fifteen (15) service connections used by year round residents or which regularly serves at least twenty-five (25) year round residents. Such systems are assessed thirty cents (\$0.30) per service connection per month with a minimum of \$250 per year.
- "Nontransient noncommunity water system" means a public water system which serves at least twenty-five (25) of the same, nonresidential individuals at least one hundred eighty (180) days, or portions thereof, per year. These systems are assessed a thirty cents (\$0.30) per service connection per month with a minimum of \$250 per year. The number of connections for nontransient noncommunity water systems without discrete service connections for each customer is calculated by dividing the population served by 2.5.
- "Transient noncommunity public water system" means a public water system serving at least fifteen (15) connections or twenty-five (25) persons who vary on a time basis at least sixty (60) days during the year or a public water system which is utilized as a source for bottled water. These systems are assessed one hundred dollars (\$125) per year.

(See Fees, page 6)

Focus on Security: Is Your Water System Climate Change Ready?

Jeff Stone, P.E., Director



The U.S. Environmental Protection Agency through its Climate Ready Water Utilities Initiative (CRWU) has provided tools that water systems can utilize in their efforts to make their systems less vulnerable to extreme weather events, shifting precipitation and runoff patterns, and changes in water quality and availability. The goal is to build water sector resilience through planning and adaptation strategies that account for potential climate change.

In Fall 2009, EPA convened a CRWU Working Group under the National Drinking Water Advisory Council (NDWAC) and a resulting report was issued on January 14, 2011. The findings of that report included:

- “The water sector faces important and potentially substantial climate change adaptation challenges,
- Different local conditions will dictate different Climate Ready responses,
- The water sector is underserved by actionable climate science and by information regarding adaptation and mitigation costs and benefits.”

The report also offered 12 recommendations which included: “Build on and strengthen advanced decision support models and tools to support utility climate change efforts”

EPA’s CRWU effort has included the provision of tools which water systems can utilize in planning efforts and adaptation strategies. The tools that have been provided include: The Climate Resilience Evaluation & Awareness Tool, The Climate Ready Water Utilities Toolbox, and the Adaptation Strategies Guide. The utilities toolbox and the adaptation strategies guide are together a rich source of detailed information relating to this topic.

The Climate Resilience Evaluation & Awareness Tool (CREAT) is provided by EPA free of charge and is downloadable from the EPA web pages. The CREAT tool is compatible with any computer equipped with Microsoft Windows XP or later version and 250 MB of free disk space.

The CREAT tool enables the user to evaluate the potential impacts of climate change on their water system and to evaluate adaptation options. Climate change related threats include flooding, drought and adverse water quality changes. The tool guides the user through identifying threats based upon regional differences and incorporates climate change projections. Following the evaluation, the CREAT tool will provide risk reduction and cost reports that will allow the user to evaluate various adaptation options to aid in long term planning.

The CREAT tool can be downloaded at the following web address.

<http://water.epa.gov/infrastructure/watersecurity/climate/creat.cfm>

The NDWAC report as well as the other resources mentioned in this article can be downloaded at: <http://water.epa.gov/infrastructure/watersecurity/climate/index.cfm>

(Fees, continued from page 5)

Fee schedules vary and are determined by the following:

- Annual fees of \$1,000 and less shall be payable in a single payment due on January 1 of each year.
- Annual fees greater than \$1,000 and less than \$5,000 may be payable in quarterly payments, with the payments due on October 1, January 1, April 1, and July 1 of each year.
- Annual fees of \$5,000 and greater may be payable in monthly payments, with the first payment due on August 1 of each year. Successive payments shall be due on the first day of each month.
- Annual fees may be paid in one lump sum in lieu of the fee schedule proposed above by any water system upon receipt of an invoice.

By mid-May, each public water system should have received a letter from the ADH containing what our records show to be the contact information and the number of service connections. Since the annual fee assessment is based on the number of total connections, it is important that you check the number shown to make sure your system is being correctly assessed. Based on this information, billing letters will be prepared and mailed in early July. Within the billing notice are coupons to identify your water system’s account number which is critical in posting the payment to the correct account. Please be sure to include this coupon when remitting payment. Your cooperation in this process of funding the Arkansas Drinking Water Program is greatly appreciated. If you have any questions about the fee act, or the amount of your billing, please feel free to contact Cathy Gaston at (501) 661-2623 or email Cathy.Gaston@Arkansas.gov. A copy of the act, along with additional Drinking Water information, is posted on our Web site for your reference: www.healthyarkansas.com/eng

¹ Act 95 of 1987 has been amended by Act 1053 of 1991, Act 903 of 1993, Act 1994 of 2005, and Act 202 of 2007. Title 20, Chapter 28, Section 101-106 of Arkansas Code (Non-Annotated)

Individual Filter Turbidity Monitoring Report Forms Explained

Craig Corder, P.E., Engineer Supervisor

Each December, the Arkansas Department of Health mails out Operation and Chemical Report Forms to water systems in the state. The systems operating surface water treatment plants also receive Individual Filter Turbidity Monitoring Report Forms (IFTMR) which are included with the forms.

ADH distributes two versions of the IFTMR form. One version is for surface water treatment plants that serve a total population of less than 10,000. The second version is for surface water treatment plants that serve a total population of 10,000 or more. The forms have either <10,000 (for small systems) or $\geq 10,000$ (for large systems) right underneath the name of the form. If you have the wrong forms for your size system, contact your district staff to get the correct forms sent to you.

Surface water systems with conventional sand (includes anthracite, and similar granular filter media) filters are required to evaluate the performance of each individual filter each month. Small (<10,000) systems with one or two filters may evaluate combined filter performance instead of individual filter performance. These water systems are required to record the turbidity from each individual filter at 15 minute or more frequent intervals. This can be done on paper charts or electronically in a SCADA system. The readings must be retained for a minimum of three years.

Much of the IFTMR form is self-explanatory. If you have a question about completing any part of the form, contact your environmental specialist or district engineer. The forms must be completed and submitted to the ADH even if no exceedances occurred.

To complete this form, you will need to review the turbidity data for each individual filter. Note that the filter turbidity data should be reviewed every day to see if any trigger levels were exceeded. One of the triggers requires the water system to take action within 7 days, so you can't wait until the end of the month to review the data. When reviewing the data, exclude readings taken during backwashing or filtering to waste of that specific filter. Also exclude data during the time that the turbidimeter for that specific filter is being cleaned or calibrated.

Data review for small systems: Small systems have two triggers, one at 1.0 NTU and one at 2.0 NTU. Look at the individual filter data to see if you had any readings greater than 1.0 NTU. If not, leave the tables in the forms blank or you can write "none" in the tables., If you did have a reading over 1.0 NTU, was the reading 15 minutes later also over 1.0? If so complete the first table on the form. Likewise, if you had a reading over 2.0 NTU with a reading 15 minutes later also over 2.0 NTU, the second table on the form must be completed. These forms must be signed and submitted to the ADH along with the Operation and Chemical Report Forms.

Data review for large systems: Large systems have four triggers, one at 0.5 NTU, two at 1.0 NTU, and one at 2.0 NTU. Look at the individual filter data to see if you had any readings greater than 0.5 NTU. If not, leave all the tables blank or write "none" in the tables, complete and sign the rest of the form and submit the form to the ADH. If you had a reading greater than 0.5 NTU then you must look to see if the readings on a specific filter were greater than 0.5 NTU at 4 hours, 0 minutes, and also at 4 hours, 15 minutes after a backwash was finished. If so, complete the top table on page 2. If filter performance exceeded the 1.0 NTU trigger level or the 2.0 NTU trigger level, other appropriate tables on this form have to be completed. These forms must be signed and submitted to the ADH along with the Operation and Chemical Report Forms.

Depending upon which trigger levels are exceeded, the water system may be required to conduct a Filter Profile, a Filter Self Assessment, or have a Comprehensive Performance Evaluation conducted, all within prescribed time frames found on these forms. If a water operator believes that they have exceeded a trigger level and has questions concerning the proper completion of these forms or questions concerning proper follow up actions, they can contact their environmental specialist or district engineer at the Engineering Section.

Staff News:



Clay Robertson has joined the Engineering Section as an Engineer Technician. Clay will be working in the sample collection program and will primarily work in northeast Arkansas. His duties will consist of

collection of SDWA compliance samples for community, non-community, and transient public water systems. Clay previously worked for LM Windpower Blades as a Production Technician.

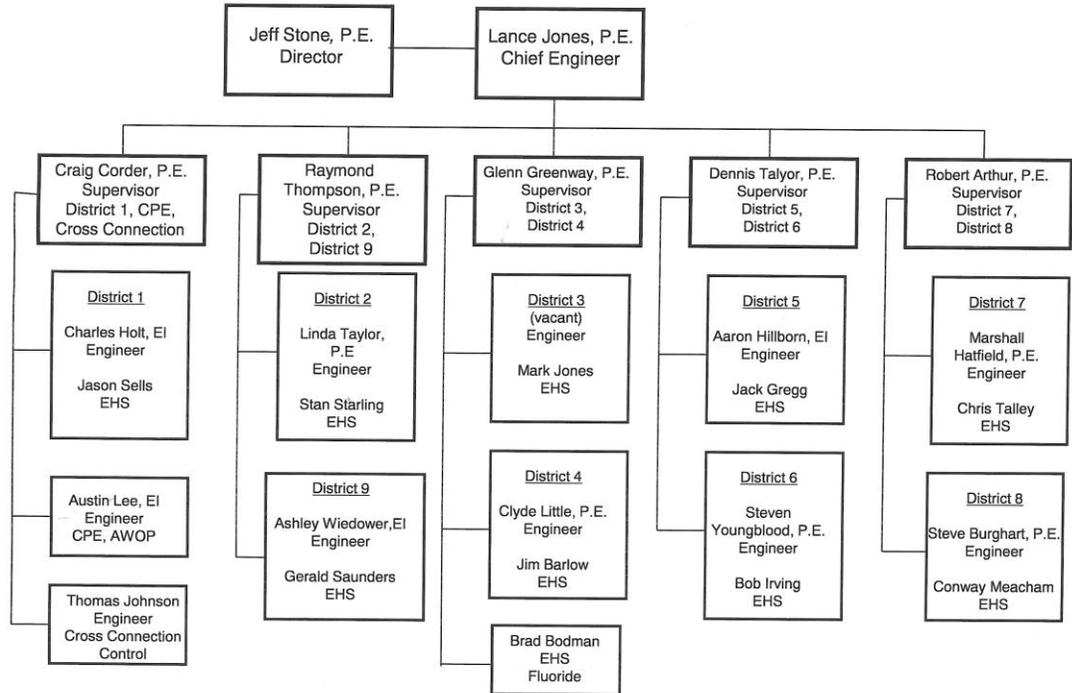


Mac Faulkner is retiring from the Engineering Section after 27 years of service with the ADH. His work with the Engineering Section is appreciated. A quote from Mac, "We have seen a lot of change in the Drinking Water Program and the Health Department since I came on board in January of 1985. Hopefully, Arkansas is a healthier place now than then. Thanks to all of you that I have worked with. I wish you well as I continue my journey." Mac Faulkner

Current Engineering Section Organizational Charts

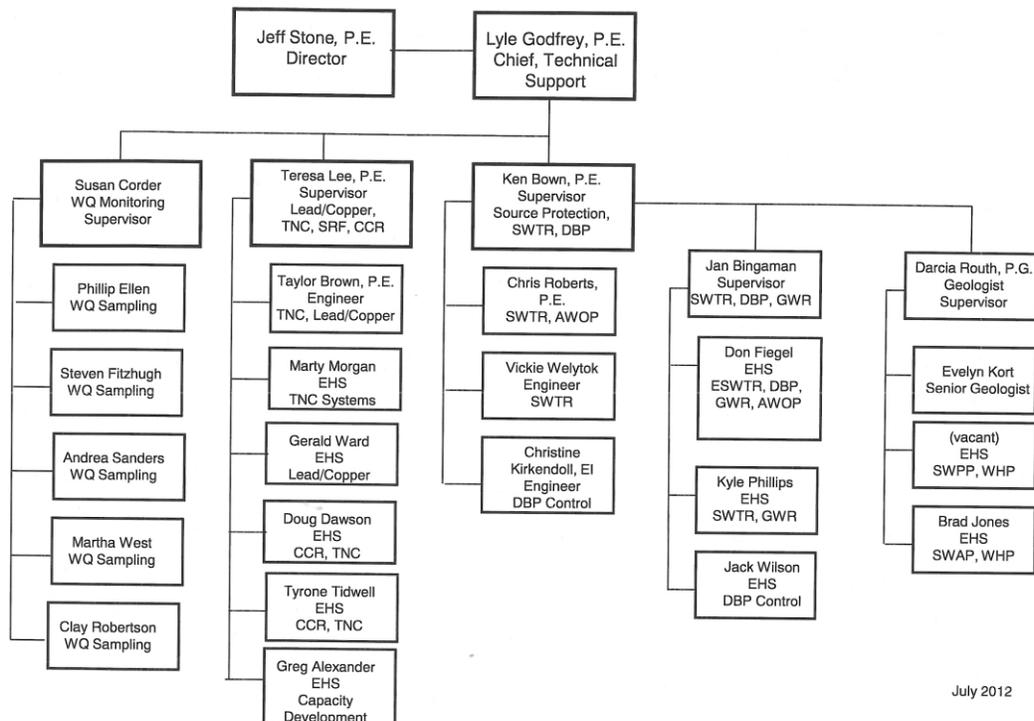
During the past couple of years the Engineering Section has experienced a significant rate of employee turnover. Updated organizational charts are provided below. This should help clarify who in the Engineering Section is currently in which role.

Engineering Section, Arkansas Department of Health Field Surveillance



July 2012

Engineering Section, Arkansas Department of Health Technical Support



July 2012

WATER OPERATOR LICENSE EXAMINATIONS

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

Listed below are the dates and locations of examination sessions as scheduled, as of **December 20, 2011**. 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 and other electronic communication devices are not allowed in exam sessions. Non-programmable calculators are allowed.

Date	City	Location	Start Time
8/10/2012	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	9:00 AM
8/10/2012	Paragould	Holiday Inn Express, 3502 Linwood Dr	9:00 AM
8/17/2012	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	9:00 AM
8/24/2012	Russellville	Tri-County Water, 5306 N Arkansas Ave	9:00 AM
8/29/2012	Hot Springs	ARWA Annual Conf, HS Convention Center	9:00 AM
9/14/2012	Bono	Bono Community Center, 100 Woodland Trail	9:00 AM
9/21/2012	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
9/21/2012	N Little Rock	CAW Maryland Complex, 1500 West Maryland Ave, NLR	9:00 AM
9/28/2012	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	9:00 AM
9/28/2012	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
10/12/2012	Arkadelphia	Recreation Center, 2575 Twin Rivers Dr	9:00 AM
10/19/2012	Mtn Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	9:00 AM
10/19/2012	N Little Rock	CAW Maryland Complex, 1500 West Maryland Ave, NLR	9:00 AM
10/26/2012	West Fork	Wenzel Community Center, 222 Webber, West Fork	9:00 AM
11/2/2012	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM
11/9/2012	Maumelle	Wastewater Plant, 425 B Hyman Drive	9:00 AM
11/16/2012	Hot Springs	HS Transportation Depot, 100 Broadway Terrace	9:00 AM
11/30/2012	Bono	Bono Community Center, 100 Woodland Trail	9:00 AM
11/30/2012	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	9:00 AM

The above exam session information is subject to change. You should confirm this information just prior to the scheduled examination period. You may confirm the exam session and its location by contacting your District Specialist or Engineer at (501) 661-2623. Also, the latest exam schedule information, including future exam sessions, can be viewed on the Internet at: www.healthy.arkansas.gov/eng/autoupdates/oper/operexam.htm

Please verify that your license application has been filed with this office and that the required exam fee for each exam has been paid. The license exams require significant preparation prior to sitting for the exam. The preparation must include extensive study utilizing the study guide and recommended reference materials. Credit for the mandatory Certification Training Courses must be obtained prior to sitting for an exam.

ATTENTION: OpCert Training Fund Expiring

The training funds, which help with travel costs, will expire by December 31, 2012. The funds cover registration fees, meals, and lodging for mandatory courses for water license exams (the courses will continue to be offered), backflow tester and backflow specialist courses. Registration fees are eligible for AETA environmental health and safety courses, and utility management course. Registration fees for ARWA courses for cave in protection, and confined space.

When registering for eligible training courses, a few simple extra steps are needed to take advantage of the USEPA OpCert Training Assistance Fund. The fund eligibility requirements are: the course must be an approved OpCert course; the individual attending the course must be an operator (volunteer or paid) for a Community, or Non-Community Non-Transient Public Water System serving fewer than 3300 persons; and an overnight hotel stay must be justified. There is presently more than adequate money to cover all operators needing training for exams or renewal training hours.

Please contact the training providers below to determine your eligibility and to register for eligible course utilizing the fund. The latest listing of courses can be found on at: www.healthy.arkansas.gov/eng/autoupdates/oper/opcertlinks.htm

Contact information for the two eligible trainers is:
 AR Environmental Training Academy – Contact Letitia Rusch – (870) 574-4551 – lrusch@sautech.edu
 AR Rural Water Ass'n – Contact Sharon Wakefield – (501) 676-2255 – info@arkansasruralwater.org

Free Exam Study Manuals: If you are an operator for an eligible system, a complete set of exam reference manuals may be available, free of charge. Please contact the Water Licensing Program at (501) 661-2623 to receive the manuals.

Major Monitoring, MCL, Treatment Technique, & Licensing Violations

Community & Nontransient Noncommunity Public Water Systems, January - March 2012

ARK ST PARK-QUEEN WILHELMENA	DBPR 1,2,3	OPPELO WATER DEPT	DBPR 1,2,3
BATT-LAPILE WATER ASSN.	BMCL 1	RIVERSOUTH RURAL WATER ASSN	Bmon 2
BEAVERFORK VOLUNTEER FD WSD	DBPR 1,2,3	SDM WATER ASSN	RMCL 1,2,3
BEN LOMOND WATERWORKS	Bmon 3	SDM WATER ASSN	FMCL 1,2,3
BODCAW RURAL WATER	DBPR 1,2,3	SEVIER CO WATER ASSOCIATION	DBPR 1,2,3
CHARLESTON WATERWORKS	DBPR 1,2,3	SOUTH MOUNTAIN WATER ASSN	RMCL 1,2,3
CHERRY HILL PUBLIC FACILITY BD.	DBPR 1,2,3	SOUTH PIKE COUNTY WATER	DBPR 1,2,3
CHERRY HILL PUBLIC FACILITY BD.	Bmon 3	ST. FRANCIS WATER SYSTEM	Bmon 2
CHIDESTER WATERWORKS	Bmon 1	TALL OAKS MHP	IMCL 1,2,3
COTTON PLANT WATERWORKS	Bmon 2	TOWERING OAKS BAPTIST CHURCH	OperLic 1
DANVILLE WATERWORKS	DBPR 1,2,3	VICTORIA WATER ASSN	Bmon 2
DELIGHT WATERWORKS	DBPR 1,2,3	WALDRON WATERWORKS	DBPR 1,2,3
GREENBRIER WATERWORKS	DBPR 1,2,3	WARD MHP	Bmon 2,3
GREENWOOD WATERWORKS	DBPR 1,2,3	WARD MHP	OperLic 2
GUY WATERWORKS	DBPR 1,2,3	WATSON WATERWORKS	OperLic 3
HICKORY RIDGE WATERWORKS	Bmon 1	WEST MEMPHIS WATERWORKS	Bmon 1
HOT SPRING CO WATER ASSN	Bmon 3	WICKES WATERWORKS	Bmon 2
HUNTSVILLE WATERWORKS	Bmon 2	WOOSTER WATERWORKS	DBPR 1,2,3
HUTTIG WATERWORKS	Bmon 1		
JAMES FORK REGIONAL WATER DIST.	DBPR 1,2,3		
MANSFIELD WATERWORKS	Bmon 2,3		
MAUMELLE WATER MANAGEMENT	DBPR 1,2,3		
MAYFLOWER WATERWORKS	DBPR 1,2,3		
MORNING STAR WATER ASSN	FMCL 1,2,3		
MOUNT OLIVE WATER ASSN	DBPR 1,2,3		
MURFREESBORO WATERWORKS	DBPR 1,2,3		
NEW LONDON WATER ASSN	BMCL 1		

KEY: Bmon = Bacti Monitoring; BMCL = Bacti MCL; Dmon = Disinfection By Product Rule Monitoring; DBPR=Disinfection By Product Rule MCL or Treatment Technique; GWRMCL=GWR Treatment Technique; GWRmon= GWR Monitoring or Reporting; Tmon = SWTR Major Monitoring; TMCL = SWTR Treatment Technique; SWTR= Failure to Filter; RMCL = Radiochemical MCL; FMCL = Fluoride MCL; IMCL=Inorganic Chemical MCL; SMCL = Synthetic Chemical MCL; OperLic = Operator Licensing; 1 = Jan 2012, 2 = Feb 2012, 3 = Mar, 2012

ARWA Annual Technical Conference & Exhibition

Hot Springs Convention Center

August 26 – 29, 2012

Hot Springs, Arkansas

www.arkansasruralwater.org

The conference consists of two (2) full days of training. ARWA plans to have six (6) training topics offered each session, with four sessions each day. Typically, a training topic is not repeated. There will be an exhibit hall with a wide selection of water industry related companies displaying their latest and best products. The conference is approved for a total of 16 hours of directly applicable water training credit for full participation. The Association will be scanning name badges each morning and afternoon training session.

Mandatory water training courses for exam purposes are not offered during this conference.

Stacy Cheevers Appointed to Water License Committee

On April 26, 2012, the State Board of Health appointed Mr. Stacy Cheevers, Plant Manager, Beaver Water District, Lowell, Arkansas, to the Arkansas Drinking Water Advisory and Operator Licensing Committee. His strong background in the drinking water industry will allow him 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, and the Arkansas Environmental Training Academy Advisory Board. Mr. Lance McAvoy, Laboratory Manager, Fort Smith Utility, Fort Smith, Arkansas, and Mr. Roger Moren, General Manager, Sardis Water Association, Mabelvale, Arkansas, were also nominated.

The Committee, at its April 18, 2012 meeting, thanked Scott Borman, Benton Washington Regional Public Water Authority, with a plaque for his six years of loyal 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.

Report of the Arkansas Drinking Water Advisory and Operator Licensing Committee

Martin Nutt, Training & Certification Officer

The quarterly meeting of the Arkansas Drinking Water Advisory and Operator Licensing Committee was held on April 18, 2012 in Lonoke, Arkansas. Committee members present were: Scott Borman, Committee Chair, Benton Washington RPWA; Terry House, Committee Chair Elect, Grand Prairie Bayou Two PFB; Matthew Dunn, P.E., Crist Engineers, Inc.; Tim Shaw, Community Water System; Susan Merideth, P.E., Jonesboro City Water and Light; and Jeff Stone, P.E., Executive Secretary, Arkansas Department of Health (ADH). Findlay Edwards, P.E., University of Arkansas was absent. ADH staff & guests present were: Reginald Rogers, Attorney, ADH; Martin Nutt, Training and Certification Officer, ADH; Ida Hampton, Administrative Specialist, ADH; Alicia Prioleau, Training Coordinator, ADH; Gary Oden, SAU Tech for the Arkansas Environmental Training Academy (AETA); Randy Harper, AETA; Dennis Sternberg, AR Rural Water Association (ARWA); Billy McKinney, Searcy Waterworks; Timothy Cleveland, Searcy Waterworks; and Mayor Grady Swofford, City of Hampton.

Standing Business

The Committee reviewed and approved the minutes from the January 11, 2012 meeting. The Committee reviewed the High School Waiver request from Mr. McKinney. The application was for a Grade I Distribution License, even though his position will require a Grade III for minimum compliance with licensing requirements for Searcy Waterworks. After significant discussion, including the consequences of approving just a Grade I Distribution License waiver and the obtaining of a GED, the Committee approved Mr. McKinney a waiver restricted to a Grade I Distribution License. The Committee then reviewed a waiver request from Swofford. The Committee approved a waiver restricted to a Grade I Distribution License.

Nutt reviewed the EPA OpCert Expense Reimbursement Grant spending. Nutt referred to a spreadsheet that detailed ARWA expenditures through March 2012 and AETA through March 2012. He noted expenditures were on target to have most of the funds spent by their December 31, 2012 expiration.

Old Business

Stone provided the Committee an update on the Rules and Regulations Pertaining to PWS revisions addressing fluoridation requirements. He stated the revisions became effective March 23, 2012 and he would further discuss fluoridation later in the meeting.

Nutt discussed with the Committee the Association of Boards of Certification (ABC) efforts to become ANSI/ISO/IEC 17024 accredited and its impact on Arkansas licensing examinations. He stated that he and Shaw attended the ABC Conference in January 2012 and he had several networking opportunities with ABC staff, ABC physiometric firm staff, and other certifiers concerning the changes in the ABC exam program to meet the standard. In particular, ABC moved away from considering customized (prescriptive) exams as valid. He indicated ABC was introducing a two-part exam concept for programs using customized exams to help address the validation issue. Part A would be the 100 item standard exam and part B would be a 20 item additional exam of client chosen items. Nutt then discussed positives and negatives of moving to ABC's ANSI/ISO standardized exams.

Borman opened discussion on the adequacy of the mandatory training courses. He expressed concerns that the present course lengths do not allow adequate time to teach everything an operator needs to know to operate higher grade level treatment plants and distribution systems. He specifically mentioned the ADH Rules and Regulation Compliance Course needed to be expanded to two days to allow instruction in actual compliance scenarios, such as: Calculate actual SWTR CT, or the time a system has to return to compliance before a violation occurs. The need to take courses in their logical order was discussed to better utilize available training time. Harper noted when an operator does not have the lower course it interferes with the upper level course. The Committee discussed the need to expand the advanced training, when exam sessions should be held, and concerns about the cost of on-line exams. Borman concluded the discussion by creating a workgroup to address immediate concerns related to expanding the training, requiring training be taken in order, reducing exams sessions which might include decoupling the exams, as well as longer term concerns of utilizing ABC standard exams, and offering exams on-line. He appointed to the workgroup Merideth, Dunn, Shaw, AETA representatives, ARWA representatives, and ADH representatives.

Nutt reported completion of the new member nomination process seeking a replacement member for Borman whose term is expiring. The three individual nominated from four industry groups were: Arkansas Rural Water Association and the Arkansas Water and Wastewater Managers Association nominated Roger Moren, Sardis Water Association; Arkansas Environmental Training Academy nominated Lance McElroy, Fort Smith Water Utility; and Arkansas Water Works and Water Environment Association nominated Stacy Cheevers, Beaver Water District. Nutt stated the Board of Health would make the appointment, and the Board will receive an information packet including each nominee's resume and letters of nomination. The Committee member appointment is included in the agenda for the Board of Health's April 26, 2012 meeting.

New Business

Stone reported the Section had recently taken significant enforcement action against two water systems and five licensed operators over the veracity of reported compliance data. He provided an overview of the Section's compliance data audit process, and how irregularities in the data were investigated and documented. The process includes an opportunity for the utility to explain the documentation irregularities, and enforcement actions are taken if warranted. When a utility is asked to address irregularities, any licensed operators involved in the data documentation are asked to explain their involvement in the data's documentation. If the corrected documentation indicates Safe Drinking Water Act violations have occurred, the violations are issued to the system. If the data errors were not from intentional falsification but just due to inadequate procedures then the operators are provided technical assistance. However, if the falsification was intentional, administrative enforcement procedures may result.

Stone informed the Committee that recent data audits had resulted in one system being placed under consent decree with fines collected; two operators surrendered their licenses and agreed not to relicense for a two-year period; and three operators had paid a fine and accepted one year of probation. Stone indicated if the system or operators had not accepted the decree, administrative procedures called for public hearings before the Committee for the operators followed by additional action by the Board of Health. The systems would have gone before the Board of Health.

The Committee reviewed reciprocity determinations prepared by Nutt for Iowa, Kansas, and Tennessee. The Committee approved all three after language was added to address some license grades experience levels which did not match the Arkansas experience requirements. In addition, the Committee concurred with Nutt's request to require attendance of the compliance course as a condition of license renewal for the reciprocated license's first renewal, with waiver provisions for out of state operators.

Committee Reports

Stone reported the Section was completing the budgeting process for SFY 2013. He detailed several significant budget increases. For the monitoring cost associated with the latest Federal Unregulated Contaminants Monitoring Rule, EPA pays for analysis for systems below 10,000 population. However, systems at or above 10,000 population that are selected are responsible for cost of additional monitoring. ADH will step in, and pay for the monitoring cost from PWS fees for those systems. Another is the Stage II DBP Rule becomes effective January 2013 and will significantly increase monitoring cost to comply with the rule; these costs include new laboratory instrumentation. He indicated some instrumentation cost may be allowed to be paid for using other funds than the service fees helping to control spending of the fees.

Stone, in his general program report indicated the revised Rules and Regulations in response to Act 197 requiring systems greater than 5,000 to adjust fluoride levels had become effective. He stated there are 34 Water Systems affected by the requirements; 17 of those 34 Water Systems have applied for a Delta Dental fluoridation grants; and 12 Water System have received approval. The remaining 17 Water Systems were recently sent letters requesting they indicate to the Health Department what their intent was and time frame to seek out available funding. Stone indicated he was not clear what the next step in enforcement would be for systems not seeking funding. The Committee made comments and relayed their experience dealing with Delta Dental and concerns over stipulations included in the grant agreement. Stone then informed the Committee that Lyle Godfrey had been selected to fill the Chief of Technical Services position and reviewed Godfrey's extensive work experience with the Section. He then reported Kenneth Bown, P.E. was selected for Godfrey's vacated Engineer Supervisor position.

Nutt provided a licensing update by reviewing the Water License Exam Report and focused his comments on the section outlining the performance of the present license exams noting the upper license grade exams were not performing as well as the operator community would prefer. Discussion followed and noted earlier mention of possible expansion of training might which be further indicated by the exam results. He then reviewed a handout titled "Enforcement Plan Update" and stated that we continued to see systems fall out of compliance for periods of time but no water system was at the final enforcement levels at this time. Nutt stated the Water Licensing program was running smoothly and apologized to Prioleau for not introducing her earlier. Nutt stated Alicia Prioleau was the new Trainer Coordinator and that her primary training effort was conducting the ADH Compliance Course on her own. He reported exam results were taking longer because the license exam provider's scoring turnaround time has increased but they are well within the 30 days allowed by their contract.

Harper provided the AETA Report. He reported AETA had provided 72 classes with 661 students during the first quarter of the calendar year. Out of the 72 classes, 13 were water classes with a total of 151 students. He reported the Academy had secured funding to build a new training laboratory addition to the Academy. It will allow hands on training to become a reality. He indicated it would be broader than just analytical laboratory training. It will allow distribution functions, such as fixing leaks, taps, etc.; pump repair; and treatment process control.

Sternberg provided the Arkansas Rural Water Association Report. He reported they had 292 water operators in water classes since the beginning of January 2012 and two ARWA Water Short Schools.

The Committee Members confirmed their next meeting date for July 11, 2012. Stone presented Borman with a plaque thanking him for his six years of service on the Arkansas Drinking Water Advisory and Operator Licensing Committee. This was Borman's last meeting; he served for the last year as Chairperson. Borman called for the adjournment; motion made by Dunn and seconded by Merideth. The Committee Members favored and adjourned.

Water Operator Licenses Issued

March 1, 2012 through May 31, 2012

LICENSEE NAME	GRADE/TYPE	WATER SYSTEM NAME
BALL DAVID	T-II	BUFFALO ISLAND REG WATER DIST
BAYLES WILLIAM	D-I	BAUXITE WATER
BLACK NEAL	D-IV	EL DORADO WATERWORKS
BLAGRAVE JAMES	D-III	HOPE WATER LIGHT
BRYANT TERRY	T-IV	CAMDEN WATERWORKS
BURRESS BILLY	T-II	BRADFORD WATERWORKS
BURSON ROBERT	D-I	HASKELL WATER
CALDWELL LORIE	D-I	YORKTOWN WATER ASSN
CARLSON PAUL	D-IV	UNITED WATER ARKANSAS
COOPER TIMOTHY	D-II & T-11	CHEROKEE VILLAGE (NO SYSTEM OF RECORD)
CRISENBERY DAVID	D-I	FLIPPIN WATERWORKS
DAVIS PAUL	D-II	BALD KNOB WATERWORKS
DUBOISE JOSHUA	D-I	BEEBE WATERWORKS
FLEMING DEBORAH	D-II	MIDWAY, AR (NO SYSTEM OF RECORD)
FLETCHER DAVID	D-1	BENTON COUNTY WATER AUTHORITY ⁵
FOUTCH RANDALL	T-1	BUFFALO ISLAND REG WATER DIST
GOSNELL RONALD	D-IV	LONOKE WATERWORKS
HARVEY KENNETH	D-II	SHUMAKER PUBLIC SERVICE CO
HILTON DANIEL	D-III	HOPE WATER LIGHT
HOWARD DANNY	D-IV	LOST BRIDGE VILL WAT-SEW DIST
JACKSON STACY	T-II	HOT SPRINGS NATIONAL PARK
JENKINS THOMAS	D-II	NORTH PIKE RUAL WATER ASSN
JOHNSON JAMES	D-IV & T-IV	BEAVER WATER DIST
JOHNSON ROGER	D-IV	MALVERN WATERWORKS HWY 9 WATER ASSN POYEN WATERWORKS TULL WATER
KIRBY SY	D-II	PEA RIDGE WATERWORKS
LETTERMAN KIMBERLY	D-II	HARTFORD (NO SYSTEM OF RECORD)
LONG JONATHAN	D-IV	CENTRAL ARKANSAS WATER
LUSINGER JESSE	D-IV	UNITED WATER ARKANSAS
MARTIN DONALD	D-IV & T-IV	HOWE, OK (NO SYSTEM OF RECORD)
MARTIN JOHNNY	D-I	LAWRENCE COUNTY REGIONAL
MASON DAVID	D-1	MULBERRY WATERWORKS
MCGINTY BLAKE	D-II	DEQUEEN WATERWORKS
MERRITT TERRY	D-IV & T-IV	STE GENEVIEVE, MO (NO SYSTEM OF RECORD)
MORRIS RANDY	T-III	CROWLEYS RIDGE WATER ASSN
MURRAY ROBERT	D-I	POCAHONTAS WATERWORKS
NELSON MARCUS	D-I	LAWRENCE CO REG WATER DIST
PAPPALARDO SALVATORE	D-IV	JACKSONVILLE WATERWORKS
PARNELL STEVEN	D-III & T-I	ANDERSON, MO (NO SYSTEM OF RECORD)
REAGAN JAMMIE	D-IV	SALEM WATER ASSN SOUTHWEST WATER ASSN
REARDON COREY	D-IV	GRAVETTE WATERWORKS
REED JEFFREY	D-III	SHANNON HILLS WATER DEPT
REIMERS TY	D-II & T-II	ASHDOWN WATERWORKS
RIDDLING PHILLIP	D-I & T-II	REMINGTON ARMS COMPANY
ROE DAVID	T-II	ARSENAL WATER SYSTEM
RUFFINS GARY	D-II	STEPHENS WATERWORKS

Water Operator Licenses Issued

(CONTINUED)

RUSSELL ROBERT	D-I	STEPHENS WATERWORKS
SCHINZ JUSTIN	D-I	HAMPTON WATERWORKS
SCOTT BRANDON	T-IV	BEAVER WATER DISTRICT
SELLERS SHANE	D-IV	NORTH WHITE RURAL WATER PFB
SMITH DAVID	D-IV	SHOW LOW, AZ (NO SYSTEM OF RECORD)
SMITH MARK	D-IV	SALEM WATER ASSN
		SOUTHWEST WATER ASSN
SNEDKER DARREL	D-III	BATESVILLE WATER UTILITIES
		PFEIFFER WATER AUTHORITY
SOMMERS BEN	D-III	CITY CORPORATION
STONE JEFFERY	D-IV	AR DEPT OF HEALTH
SULLIVAN ROBERT	T-I	LONOKE WATERWORKS
SWOFFORD GRADY	D-I	HAMPTON WATERWORKS
TEMPLETON DOUGLAS	D-IV	CEDARVILLE WATERWORKS
THOMAS TOMMY	T-IV	HEBER SPRINGS WATER SYSTEM
TOPF WILLIAM	D-I	FLIPPIN WATERWORKS
TREADWELL MORGAN	D-IV	MALVERN WATERWORKS
		HWY 9 WATER ASSN
		POYEN WATERWORKS
		TULL WATER
VAN HOFE FRED	D-IV & T -IV	MEMPHIS, TN (NO SYSTEM OF RECORD)
WARD HUBERT	D-III	WOOSTER WATERWORKS
WEESE SHANNON	D-I	DYER WATERWORKS
WEST ALAN	D-II	SEARCY WATERWORKS
WILKERSON MICHAEL	D-I	HERMITAGE WATERWORKS
WILSON MICHAEL	D-IV & T-IV	CENTRAL ARKANSAS WATER
WORLEY ZACHARIAH	D-I	MARSHALL WATERWORKS
WYRICK RICKEY	D-I & T-II	DORCHEAT WATER ASSN
		TAYLOR WATERWORKS

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.

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

MANDATORY COURSE NAME	START DATE	ENDING DATE	OPC ERT GRA NT ELI G- IBLE COU RSE	CITY	LOCATION All courses begin at 8 a.m.	SPONSOR
Basic Water Math	08/01/12	08/15/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Intermediate Water Distribution	08/07/12	08/09/12	Yes	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	ARWA
Basic Water Treatment	08/07/12	08/09/12	Yes	Paragould	Holiday Inn Express, 3502 Linwood Dr	AETA
Intermediate Water Distribution	08/14/12	08/16/12	Yes	Fayetteville	Fayetteville Operations Center, 2435 S Industrial Dr	AETA
Applied Water Math	08/16/12	08/31/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Advanced Water Treatment	08/21/12	08/23/12	Yes	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Basic Water Math	08/21/12	08/21/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Applied Water Math	08/22/12	08/22/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
ADH PWS Compliance	08/23/12	08/23/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Basic Water Treatment	09/03/12	09/17/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Basic Water Math	09/04/12	09/04/12	Yes	Maumelle	Wastewater Plant Training Rm, 425 B Hyman Drive	AETA
Applied Water Math	09/05/12	09/05/12	Yes	Maumelle	Wastewater Plant Training Rm, 425 B Hyman Drive	AETA
ADH PWS Compliance	09/06/12	09/06/12	Yes	Maumelle	Wastewater Plant Training Rm, 425 B Hyman Drive	AETA
Intermediate Water Distribution	09/11/12	09/13/12	Yes	Bono	Bono Community Center, 100 Woodland Trail	ARWA

Basic Water Distribution	09/17/12	10/01/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Advanced Water Distribution	09/18/12	09/20/12	Yes	Nth Little Rock	CAW Maryland Complex, 1500 West Maryland Ave	AETA
Advanced Water Treatment	09/18/12	09/20/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Intermediate Water Treatment	09/25/12	09/27/12	Yes	Jonesboro	Jonesboro CWL Office Training Rm, 400 E Monroe	AETA
Basic Water Distribution	09/25/12	09/27/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Intermediate Water Treatment	10/01/12	10/15/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Basic Water Math	10/02/12	10/02/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Applied Water Math	10/03/12	10/03/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
ADH PWS Compliance	10/04/12	10/04/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Advanced Water Distribution	10/09/12	10/11/12	Yes	Arkadelphia	Recreation Center, 2555 Twin Rivers Dr.	ARWA
Basic Water Math	10/09/12	10/09/12	Yes	Hot Springs	HS Transportation Depot, 100 Broadway Terrace	AETA
Applied Water Math	10/10/12	10/10/12	Yes	Hot Springs	HS Transportation Depot, 100 Broadway Terrace	AETA
ADH PWS Compliance	10/11/12	10/11/12	Yes	Hot Springs	HS Transportation Depot, 100 Broadway Terrace	AETA
Intermediate Water Distribution	10/16/12	10/31/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Basic Water Treatment	10/16/12	10/18/12	Yes	Nth Little Rock	CAW Maryland Complex, 1500 West Maryland Ave	AETA
Basic Water Treatment	10/16/12	10/18/12	Yes	Mtn Home	Baxter Co OEM Training Facility, 170 Dillard Dr, Midway	ARWA
Advanced Water Distribution	10/23/12	10/25/12	Yes	West Fork	Wenzel Community Center, 222 Webber, West Fork	ARWA
Intermediate Water Treatment	10/30/12	11/01/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Advanced Water Treatment	11/01/12	11/15/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Intermediate Water Treatment	11/06/12	11/08/12	Yes	Maumelle	Wastewater Plant Training Rm, 425 B Hyman Drive	AETA
Basic Water Distribution	11/13/12	11/15/12	Yes	Hot Springs	HS Transportation Depot, 100 Broadway Terrace	AETA
Advanced Water Distribution	11/16/12	11/30/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Basic Water Math	11/27/12	11/27/12	Yes	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Advanced Water Distribution	11/27/12	11/29/12	Yes	Bono	Bono Community Center, 100 Woodland Trail	ARWA
Intermediate Water Treatment	11/27/12	11/29/12	Yes	Lonoke	ARWA Training Facility, 240 Dee Dee Ln	ARWA
Applied Water Math	11/28/12	11/28/12	Yes	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
ADH PWS Compliance	11/29/12	11/29/12	Yes	Russellville	Tri-County Water, 5306 N Arkansas Ave	AETA
Basic Water Math	12/03/12	12/17/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Applied Water Math	12/03/12	12/17/12	Yes	Internet	http://www.sautech.edu/admin/escience.aspx	AETA
Basic Water Treatment	12/04/12	12/06/12	Yes	Nashville	Carter Day Center, 200 Nichols Drive	ARWA
Advanced Water Treatment	12/04/12	12/06/12	Yes	Nth Little Rock	CAW Maryland Complex, 1500 West Maryland Ave	AETA
Advanced Water Distribution	12/11/12	12/13/12	Yes	Clarksville	CLW (Operations Bld) 710 East Main (Hwy 64 East)	ARWA
Basic Water Distribution	12/11/12	12/13/12	Yes	Camden	AR Env Training Academy, 100 Carr Road	AETA

OpCert Grant Eligible Courses – Meal and lodging expenses may be reimbursed for operators from Community or Non-Transient Non Community Public Water System serving a population of 3300 or less. The course may be space limited, with eligible system operators given preference.

All courses require pre-registration. All courses begin at 8:00 AM.

The course sponsor must be contacted to register for each course and to confirm course information that is subject to change or cancellation. Contact information for the sponsors is shown below:

ADH – Arkansas Department of Health – Contact Martin Nutt – (501) 661-2623 – martin.nutt@arkansas.gov

AEA – Arkansas Environmental Academy – Contact Letitia Rusch – (870) 574-4550 – lrusch@sautech.edu

ARWA – Arkansas Rural Water Association – Contact Sharon Wakefield – (501) 676-2255 – info@arkansasruralwater.org

Additional courses are shown on the internet at: www.healthy.arkansas.gov/eng/autoupdates/oper/mandtrmgall.htm

**American Water Works Association
Southwest Section Annual Meeting
Hilton Hotel, Lafayette, LA
October 14 - 16, 2012**

<http://www.swawwa.org/ACE/home.htm>

The conference consists of two (2) full days of training. There will be three (3) training topics offered each session, with six sessions each day. Typically, no training topic is repeated. There will be an exhibit hall with a wide selection of water industry related companies displaying their latest and best products. The conference is approved for a total of 16 contact hours of directly applicable water license training credit for full participation.

Mandatory training courses for exam purposes are not offered during this conference.

Return Service Requested

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AWW&WEA District Meetings

See also the Division's web site www.healthyarkansas.com/eng/ for updates.

DATE	TIME	CITY	LOCATION	SPONSOR
<u>July 2012</u>				
5	5:00 PM	Little Rock	Clearwater Operations Center	Central District, AWW&WEA
5	5:30 PM	Fort Smith	Golden Corral	Western District, AWW&WEA
11	8:30 AM	Pea Ridge	Emergency Services Bldg.	Northwest District, AWW&WEA
12	5:00 PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
12	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
12	5:30 PM	Marvell	Davidson Civic Center	Eastern District, AWW&WEA
17	6:00 PM	Star City	FUMC, Family Life Ctr.	Southeast District, AWW&WEA
19	12:30 AM	Paragould	Grecian Steak House	Northeast District, AWW&WEA
26	5:30 PM	El Dorado	Utility Meeting Room	Southwest District, AWW&WEA
<u>August 2012</u>				
2	5:00 PM	to be announced	to be announced	Central District, AWW&WEA
2	5:30 PM	Fort Smith	Golden Corral	Western District, AWW&WEA
8	8:30 AM	Siloam Springs	110 N. Mt. Olive	Northwest District, AWW&WEA
9	5:30 PM	Des Arc	Dondies Riverboat Restaurant	Eastern District, AWW&WEA
9	5:00 PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
9	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
16	12:30 PM	Jonesboro	Western Sizzlin	Northeast District, AWW&WEA
21	6:00 PM	Jefferson County	Leon's	Southeast District, AWW&WEA
23	5:30 PM	Ashdown	Senior Citizen Center	Southwest District, AWW&WEA
<u>September 2012</u>				
6	5:00 PM	to be announced	to be announced	Central District, AWW&WEA
6	5:30 PM	Fort Smith	Golden Corral	Western District, AWW&WEA
11	6:30 PM	Monticello	Cowboy's	Southeast District, AWW&WEA
12	8:30 AM	Springdale	The Jones Center	Northwest District, AWW&WEA
13	5:00 PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
13	5:00 PM	Pleasant Plains	Tadpole's Catfish Barn	North Central District, AWW&WEA
13	5:30 PM	Helena	Catfish Island	Eastern District, AWW&WEA
20	12:30 PM	Paragould	Couch's BBQ	Northeast District, AWW&WEA
27	5:30 PM	Camden	AETA	Southwest District, AWW&WEA