ARKANSAS
DRINKING WATER UPDATE

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Water Bacti Sampling – a Review

Jay Northern, Environmental Specialist

Bacteriological sampling and analysis has been a fundamental process in determining the safety of drinking water since the application of the germ theory to water supplies in the early part of the 20th century. Because of the potential health threat from microbes, drinking water must be regularly analyzed for pathogens or for indicator organisms. An indicator organism is one which is not considered pathogenic but whose presence indicates that the safety of the water may be questionable. Under the federal Safe Drinking Water Act, such an indicator organism is total coliform.

There are over 1100 public water systems in the state of Arkansas, most submitting on the average 3 samples per month and some up to 90 per month. The Microbiological Section of the State Public Health Laboratory receives over 60,000 water samples each year which are analyzed for total coliform and *E. coli.* No other drinking water contaminant is sampled and analyzed more frequently by the state lab when it comes to the daily operations of a public water public system. Because of this volume, the efficient processing of these samples is crucial to the timely analysis and reporting of the results.

An improper amount of water in the collection bottle or not correctly filling out the sample collection form slows down the analysis and can create greater work for all parties – the Laboratory, Engineering Section personnel, and, ultimately, the water system operator who may have to recollect and resubmit rejected or invalid samples. As an example, the Microbiological Section recently tallied for a two week period the number of samples with overfilled bottles and found it to be approximately 40 percent. Engineering Section staff have reported that up to 30 percent of the collection forms to be incomplete or incorrectly transcribed; i.e.: sample location not matching Sample Site Plan, time not logged, etc.). The work and time necessary to analyze overfilled bottles, correct sample collection forms, or to recollect and resubmit samples, is a tremendous work burden that is unnecessary.

This article will review the water microbiological sampling process and focus on proper collection, completion of the sample forms, and transport to the state lab.

Sample Schedule

In an attempt to even the workload on the Microbiological Section of the State Public Health Laboratory, the Engineering Section divides all water systems which collect monthly samples in one of four schedules, one for each full week of the month. Labels are generated each Monday in the month, except for those months with five Mondays, and sent to the Lab which prepares the bottles and mails them to the water system that same week. The water system is then scheduled to collect the samples the following week. Ideally, this process results in the following sequence of sample submittals each month:

Mailing Schedule	Submit To the State Lab
4	Week 1 of month
1	Week 2 of month
2	Week 3 of month
3	Week 4 of month

Water systems which submit late in the month and have to resample a coliform positive result are given some time into the next month to complete

Submittal of Master Plans Urged for State Water Plan Compliance

In light of the passage of Act 691 by the 2007 Arkansas Legislature and subsequent rule changes, the staff of the Arkansas Natural Resources Commission are recommending that public water systems submit a copy of their master plan to the Commission for review and approval under the State Water Plan. Approval of the plan will provide greater assurance for the protection of water service boundaries.

The Arkansas Water Plan, administered by the Commission, is the mechanism by which the orderly management of the state's water resources is supposed to occur. Political subdivisions of the state are not to undertake any project or expend any state funds which are not in compliance with the plan. Cities, regional water districts, public water authorities, and public facilities boards are considered political subdivisions of the state.

Act 691 clarified the factors that are to be considered in the economic valuation of a service area which is disputed or to be exchanged between two water suppliers. It also added "geographical area" to the list of items to be considered on whether a project complies with the plan.

Ed Swaim, General Counsel for the Commission, spoke at the recent state conference for the Arkansas Rural

See Master Plans page 2

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Master Plans *continued from pg 1*

Water Association and outlined several changes the Commission had recently implemented. Under revised regulations, the Commission will now approve master plans which outline the service area boundary for a water utility and a time frame, up to ten years, in which water service will be provided. Approval of the master plan will provide a mechanism to exclude other service providers from encroachment. Previously, the Commission approved only specific water lines proposed for the immediate future under the State Water Plan.

The revised regulations incorporate the language of Act 691 regarding the exchange of service areas, including:

- the impact of transfer on the current provider's existing indebtedness;
- the value, including depreciation, of the current provider's facilities in the area to be transferred;
- the amount of expenditures by the current provider for planning, design, or construction of service facilities outside the area that are directly and reasonably allocable to the area to be transferred;
- demonstrated impairment of service or increase in cost to the consumers of the current provider remaining after the transfer of area;
- the impact of future lost revenues from the current provider's existing customers in the area to be transferred until the indebtedness is retired;
- other relevant factors.

Swaim pointed out that even with the revised regulation, the success of service area disputes would depend to a large measure on the goodwill of the parties involved and their willingness to amicably resolve the issue. ♦

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ADEQ Regs on Extraordinary Waters Revised to Clarify Water Supply Development

The Arkansas Department of Environmental Quality, acting through its governing body the Arkansas Pollution Control & Ecology Commission, has modified its water quality regulations to clarify the development of drinking water supplies on exceptional water quality bodies, considered the state's most scenic and prized streams. Modifications to ADEQ's Regulation 2 - *Regulation for Establishing Water Quality Standards for Surface Waters of the State of Arkansas* were unanimously passed by the PC&E Commission on September 28 after more than a year of hearings and public input.

The regulation changes affect those waters of the state designated as Extraordinary Resource Waters (ERW), Ecologically Sensitive Waterbodies (ESW), and Natural and Scenic Waterways (NSW). The changes to the regulation consisted of:

1. Defining the information required to be submitted and the procedures whereby the ADEQ Director determines whether a proposed project will constitute a significant physical alteration to an ERW, ESW, or NSW.
2. Allowing the removal of an ERW, ESW, or NSW designation from a stream for the construction of a reservoir which is solely for the purpose of providing a domestic water supply and for which there are no feasible alternatives; and defining the information necessary to be submitted to ADEQ and the Commission and the procedures to follow in considering such a change.
3. Defining the information to be submitted and the procedures to follow for designating a stream as an ERW, ESW, or NSW.

Under the previous regulations, the development of a water supply intake, or any type of project, on an ERW, ESW, or NSW stream could not result in a "significant physical alteration of the habitat". However, what constituted such an alteration was not defined in the regulations. Additionally, the damming of any such stream was, depending on who you asked, either specifically prohibited by the regulation and by the federal Clean Water Act which the regulation was designed to implement; or was theoretically possible but practically unachievable because of the manner in which the regulation had been implemented for the past 20 years by ADEQ.

Key to the public debate on the regulation changes were discussions on the intent of the PC&E Commission when the regulations on extraordinary waters were last modified, and how the language of the federal Clean Water Act should be interpreted. Proponents for the regulation change argued that the Commission never intended an ERW, ESW, or NSW classification to be irrevocable since the public's water supply needs could change over time. Opponents of the change believed that removing an ERW, ESW, or NSW designation violates the anti-degradation requirements of the state regulation as well as of the Clean Water Act.

Active throughout the regulation revision process was the River Valley Regional Water District. The District is seeking a long term water supply for the public water systems in Crawford County and is examining the possibility of damming Lee Creek, a state Extraordinary Resource Water.

The regulation change must be submitted to EPA for review and approval. Additionally, several organizations opposed to the regulation change submitted comments predicting that litigation could result from the regulation change, however, the comments did not indicate whether those particular organizations would themselves file a lawsuit.

The regulations can viewed or downloaded from ADEQ website at http://www.adeq.state.ar.us/water/regulations.htm . ♦

Bacti Sampling cont'd from pg 1

their sampling requirements.

Collecting the Sample:

A water operator needs to remember there are several factors related to the collection process that have the potential to negatively affect the sample result and not give a true representation of the water the system is providing. One factor is to select a proper hydrant: no kitchen or swivel faucets, no frostproof hydrants, no hydrants which are mounted sideways or turned upwards, and removing the aerator if the fixture is so equipped. Other measures include making sure you have clean hands prior to collecting the sample, not collecting a sample during a rain storm or collecting a sample from a faucet surrounded by a significant growth of shrubbery, etc. All of these factors have the potential to cause a false positive result.

1) *Flush the faucet.* The faucet should be flushed for several minutes to ensure that the water being sampled is representative of the water from distribution main and not from the building plumbing. This can be done by letting the water run until the water exiting the faucet either cools down or heats up, depending on the season of the year, to a constant temperature.

2) Check the residual. The chlorine residual should always be checked prior to sample collection and should be at least 0.1 to 0.2 ppm. If no chlorine is detected, the operator should investigate why that is the case. A chlorine residual of zero does not necessarily mean the sample will come back positive for coliform but it does increase the likelihood of it happening.

3) *Flame the hydrant.* Flame the hydrant with a portable propane torch in order to minimize contamination from the faucet itself. Although flaming is recommended, there are situations where it is impractical. For instance, when a plastic type faucet is encountered, a chlorine disinfectant spray or solution could be utilized.

4) *Flush again.* Flush once again to remove any heated water and possible residue left behind from the flaming.

5) *Sample collection.* Adjust the faucet to create a slow, steady stream of water that does not produce any splash or spray. Remove the cap from the bottle, not touching the inside of the cap, and continue to hold the cap with the inside facing down. With the other hand, place the bottle under the stream and fill exactly to the 100 milliliter mark displayed on the sample bottle. Check the quantity by placing the bottle on a level surface and looking for the water level, at eye level, to be on the 100 milliliter mark. Overfilling the bottle is not acceptable. As stated earlier, the biggest problem recognized by the bacteriological water lab is the blatant overfilling of the sample bottle (This will be expanded on later).

Filling Out the Form:

The operator next fills out the collection form completely. Month, Day, Year, Hour, Water System Name, Water System ID Number, Site Code, Definite Location of Sample, City, County, type of system, source, type of sample, and chlorine residual are all marked accordingly. '*Site Code' and 'Definite Location of Sample' should be filled according to the water system Sample Site Plan when collecting routine compliance samples.* Any operator collecting samples needs to have a copy of the sample site plan. Contact Engineering staff to obtain a copy if your plan cannot be located. Lab personnel immediately notify Engineering Staff to make corrections when forms are not properly completed. This routinely results in the staff calling the water operator for verification and confirmation on whether the information is correct.

Be sure to look at the calendar before sampling to ensure the correct date is listed. Also, 12:00 noon should be marked PM. Please remember that New Construction, Special, Boil Order, and Investigative samples are not considered compliance samples.

Transporting the Samples

A water system can hand deliver any of its samples directly to the lab. The lab is open Monday through

See Bacti Sampling page 4

Coliform Sampling Frequency for Community Water Systems

Population	Minimum #/Month
25 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
> 96,000	contact ADH

Examples of sample volume in a bacti bottle. The arrow indicates the 100 ml mark.

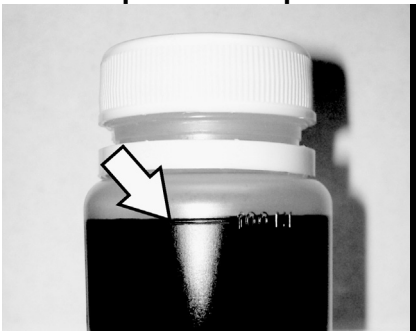


Figure 1: Correct Amount

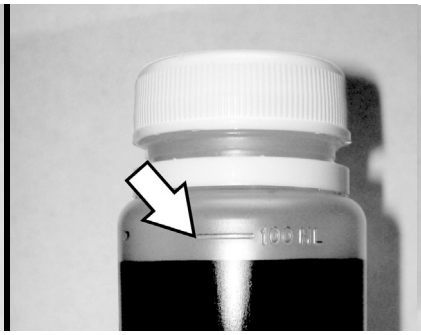


Figure 2: Incorrect – Underfilled

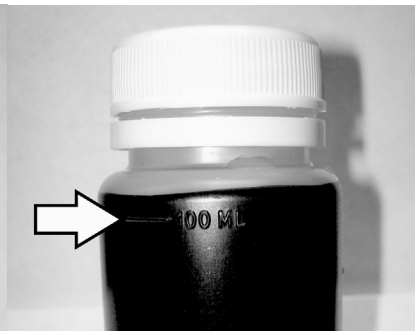


Figure 3: Incorrect - Overfilled

Bacti Sampling cont'd from pg 3

Friday, 8:00-4:30, except for state holidays. Water systems can also pay for overnight delivery via the US Postal Service or an express service (FedEx, UPS, etc.) The delivery address is Public Health Laboratory, 201 South Monroe, Slot H-47, Little Rock, AR 72205.

Since the Department of Health contracts for an overnight delivery service from each County Health Unit to the central office in Little Rock, many water systems utilize this alternative, at no charge, to deliver their samples to the state Lab. The pickup days and times vary with each Health Unit and should be verified by a phone call to the Health Unit. A copy of the schedule can be found at http://www.healthyarkansas.com/eng/ or by calling the Engineering Section. Samples should be delivered to the Health Unit 30 minutes before the scheduled pickup.

The time between sample collection and the placement of the sample in the lab incubator must not exceed 30 hours. Sample collection and transport needs to be coordinated in advance to meet the schedule of the carrier. Whether shipping by overnight express delivery or the ADH's courier system, samples must not be sent on a Friday or the day before a state holiday as the Lab will not be open when the sample is delivered and the sample's holding time will be exceeded.

While the transport procedures and hold times are the same, do not confuse the schedule for your routine finished water distribution compliance samples with that for the raw water samples under the Long Term 2 Enhanced Surface Water Treatment Rule. They may or may not be on the same week(s) and each schedule should be considered separate.

Analyzing the Sample

The Public Health Laboratory utilizes the Colilert® method for coliform analysis and adheres to the Environmental Protection Agency's *Manual for the Certification of Laboratories Analyzing Drinking Water* as its guide to all aspects of the analysis. The manual lays out the criteria and procedures for all methodologies, along with guidelines for quality control and quality assurance. Thus, the Lab continually follows and updates a quality control program that ensures that the compliance monitoring records and data are thorough, accurate and legally defensible. Importance by the Lab is placed on correct sample collection information and on correct analytical methodology

When samples arrive in the lab, they are time stamped, assigned a lab number, and checked for any deficiencies either on the collection form or in the sample itself. Sample bottles are placed on a level surface and visually observed for the correct quantity by the lab technician. The water level is checked to see that it hits the mark indicated on the bottle. The laboratory certification manual states that the amount of water to be used will be 100 milliliters, no more, no less. See Figures 1-3 on page 3 (a dye has been added to the sample for a visual aid). Samples that are on the mark are lined up and after the addition of the Colilert® reagent each is shaken vigorously 25 times. Once prepared, the samples are incubated for the 24 hours and observed for the absence or presence of coliforms and E. coli.

If a sample is overfilled, as in Figure 3, the process time is essentially doubled. The lab analyst will pour the entire sample into a new sterile sample bottle, vigorously shake the sample bottle 25 times to ensure adequate mixing, then pour 100 milliliters back into the original sample bottle. The Colilert® reagent is added, the bottle is shaken for another 25 times, and then placed in the incubator. This situation is where the additional sample bottles and man-hours come into play. Emphasis is once again placed on getting the correct amount of water in the bottle to eliminate the need to expend addition resources in the analysis.

Samples can be rejected for numerous reasons including insufficient water in the bottle ('Quantity Insufficient', see Figure 2), the holding time exceeding 30 hours ('Too Old'), the form not containing the minimum information ('Form Incomplete'), the incorrect date or time listed ('Form Postdated'), and other reasons.

Reporting of Results

Once the analyses are finalized by the lab, the data is electronically reported to the Engineering Section which prepares and mails the results and posts them to its website http://www.healthyarkansas.com/eng/bacti.htm. Sample results should be received within seven to ten days of submittal. Each sample result contains instructions on how to interpret the analysis and what action, if any, is required.

If a sample result is coliform positive, rejected, or invalid, resample bottles will automatically be sent to the water system within a few days. However, a water operator should track and keep up with the samples submitted and their corresponding results on the Bacteriological Monitoring Report (BMR) (http://www.healthyarkansas.com/eng/download.htm) since the additional bottles will not contain an explanation for why they were sent. If a water operator does not receive lab results in a timely manner, is uncertain what an analytical result means, or does not receive resample bottles, he/she is encouraged to contact the appropriate Engineering Section staff.

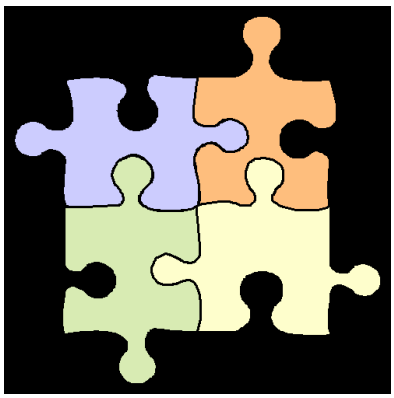
A copy of the completed BMR needs to be submitted to the Engineering Section within 10 days after the end of the month and a copy kept in the water system's files for at least five years.

It goes without saying that the bacteriological sampling of water systems will continue to be a mainstay of the state's drinking water program. Bacteriological sampling of water treatment plants and distribution systems is but one aspect of the program that ensures Arkansas' citizens continue to have a potable and reliable supply of water. This article is by no means all inclusive in the process of bacti sampling and analysis, as there are many different scenarios that can and will happen. Let's all try to work together to ensure drinking water safety, and not forget the importance of proper bacti sampling. Contact Jay Northern or your Environmental Specialist with the Engineering Section should you have questions. ♦

The Preliminary Engineering Report: A Problem Solving Tool

Jeff Stone, P.E., Chief Engineer

As we all know, the demands being placed upon water resources and water utilities in the State have increased over time. Water systems attempting to develop water sources are finding this task more difficult due to greater population densities and rural areas that are becoming more highly developed. Water treatment plants are finding that raw water quality is in some cases decreasing at the same time that treated water standards have become more stringent and complex. The federal Safe Drinking Water Act is requiring that distribution system water quality be given greater scrutiny at the same time that we have seen distribution of treated water increase in scope due to regionalization. These factors have made the job of operating a water system more challenging. These factors have also made the job of planning and designing changes to water systems more challenging. There are now more factors than ever that have to be taken into account when a water utility needs planning or design services.



One of the tools for facilitating good design and good planning is a Preliminary Engineering Report (PER). Unfortunately, this tool is too often overlooked. Confident people sometimes don't appreciate the need for outside input. However, I would assert that competent people seek out and incorporate relevant input from all stakeholders. The PER is a method by which relevant input can be obtained prior to the beginning of the more expensive step of project design. The Engineering Section of the Arkansas Department of Health will, on many occasions, have access to information that is not readily available to the consultant and may not have been noted by the utility. The Engineering Section has direct access to a great amount of water quality data concerning raw water quality, finished water quality, and distribution system water quality. This data includes a wide variety of parameters that represent a significant financial expenditure for sample collection and analysis. This data has many times been organized into forms that are more meaningful than just raw data and can be presented in forms that show trends and facilitate insights.

Employees of the Engineering Section are also many times able to provide insight into not only the current regulatory requirements, but also the likely future requirements. Many times, the regulatory requirements are different depending upon the treatment scheme being proposed and input from the people knowledgeable with regards to the regulations can be beneficial.

Water managers play a pivotal role in ensuring that the PER tool is used for the benefit of their utility. A consultant might not go to the incremental expense of a preliminary report unless required to do so by the utility and compensated for that expense. I suppose it is human nature to be resistant to backing up and re-evaluating decisions once they are made. If a consultant, on behalf of a client, presents a completed design to the Engineering Section and then discovers that there are disagreements, an unproductive environment concerning the project can result.

It is a point of fact that the "Arkansas Department of Health's Rules and Regulations Pertaining To Public Water Systems" require that a PER be submitted for all new water systems and major improvements to existing systems. PER's are almost always prepared with respect to new water systems due to the need to present them to funding agencies, etc. However, we many times see major improvements to water treatment plants and distribution systems submitted for our review without a PER having been prepared. This is especially unfortunate since, in these cases, a PER would not have to be all inclusive but rather can be limited to the issues relevant to the proposed improvements. On occasion this results in what should be a smooth review process becoming one with delays and increased potential for conflict.

Once again, I would like to indicate that the water manager is in a pivotal role in ensuring that relevant input has been obtained prior to the design phase of a project. If a water manager has questions as to whether specific improvements warrant a PER, I would encourage you to give me a call (501-661-2623) and we can talk about it. ♦

Jeff Stone was appointed Chief Engineer of the Engineering Section in June of this year.

Revised Fee Invoices Mailed in October

The Department of Health began assessing an increase in the Public Water System Service Fee on October 1, 2007. With the support of the waterworks industry, legislation authorizing an increase in the fee from 25 cents to 30 cents per meter per month was passed in the 2007 Legislative Session and changes in the agency's regulations to set the fee were effective on October 1.

Revised billing statements for the fee were issued to community water systems in October. The billing statements assessed the old fee of 25 cents for the months of July – September of 2007 and the new fee of 30 cents for the months of October 2007 through June 2008. Payments already submitted to the Department of Health at the time of the billing were credited against the revised bill.

If you have questions regarding your billing statement, contact Cathy Gaston or Karen Howard.

Zebra Mussels Found in Bull Shoals Lake

The presence of a pest mussel has been confirmed by the Arkansas Game and Fish Commission in Bull Shoals Lake in north Arkansas. Zebra mussels, so named because of the dark, zig-zag pattern of stripes on the shell, were found in September near the Lead Hill marina in Boone County.

The zebra mussel, whose scientific name is *Dreissena polymopha*, has spread rapidly throughout the Great Lakes Region and navigable rivers of the eastern Mississippi drainage basin, including the Arkansas River. First discovered in Lake St. Clair, located between Lakes Huron and Erie, in 1988, the mussel is native to Europe and is believed to have been introduced in the U.S. from ballast water dumped by large ocean going vessels.

The mussel is an invasive species which aggressively attaches to any hard surface, natural or man-made, and reproduces rapidly. The zebra mussel grows best in areas of free flowing water and can develop dense mats on structures, docks, and boats, and can clog water intakes and pipes. Water utilities and power plants which use lakes and rivers where the mussels have become infested report an ongoing battle in keeping their intakes clear of the pest.

In addition to the difficulties presented for water and power utilities, the zebra mussel can also be a hazard to native mussel species. Zebra mussels will attach to native mussels and prevent their normal functioning resulting in their death. Native mussels have disappeared in areas where the zebra mussels are heavily invested. Additionally, zebra mussels feed primarily on algae and compete for food with native microscopic organisms. They have no significant natural predators in North America.

To prevent the spread of the mussel, the Game and Fish Commission advises that boaters should wash boat hulls, trailers and live wells with either a 10 percent bleach solution or high-pressure hot water. Live wells and bait buckets with Bull Shoals or Arkansas River water should be dumped before they leave the water. Adult zebra mussels can survive out of water for several days or weeks if the temperature is low and humidity is high.

Methods to control the mussel by water and power utilities have included chemicals – chlorine, chlorine dioxide, and carbon dioxide; ultraviolet light; sound; thermal applications such as with steam and hot water; manual removal by pigging and high pressure wash; and the use of materials or coatings which are toxic to the mollusks such as copper, zinc, and brass. ♦

Photo courtesy of US Geological Survey

Zebra mussels similar to those found in Bull Shoals Lake

AWWA Revises C 900 Std.

Jeff Stone, P.E., Chief Engineer

The American Water Works Association provides standards that apply to many of the common materials and products used in the waterworks industry. This is a great service to the profession in that it makes quality more consistent and allows experts in each field to develop the requirements that the rest of the profession can rely on without having to "reinvent the wheel". Routinely, AWWA will reissue updated standards as the practice of the waterworks profession evolves or new information is gained from experience or research.

Recently, AWWA revised Standard C-900, *Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4-12 inch, for Water Transmission and Distributio*n. The revisions made to the standard were substantial and will require the ADH to revise it's own plastic pipe policy.

As a background to this issue, there are currently two main types of PVC pipe used in the waterworks industry in Arkansas: pipe manufactured to the requirements of ASTM D 2241, *Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe;* and pipe manufactured to the requirements of AWWA C-900.

The two standards differ in several respects and a water system or a design engineer has a choice of specifying one type of pipe or the other. One of the differences between the two has been the "Factor of Safety" that the two standards utilized to calculate the working pressure to which the pipe can be subjected. AWWA C-900 required a Factor of Safety of 2.5 while ASTM 2241 set a factor of safety of 2. In addition, AWWA C-900 contained a provision for a pressure surge allowance, equivalent to an abrupt 2 ft/sec velocity change, that was not found in ASTM D 2241. In the past, the Arkansas Department of Health, has utilized a policy that essentially placed these two products on an even playing field. A Factor of Safety of 2.5 was applied to both products and a reduction in working pressure to account for the lower factor of safety and pressure surge allowance was

applied to ASTM D2241 specified pipe.

In the recent revision of the AWWA C-900 standard (C900-07), the factor of safety was reduced to 2.0 and the reduction in working pressure to accommodate a 2.0 ft/sec pressure surge was eliminated. Instead, the revised standard places the burden on the design engineer to show that the application will neither subject the pipe to pressure surges exceeding the pressure class by 60% nor result in surges of a magnitude and frequency that results in pipe fatigue and a reduced service life. If the application will subject the pipe to pressure surges that violate either of these two restrictions, then it is the responsibility of the designer to select a stronger pipe or reduce the surges through other methods.

It would appear that the PVC Plastic Pipe policy that the Arkansas Department of Health has used in the past will need to be revised since the underlying industry standard has been revised. However, the implication of these revisions are that the PVC plastic piping used in the waterworks systems in Arkansas will be allowed to be subjected to greater pressures than they have been before. These types of policy changes are not to be made without due consideration of the issues involved and your input would be appreciated. Any proposed changes in the Engineering Section's policy on PVC pipe will be distributed for review and comments.

Those of you that are willing to review the relevant issues and offer your comments at this early point in the process should send comments to Jeffery.Stone@arkansas.gov. The main references pertaining to this issue are AWWA C900-07, AWWA M23 *PVC Pipe – Design & Installation*, ASTM D 2241, *Uni-Bell Handbook of PVC Pipe*, and the Arkansas Department of Health's policy "PVC Pipe for Public Water Systems". If you wish to receive a copy of the current ADH policy, contact Jeff Stone at the above e-mail address. A recent article in AWWA Opflow (October 2007) "Question of the Month: What Prompted Changes in AWWA's C900-07 PVC Standard?" should also be reviewed. Thanks for your input. ♦

EPA Invites Utilities to Join *WaterSense* Conservation Program

EPA is inviting water utilities to become partner members of the WaterSense program for conservation. In 2006, EPA Administrator Stephen Johnson announced *WaterSense*, a partnership program designed to enhance the market for water efficient products and services by making it easier for consumers to find products that use less water.

As part of the program, Johnson unveiled a logo which manufacturers could use on a product if it met the *WaterSense* criteria. The concept is similar to the Energy Star conservation logo commonly seen on electronic devices.

EPA also invited other organizations to help in the promotion of the WaterSense program including water and wastewater utilities, state and local governments, nonprofit organizations, and trade and professional groups. The logo signifies an organization's commitment to promoting water efficiency. Promotional members who have been accepted in the program can utilize the WaterSense logo on flyers, letterheads, bill stuffers, and other outreach efforts including websites.

Also as part of the program, EPA established specifications to recognize certification programs for irrigation professionals in the areas of system design, installation and maintenance, and system auditing. Consumers are encouraged to look for a WaterSense irrigation partner to design or maintain their irrigation system.

This year EPA finalized the criteria which high efficiency toilets and bathroom sink faucets must meet in order to display the WaterSense logo. To date, over 100 different toilet models have been tested and certified. Any product displaying the logo must:

- Perform as well or better than less efficient counterparts;
- Be about 20 percent more water efficient than average products in that category;
- Achieve water efficiency through technology options;
- Provide measurable results;
- Be independently certified.

EPA estimates that each American uses an average of 100 gallons of water a day at home, and that simple steps could reduce that usage by 30 percent. Due to increasing water demands, the agency states at least 36 states are projecting water shortages between now and 2013.

Partner applications are at http://www.epa.gov/WaterSense/partners/join/index.htm. A listing of WaterSense products is found at http://www.epa.gov/WaterSense/pp/index.htm. ♦

WaterSense Statistics

- An estimated five to ten percent of homes have leaks of 90 gallons or more a day.
- WaterSense labeled faucets and faucet accessories can reduce flow volumes by more than 30 percent without sacrificing performance.
- If one in every 10 homes in the U.S. were to install WaterSense labeled faucets or faucet accessories in their bathrooms, it could save 6 billion gallons of water and more than $50 million in the energy required to supply, treat, and heat that water.
- If all inefficient toilets in U.S homes were converted to WaterSense models, over 950 billion gallons of water would be saved annually, equivalent to 15 days of flow over Niagara Falls.
- Homeowners using WaterSense irrigation partners to perform regular maintenance could reduce irrigation water by 15 percent annually.

NATIONAL

* An agreement between the US Fish & Wildlife Service and the US Army Corps of Engineers will allow reduced releases from Lake Lanier, the principal water supply for Atlanta, Ga., increasing the storage reserve in the lake. Prior to the agreement, officials had stated the city had as little as a three month supply of drinking water remaining. The state is struggling with the impact of an ongoing critical drought in the area. USFWS water requirements for an endangered species downstream of Lake Lanier had contributed to the lake's drawdown.

* The state of California has adopted a drinking water standard for perchlorate of 6 micrograms/L that became effective in October 2007. The standard is equal to the public health goal level and was set in large part to protect fetuses of women with hypothyroidism or iodide deficiencies. Massachusetts set a standard of 2 micrograms/L in 2006.

* The Centers for Disease Control and some state water programs have reported fluoride shortages or disruptions of product deliveries are occurring in some areas of the country. Water utilities are encouraged to seek out backup sources if their existing supplier cannot deliver. More information can be found at http://ww.cdc/fluoridation/ .

* The U.S. Court of Appeals for the District of Columbia rejected a petition by the cities of New York and Portland, OR challenging EPA's Long Term 2 Enhanced Surface Water Treatment Rule. The cities had argued that the rule, designed to control *Cryptosporidium* levels in drinking water, was arbitrary and capricious, failed to use the best available science, and did not provide adequate opportunity for notice and comment. Both cities utilize unfiltered surface sources for drinking water and under the rule could be required to install additional treatment.

* AWWA reported that the Bush Administration has decided to support legislation that would make water and wastewater utilities subject to the Chemical Facility Anti-Terrorism Security program under the federal Department of Homeland Security. Utilities are currently exempt from the program; however, those whose utilities whose onsite chemical quantities exceed a threshold level (2500 lb for chlorine) must register with DHS, and may be required to submit a special Security Vulnerability Assessment and prepare a Site Security Plan. AWWA expects legislative action on the exemption under CFATS to occur in 2008.

News of Note

* The National Drinking Water Advisory Council has recommended to EPA two health based measures to assess drinking water performance: 1) avoided bladder cancer cases attributable to reduced TTHMs resulting from the Stage 1 and Stage 2 DDBPR, and 2) annual cases avoided of endemic cryptosporidiosis resulting from the Long Term 2 ESWTR. The NDWAC is interested in EPA developing such measures to assess the effectiveness of the regulation of drinking water based on health based outcomes instead of the simple percentage of water systems complying with a standard.

* A December 10, 2007 Federal Register notice from EPA on the agency's future regulatory agenda predicts, for drinking water, a final rule for radon in May 2009 and a proposed Total Coliform / Distribution System Rule in 2010.

ARKANSAS

* Representative Betty Pickett of Conway held legislative hearings in Little Rock in November on the impact of the drilling for natural gas in the Fayetteville shale in north central Arkansas. The hearings focused on the environmental impact of the drilling. Representatives of the energy companies, county officials, and state agencies testified at the hearings. The hearings were authorized by the 2007 Arkansas Legislature.

* Texarkana Water Utilities was the winner for the 2006 Award for Sustainable Public Health Protection presented by Region 6 of the United States Environmental Protection Agency. Texarkana was nominated by the Arkansas Natural Resources Commission for its innovation in financing, approach to planning and project implementation, use of partnerships, as well as for its promoting sustainable infrastructure. Nominees for the award had to demonstrate their compliance with the Safe Drinking Water Act, had no issues with their last financial review, and ranked high on the Department of Health's project priority list. Congratulations to Texarkana Water Utilities on their outstanding achievement!

ENGINEERING SECTION

* The most up-to-date schedule for the overnight courier pickup at the Department of Health's County Health Units can be found on the first page of the Engineering Section's website: http://www.healthyarkansas.com/eng/. Water operators are reminded to have their bacti samples at the health unit 30 minutes before the scheduled pickup time and to obtain a receipt for the samples.

* Robert (Bob) Arthur, P.E., has been promoted to Engineer Supervisor for the Engineering districts covering central and western Arkansas. Bob is a former District Engineer in the north central part of the state and has five years experience with the Engineering Section. Additionally, he has almost thirty years of chemical engineering experience with Reynolds Metals before coming to work for Department of Health.

* Ed Craig has transferred to the position of District Engineer for District 9 which includes Faulkner, Cleburne, Van Buren, Pope, and Johnson counties. Ed has worked for a number of years as the Cross Connection Control Engineer in the Engineering Section. As a District Engineer, he will be responsible for plan review, and assist with sanitary surveys and technical assistance in those counties.

Mandatory Training Course Schedule

Most Current Listing is at: http://www.healthyarkansas.com/eng/autoupdates/oper/mandtrngall.htm. Courses begin at 8:00 a.m.

MANDATORY COURSE NAME	START DATE	END DATE	OPCERT GRANT ELIGIBLE COURSE	CITY	LOCATION All courses begin at 8 a.m.	SPONSOR
Basic Water Treatment	01/01/08	01/15/08	Yes	Internet	Contact AEA for Registration	AEA
Basic Water Treatment	01/08/08	01/10/08	Yes	McGehee	Municipal Building, 901 Holly Street	ARWA
Basic Water Math	01/08/08	01/08/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
Applied Water Math	01/09/08	01/09/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
PWS Compliance	01/10/08	01/10/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ADH
Advanced Water Treatment	01/14/08	01/16/08	Yes	Hot Springs	WW Plant, 798 Adams	AEA
Basic Water Distribution	01/15/08	01/17/08	Yes	Heber Springs	ASU, 71 Cleburne Park Road, Rm 110	ARWA
Basic Water Math (PM Class)	01/15/08	01/24/08	Yes	Fort Smith	Contact AEA for Registration	AEA
Basic Water Distribution	01/15/08	01/30/08	Yes	Internet	Contact AEA for Registration	AEA
Two Day School	01/22/08	01/23/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
Basic Water Math	01/22/08	01/22/08	Yes	Camden	AEA, 100 Carr Road	AEA
Applied Water Math	01/23/08	01/23/08	Yes	Camden	AEA, 100 Carr Road	AEA
PWS Compliance	01/24/08	01/24/08	Yes	Camden	AEA, 100 Carr Road	ADH
Basic Water Distribution	01/28/08	01/30/08	Yes	Maumelle	Wastewater Plant, 425 B Hyman Drive	AEA
Basic Water Treatment	01/29/08	01/31/08	Yes	West Fork	Wenzel Community Center, 222 Webber	ARWA
Intermediate Water Treatment	02/01/08	02/15/08	Yes	Internet	Contact AEA for Registration	AEA
Basic Water Math	02/05/08	02/05/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
Int Water Distribution	02/05/08	02/07/08	Yes	Heber Springs	ASU, 71 Cleburne Park Road, Rm 110	ARWA
Applied Water Math	02/06/08	02/06/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
PWS Compliance	02/07/08	02/07/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ADH
Appl Water Math (PM Class)	02/11/08	02/19/08	Yes	Fort Smith	Contact AEA for Registration	AEA
Two Day School	02/12/08	02/13/08	Yes	Harrison	Contact ARWA for Registration	ARWA
Intermediate Distribution	02/15/08	02/29/08	Yes	Internet	Contact AEA for Registration	AEA
Int Water Distribution	02/18/08	02/20/08	Yes	Russellville	Tri-County Water, 5306 N Arkansas Ave	AEA
Basic Water Treatment	02/25/08	02/27/08	Yes	Camden	AEA, 100 Carr Road	AEA
Basic Water Treatment	02/26/08	02/28/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
Basic Water Distribution	02/26/08	02/28/08	Yes	Nashville	Carter Day Facility, 200 Nichols Drive	ARWA
Advanced Water Treatment	03/03/08	03/17/08	Yes	Internet	Contact AEA for Registration	AEA
Basic Water Treatment	03/03/08	03/05/08	Yes	Hot Springs	WW Plant, 798 Adams	AEA
Int Water Distribution	03/11/08	03/13/08	Yes	Nashville	Carter Day Facility, 200 Nichols Drive	ARWA
Intermediate Water Treatment	03/11/08	03/13/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
Advanced Water Distribution	03/17/08	03/31/08	Yes	Internet	Contact AEA for Registration	AEA
Two Day School	03/18/08	03/19/08	Yes	Lonoke	ARWA, 240 Dee Dee Ln	ARWA
PWS Compliance	03/20/08	03/20/08	Yes	Little Rock	ADH Lab, Markham & Monroe	ADH
Basic Water Distribution	03/25/08	03/27/08	Yes	Camden	AEA, 100 Carr Road	AEA
Advanced Water Distribution	03/25/08	03/27/08	Yes	Heber Springs	ASU, 71 Cleburne Park Road, Rm 110	ARWA
Basic Water Math	03/25/08	03/25/08	Yes	El Dorado	Water Office, 300 South Madison	ARWA
Applied Water Math	03/26/08	03/26/08	Yes	El Dorado	Water Office, 300 South Madison	ARWA
PWS Compliance	03/27/08	03/27/08	Yes	El Dorado	Water Office, 300 South Madison	ADH

*Opcert Grant Eligible Course – 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. 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 Jeremy Rowe or Martin Nutt – (501) 661-2623 – Jeremy.Rowe@arkansas.gov

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

ARWA – Arkansas Rural Water Association – Contact Carol Shaw – (501) 676-2255 – arkrwa@sbcglobal.net

Additional courses are shown on the internet at: http://www.healthyarkansas.com/eng/autoupdates/oper/opcert/opertrng.

Water Licenses Not Renewed

The following persons did not renew their water operator license for the renewal period July 2007-June 2009.
If you have questions about your renewal, contact Martin Nutt or Debbie Bertrand at 501-661-2623.

Licensee Name	Mailing Address
ACORD SCOTT	CECIL
ADAMS KEITH B	GREEN FOREST
ALLEN FINIS D	OIL TROUGH
ALLEN PAUL HENRY	HOT SPRINGS
ALLEN ROBERT	SUMMIT
ALVAREZ MANUEL	WEST FORK
ANDERSON REBECCA	BENTONVILLE
APPLE RONALD L JR	FAYETTEVILLE
ATKINSON NATHAN A	OZARK
BAKER TIMOTHY D	GLENWOOD
BARBER MATHEW	BERRYVILLE
BARKER KIM	SPRINGDALE
BARRON WILLIAM D	FAYETTEVILLEE
BATSON JEROD C	ARKADELPHIA
BECK STEVEN R	FORT EUSTIS
BEELER ROY C	GENTRY
BELL SHEILA	VAN BUREN
BENSON BENNY K	MTN HOME
BENSON RICKY D	IMBODEN
BERG ARNOLD	FLIPPIN
BIGGS THOMAS RAY	PLAINVIEW
BILLINGS MARIAN	RISON
BISWELL GREG	FAYETTEVILLE
BLANKENSHIP W	ALEXANDER
BLYTHE ROBERT	FAYETTEVILLE
BOBO JUSTIN D	BROOKLAND
BOTTOMS GRADY E	WALDRON
BOTTOMS MELANIE	FOUKE
BOYD JOSHUA O	WEST FORK
BRANSON JAYCE	FAYETTEVILLE
BRANTLEY DENNIS G	HOPE
BRANUM KENNETH F	CORNING
BRASWELL DANNY	PINE BLUFF
BRAY DUSTIN D	BROKEN BOW
BROWN BRYAN LEE	SEARCY
BROWN DORLON R	DEER
BRYAN DAVID A	JACKSONVILLE
BUBBUS PATRICIA	RUSSELLVILLE
BURNETT DARRELL	GRAVETTE
BURTON CHARLES M	OZARK
BUSHONG WILLIAM	HUNTSVILLE
BUTLER RANDALL L	MORRILTON
BUTTON ROBERT	PEA RIDGE
CAGLE BOBBY W	CLARKSVILLE
CAGLE THOMAS S	OKOLONA
CAMERON FLOYD	MTNBURG
CANNON SHANE	HAVANA
CANTRELL RODNEY G	STAR CITY
CARNEY JOSHUA J	PEA RIDGE
CARTWRIGHT DENNIS	FAYTTEVILLE
CHILCOAT TIMOTHY	LOCKESBURG
CLARK BILLY RAY	GARFIELD
CLARK DALE	WESTVILLE
CLARK DONALD	CLARKSVILLE
CLEMENTS BOBBY B	RAVENDEN
CLINTON BRIAN LEE	CLARKSVILLE
CLOUTIER KENNETH	PINE BLUFF
CONDE CARLOS A	SPRINGDALE
CONWAY MIKE E	HARRISON
COPELAND HOWARD	WALDO
CRINER JEREMEY S	LOWELL
CROY RITCHEY	JEFFERSON
DANIELS MATT A	LINCOLN
DAVIDSON SANDRA D	WOODLANDS
DAWSON STEVEN N	ALEXANDER
DEADY KELLY M	FAYETTEVILLE
DEATON JOHN	FAYETTEVILLE
DEBOW STANLEY	WALNUT RIDGE
DICKERSON C	PARKIN
DONALDSON TONY R	FORDYCE
DOVE BOBBY	BOONEVILLE
DOVER TOBY D	RUSSELLVILLE
DUNIVAN JESSIE M	JACKSONPORT
EARLS COREY L	RUSSELLVILLE
EATON ROBERT J	MENA
EFURD SHANE	GREENWOOD
EMERSON SCOTT	TAYLOR
ERICSON EDWARD E	EVEN'G SHADE
ERWIN TOBY DAN	BAUXITE
FAULKNER BRIAN K	LAMBROOK
FINKENBINDER KEITH	DARDANELLE
FLANIGAN JEFF	MENA
FLETCHER DANIEL	PEA RIDGE
FORD DAVID	HEBER SPRGS
FORREST ROBERT E	EUREKA SPRGS
FOSTER LOUIS	N LITTLE ROCK
FOWLER JOE B	ASH FLAT
FRADY BRIAN C	BEEBE
FRATESI BECKY	BARTON
FREEMAN BRIAN RAY	GRAPEVINE
FREEMAN KENNETH	ALTUS
FULLER DON	KENSETT
GARD SHAWN M	GANS
GARRETT CHARLES D	MAGNOLIA
GEASLIN TERRY	TUCKERMAN
GEORGE MICHAEL T	SEARCY
GERSLEY MICHAEL R	LANTANA
GLAGOLA MICHAEL A	BAUXITE
GLASCOCK JAMES E	DRASCO
GLOVER FRED V JR	N LITTLE ROCK
GOAD DALLAS RAY	BRADFORD
GODFREY WALLACE	GOULD
GOLDEN WALDENE	MCCRORY
GOODSON EDDIE	CROSSETT
GREB JONATHAN RAY	BRANCH
GREEN BOBBY ALLEN	BOONEVILLE
GREEN PAMELA D	RUSSELLVILLE
GREENLEE RICKY	FAYETTEVILLE
GROSS JOHN C	PRARIE GROVE
GUERCIO MARGIE a	EMMETT
GUYLL BOB	FARMINGTON
HALE BILLY RAY	BLYTHEVILLE
HALL DEAN	PLSNT GROVE
HALL MICHAEL JOE	FORT SMITH
HAMMOND JAMES T	MALVERN
HAMMOND MARIA	PARAGOULD
HANKS MIKE	JONESBORO
HARDERSON ISAAC	WEST FORK
HARDIN CLAUDE W	POYEN
HAREL ROBERT TODD	ARAB
HAROLD JERRY L	GILLHAM
HARRELL ELTON W	RUSSELLVILLE
HARRIS BETTY	MALVERN
HARRIS RAYMOND	MALVERN
HARRISON GENE	FAYETTEVILLE
HARTNESS FRANK S	MCGEHEE
HAWTHORNE W	DIAMOND CITY
HEER MICHAEL E	MABELVALE
HENDERSON MARK W	CROSSETT
HERRERRA L	JACKSONVILLE
HICKS JAMES PAUL	TRASKWOOD
HICKY PHILIP III	FAYETTEVILLE
HIMSL JAMES	GRAVETTE
HIXON WILLIAM N	WHEATLEY
HOLAWAY STEPHEN	BASTRAP
HOLT JIM D	PELSOR
HOLT JUDITH ANN	MCGEHEE
HOOK CHRIS WILLIAM	EUREKA SPRGS
HOOVER HOWARD W	HOT SPRINGS
HOSTETLER CHRIS J	NASHVILLE
HOTTINGER BRAD E	RUSSELLVILLE
HUBBARD TOM	SPRINGDALE
HUFF DEWAYNE M	OZARK
HUMPHREY TREVOR	DELIGHT
HURT JASON	MANSFIELD
HUSTON MIKE	BIG FLAT
JAMISON SETH A	NASHVILLE
JARMAN TERRY J	LITTLE ROCK
JENSEN JONATHAN D	JACKSONVILLE
JINKS RANDY V	STEPHENS
JOHNSON FLOYD	REDFIELD
JOHNSON NEAL JOEL	MENA
JOHNSON PAT	DUMAS
JONES JASPER B	KENSETT
JOYNER REGINA G	WHITE HALL
JUDY BRIAN	FAYETTEVILLE
JURGENS DAVID	SPRINGDALE
KELLY MICHAEL W	FARMINGTON
KENNEDY TERRY R	HOPE
KEY ROGER	VAN BUREN
KIMMEY DOUGLAS E	STOCKBRIDGE
KING ANTHONY W	MARSHALL
KLARR GILBERT A	EUREKA SPRGS
LACKEY DAVID	HEBER SPRGS
LAMB RANDY H	MURFREESBORO
LAMBERT DWIGHT M	DUMAS
LANE DUSTY GERALD	OZARK
LEE JAMES	PINE BLUFF
LEETE JACK	LAVACA
LEWIS JERRY NOFF	FAYETTEVILLE
LITTLEFORD RONALD	MOUNTAIN HOME
LONGLEY JAMES D	ELKINS
LOVE DANNY RAY	FAYETTEVILLE
LUSK BRADLEY W	BATESVILLE
LUTZ JAMES H	HARRISON
LYONS BOBBY E	DARDANELLE
MALLETT STEVE	HOT SPRINGS
MANEY PAMELA P	HOLLY GROVE
MAXWELL ROBERT W	GREENWOOD
MAYBERRY FRANK	HOT SPRINGS

Licensee Name	Mailing Address
MCCLAIN DAVID S	WARREN
MCCLELLAN MAJOR S	NEW EDINBURG
MCCLELLAN ROBTA	MAGNOLIA
MCCLENDON JAMES	DEQUEEN
MCCONNELL TOMMY	CARTHAGE
MCCORMACK EDDIE	BENTON
MCCRAW GENE	OZONE
MCDOWELL MYREN J	LITTLE ROCK
MCFARLAND ORVILLE	VIOLA
MCKNIGHT SHANNON	WYNNE
MCMAHON JOSEPH B	GARFIELD
MEDINA AMANDA F	SOLGOHACHIA
MEDLIN JAMES	HARRISON
MILES WHIT R	WICKES
MILLER AUDREE L	LITTLE ROCK
MILLS DEBORAH D	HOT SPRINGS
MINKS LEISA	FORT SMITH
MITCHELL EARL	DUMAS
MITCHELL EDWARD D	MORRILTON
MOORE JOHNNY W	MOUTAIN HOME
MOORE RUSSELL G	DARDANELLE
MORSE JACKIE D	ALMA
MOSES III NOAH E	EL DORADO
MULLINS GARY	NEWPORT
MYERS ARTHUR H	MTN HOME
MYERS NATHAN D	OZARK
NEAL PHILLIP W	TEXARKANA
NICKS JAMES	MARIANNA
NORBASH SID	FAYETTEVILLE
NORRIS WALTER	WEINER
OLEJNICZAK D	CLINTON
PALMQUIST RANDY J	MAUMELLE
PARKER-FOSTER H	LITTLE ROCK
PARSLOW FRED	EMERSON
PARSONS DWAIN	SPRINGDALE
PATRICK RANDALL	FAYETTEVILLE
PEARSON BARRY W	HAMBURG
PEOPLES JOHNNY	PRARIE GROVE
PHILLIPS BYRON C	MARMADUKE
PHILLIPS RANDY K	MIN SPRGS
PICTON OZZY DEAN	DOVER
PIERCE JERRY W	POWHATAN
PIERCY WILLIAM A	PARAGOULD
PIKE PATSY ANN	FARMINGTON
PLANK CHRISTOPHER	MULDROW
PLOWMAN ANDREW L	GREENWOOD
POLLARD CHARLES J	BLYTHEVILLE
POYNOR LESTER GE	BRKN ARROW
PREECE DONALD	SPRINGDALE
PROCTOR BILLY JO	HICKORY RIDGE
PURYEAR MILTON L	NASHVILLE
RAINWATER LEO C	CEDAR RIDGE
RALSTON ODELL	FAYETTEVILLE
RAULS WILLIAM C	HERMITAGE
RAY FAY ALLEN	BOONEVILLE
REEVES JANET	MULBERRY
RENNELS TOM W	EUREKA SPRGS
RHODES JAMES H	HOPE
RICKETT KENDALL L	PLSNT PLAINS
ROBBINS WAYNE	FAYETTEVILLE
ROGERS CURTIS A	ALICIA
ROGERS J C	KINGSLAND
ROOFFENER KEVIN	GOULD
ROSS MAX	PORTIA
ROUSE RUSSELL B	MAUMELLE
RUCKER RICK L	BEEBE
RUDDER JON ERIC	MNTN HOME
RUNDLE MICHAEL S	ROGERS
RUNYON WILLIAM	FLIPPIN
RUSSOM DALE	VILONIA
SAMPLEY JASON D	ALTUS
SANDERS JOHN K	CLARKSVILLE
SANDERS TIMOTHY A	COFFEYVILLE
SCHRADER DAN	GRAND LAKE
SCOTT DANNY L	CLARENDON
SCOTT MALCOM	WABBASEKA
SEYMOUR JOHN D	SMACKOVER
SHARP DOUGLAS W	FAYETTEVILLE
SHAW TEDDY E	ROLAND
SHELL PATRICK	EVEN'G SHADE
SHETRON SHANNON	BATESVILLE
SHORT HARRY L	PEA RIDGE
SHORT TEDDY L	HOT SPRINGS
SINGLETON KELLY	ODEN
SMELLEY JAMES	FORT SMITH
SMITH DONALD R	GILLHAM
SMITH GREGORY G	FAIRFIELD BAY
SMITH ROBERT ALAN	DARDANELLE
SMITH SHARON	FAIRFIELD BAY
SMITH WILLIAM LEON	LINCOLN
SPEARS ROBERT A	SHERIDAN
STAFFORD WILLIAM	MAUMELLE
STANDLEE KALEB Z	GREEN FOREST
STAPLETON JAMES R	CONWAY
STATON MARTY D	PINE BLUFF
STAUNTON ROD	ROYAL
STEED JAMES TERRY	BRYANT
STOBAUGH WARREN	PLUMBERVILLE
STOKES ROOSEVELT	REDFIELD
STRIPLIN WILLIAM A	FORT SMITH
TACKER EVERETT	TYRONZA
TANKERSLEY RICKY L	TEXARKANA
TAYLOR ANGELA C	ARKADELPHIA
TAYLOR WILLIAM S	BENTON
TEAGUE R MICHAEL	EUREKA SPRGS
THOMAS DANNY J	HIGDEN
THOMAS MICHAEL B	SALEM
TOMPKINS CHRIS	LOCKESBURG
TURNER BRAD J	CARLISLE
TURNER NATHAN	AMITY
VAUGHAN JARROD H	BATESVILLE
WALKER DAVID B	CROSSETT
WALLEY ROBBY W	CAVE CITY
WALTERS DAVID F	CARLISLE
WALTERS RAY E	MAYFLOWER
WATKINS DENNIS	DEWITT
WATSON RANDY	PARIS
WEAVER CHARLES W	LAVACA
WELDON BRET D	ROGERS
WELLS RON	BEEBE
WHITAKER KILEY S	BENTONVILLE
WHITE CHARLES E	THORNTON
WHITE JAMES D	HOT SPRINGS
WHITE RICHARD O	WAKE VILLAGE
WHITTINGTON RUSS	ALMA
WILEY DON	MONTICELLO
WILSON MICHAEL R	MONTROSE
WOOD DANITA GWEN	EL DORADO
WOOD WILLIAM D	EL DORADO
WOOLLEY JOE	RISON
YANDELL KRIS ERIC	HLDY ISLAND
YARBROUGH CARL	MAYFLOWER
YARNELL WILLIAM H	TEXARKANA
YOUNG CHRIS	EUREKA SPRGS
YOUNGER GINA	RUSSELLVILLE
YOUNGER RANDY E	RUSSELLVILLE
YOUNGER SCOTT	BATESVILLE
ZACHARY JACKIE T	EARLE

2007 License Renewals Withheld

The following licenses renewals were withheld because of inadequate training hours. The license can be reinstated until June 30, 2008. Please contact the water licensing program staff if you have questions about your renewal.

Licensee Name	Mailing Address	Licensee Name	Mailing Address	Licensee Name	Mailing Address
ASHCRAFT TERESA	PINE BLUFF	GUILLORY GARY	BIDDEFORD, ME	MONGOLD CLIFFORD	CEDARVILLE
BEAN TERR	LITTLE ROCK	HARDY RUSSELL	MALVERN	PARKS DALE	DARDANELLE
BRIDGES MICHAEL	GREENWOOD	HOLMAN TERRY	WICKES	MULLINS WILLIAM	PARON
CRISEL CHARLES	DES ARC	LAWSON WILLIE	MALVERN	ROYCE CARL	VENDOR
DIGGS ANDRE	LUXORY	LEE JOHN ALLEN	MORRILTON	SCOTT BRANDON	SPRINGDALE
FAULKNER MICHAEL	MONTICELLO	MARCHANT JOHNNY	CABOT	THATCHER JOE	MOUNTAIN VIEW
GARNER JERRELL	NASHVILLE	MECHLING LAURA	FORT SMITH	WYATT KENNETH	SHIRLEY

Communicating with Consumers on Chronic Contaminants

A chronic contaminant under the Safe Drinking Water Act is one whose standard is based on potential adverse health effects resulting from long term exposure, literally decades of drinking the water. This includes most of the regulated chemical contaminants and is contrasted with an acute contaminant which can result in a person becoming ill within a matter of hours or days such as from microbial pathogens or high nitrates.

A water system manager with a long term violation of a Safe Drinking Water Act chemical standard, particularly when that violation is beyond the control of the water system, may feel that he/she can do nothing more than the required monthly or quarterly public notices required by the regulations. Examples of such violations in Arkansas include radium, fluoride, and some disinfection by-products. Oftentimes, the contaminant in these cases is either naturally occurring, as with radium and fluoride; or the water is purchased wholesale from another system without any treatment and the water system has no control over the contaminant's level, as in some case of elevated disinfection by-products.

EPA recently released a two-page best practices guide for public water system on communicating with their customers about chronic contaminants. While specifically addressing chronic contaminants, the guide provides useful strategies when communicating with consumers on any topic. The guide is found at http://www.epa.gov/ogwdw/radionuclides/complaincehelp.html.

In the case of water contamination, consumers want to know the following:

- What contaminants are in my drinking water?
- How did they get there?
- Should I be concerned?
- What are the health effects?
- What is the allowable standard for these contaminants?
- What is my utility doing to reduce or remove the contaminants?

In the case of chronic contaminants, it is important the public understand that while there are no immediate risks to healthy individuals from consuming the water, sensitive groups such as the young, elderly, pregnant women, and cancer patients may be more susceptible to adverse effects. Being proactive in communicating with customers helps to build public trust, prepare them for future communications, and help to gain support for possible investments in the water system. Methods for communicating with customers includes holding public meetings, conducting tours of water system facilities, providing interviews on local radio and TV, using bill inserts, and partnering with local health care, religious, and community organizations to share information.

The guide emphasizes that communicating early and often with consumers is more effective in getting the message out. In addition to addressing the above items of most importance to consumers, the guide recommends that notices:

- Provide a simple, straightforward, and consistent message;
- Describe actions the consumer can take such as using alternate water supplies and when to seek medical help;
- Provide links to additional information such as websites, contacts, etc.
- Use graphics, photos, and drawings to illustrate a message;
- Assume the consumer will only read the top half of the notice or what can be read in ten seconds;
- Display important elements in bold or large type.
- Communicate in multiple languages if the constituent of non-English speaking consumers is significant.
- Include contacts for further information. ♦

EPA Begins Stakeholder Process on TCR Rewrite

An advisory committee consisting of a number of stakeholder groups has been convened by EPA and begun meeting to examine possible revisions to the Total Coliform Rule (TCR). The TCR, issued in 1989, is overdue for an overhaul and EPA is using the Federal Advisory Committee Act (FACA) to form the Total Coliform Rule Distribution System Advisory Committee as part of that process. The major objectives of the Committee are to advise EPA on how the agency should revise the TCR while maintaining or improving public health protection, and what data should be collected, research conducted, or risk management strategies evaluated to better assess distribution system contaminant occurrences and associated health risks.

While the duties of the Committee under FACA are solely advisory in nature, EPA has used the process in the past to obtain stakeholder consensus on the framework for a proposed regulation. Stakeholders on the Committee include representatives from water utilities, environmental groups, state primacy and public health agencies, consumers, cities, utility commissions, and Native Americans . Utility organizations on the Committee consist of National Rural Water Association, American Water Works Association, Association of Metropolitan Water Agencies, and National Association of Water Companies.

The Committee intially focused its efforts on educating its members on the TCR, how it is implemented by utilties and states, and various distribution system issues. More recently, the Committee has begun developing options for possible changes. Among the issues being considered are:

- Changing the current MCL for total coliform to a treatment technique requirement;
- Allowing for flexibility for routine and repeat sampling;
- Providing more meaningful public notice in the event of a violation;
- Matching the rule requirements to the type and size of the system.

The Committee met four times in 2007 and will continue to meet in 2008 with a goal to have recommendations to EPA in mid to late 2008. A proposed TCR revision is not expected from EPA until 2010.

Compliance Sampling Under the SDWA

Susan Corder, Env. Specialist Supervisor

Is collecting chemical samples under the SDWA just filling up bottles with water? Of course not! Many public water systems don't realize that the Engineering Section has a specialized staff dedicated to nothing but coordinating, scheduling, collecting, and transporting to the state Public Health Lab the numerous and frequent SDWA chemical compliance samples. The water quality staff of the Engineering Section consist of a Pollution Control Inspector Supervisor, yours truly, who coordinates, schedules and reviews analytical samples and results. She oversees four Engineer Technicians whose full time jobs are the collection and transport of SDWA compliance samples, and two Environmental Specialists that assist, as needed. The water quality staff have a cumulative total of 64 years experience in the Engineering Section.

If you're lucky, you will only see the water quality staff once a year, but many utilities are on sampling schedules as frequent as every quarter. Water quality staff prepare sampling schedules for the collection of compliance samples each week based on contaminant type, population, source, and historical analytical data.

The EPA has very strict guidelines on sampling requirements, and collection and transport operating procedures. The water quality staff participated in two EPA audits in 2007, one with the Public Health Lab and one with the Engineering Section. In both, they received very good marks regarding sampling procedures and SDWA compliance rates. Arkansas has one of the highest SDWA compliance rates for monitoring in the nation.

The number of water system visits by Engineering staff to collect compliance samples during State Fiscal Year 2007 was 3,270. The number of samples analyzed as a result of those samples is listed in the adjacent box. There were other miscellaneous samples collected during the year; however, the individual listing of these analytes gets too long to include here.

The water quality staff would like to thank the many utilities that go out of their way to make our life easier for sampling and scheduling purposes. Keep in mind we do appreciate your assistance, and our main goal is to ensue that utilities maintain compliance with the SDWA and that the public is receiving safe, potable drinking water. If you have questions about your chemical compliance samples, contact Susan Corder. ♦

UCMR2 Monitoring to Begin in January

In the Spring 2007 edition of the *Arkansas Drinking Water Update* it was explained that the Department of Health would contract with a private laboratory for analytical work under the EPA Unregulated Contaminant Monitoring Rule 2 for large water systems (>10,000 population). The rule requires the monitoring of all large water systems and a selected cross section of small systems (≤ 10,000 population), for up to 25 contaminants that are not currently regulated by EPA.

Earlier this year, a Request for Quotations was advertised and five qualified bids were received, ranging from $124,240 to $246,160, for the necessary analytical work under the rule. The contract has been awarded to Montgomery Watson Harza Laboratories (MWH) and the Engineering Section is on schedule to assist in beginning that sampling in January 2008.

Large water systems should receive their sample kit(s) from MWH about two weeks in advance of the scheduled sampling week. That sampling schedule has been sent to all affected water systems and is available at Engineering's website http://www.healthyarkansas.com/eng/. If you do not receive your sample kit two weeks in advance of your sampling week, please contact Bob Makin or Susan Corder at 501-661-2623.

EPA will be contracting on its own for laboratory services for small water systems. It is Engineering's understanding that the small systems will also receive their sample kit(s) about two weeks in advance of sampling. If you do not, again contact Bob Makin or Susan Corder.

When you receive your kit, it should contain some chemical freeze packs, along with bottles, packing, and instructions. These freeze packs should be removed from the kit and placed in a freezer until the samples have been collected and are ready for packaging and shipment.

Samples will be collected by Engineering Section staff with your assistance. The samples should be collected only on Monday thru Wednesday of the scheduled week. This way the samples can be shipped overnight delivery and received in the laboratory during the work week.

If you are uncertain when you are scheduled to sample please call Bob Makin or Susan Corder.

Chemical Compliance Analyses for Arkansas Public Water Systems by the Public Health Lab - FY07

Analyte	# Samples	Analyte	# Samples
Inorganic Complete	308	Carbamate	347
Nitrate	845	Glyphosate	344
Nitrite	158	EDB	357
Bromate	14	Endothall	357
Chlorite	145	Diquat	353
Antimony	9	VOC	773
Arsenic	34	TOC	1018
Cyanide	35	THM	2019
Fluoride	57	HAA	2019
Lead	42	Radiochemical	619
PAE/PAH	490	Uranium	55
OGC	379	Strontium	12
CPAH	352		

WATER OPERATOR LICENSES ISSUED

June 1 – September 30, 2007

NAME	TYPE/GRADE	PUBLIC WATER SYSTEM NAME
ADAMS CARL WILLIAM	D - III	FAYETTEVILLE WATERWORKS
ADAMS TOMMIE D III	D - IV	SARDIS WATER ASSOCIATION
BAGLEY JOHNATHAN JAMES	D - II & T - I	GILLHAM WATERWORKS
BARKIE JAMES A	T - II	ALMA WATERWORKS
BROWN ANTHONY K	D - I	NASHVILLE WATERWORKS
BROWN DUSTY L	D - II	TRUMANN WATERWORKS
BURKETT MARK ANTHONY	D - III	PEA RIDGE WATERWORKS
CARD KENNETH WAYNE	D - VSS	LITTLE PORTION HERMITAGE
CARPENTER LANTIE KEITH	D - IV	ROGERS WATER UTILITIES
CARR TERRY DON	D - III	GENTRY WATERWORKS
CRUTCHFIELD DAVID RAY	D - I	BENTON CO WATER
CUMMINGS DARREN KEITH	D - III & T - I	MAUMELLE WATER MANAGEMENT
DAVIS GREGORY ALLEN	D - IV	BELLA VISTA POA
DAVIS JONATHAN WAYNE	D - I	HASKELL WATER SYSTEM
DAVIS TONY ERIN	D - II	BEE BRANCH WATER
DOBBS JOHN CHARLES	D - IV	WASHINGTON WATER AUTHORITY
DOSSETT GARY JR	D - IV	BATESVILLE & PFEIFFER
DRAPER DONALD EVERETT	T - IV	BENTON-WASHINGTON REGIONAL PWA
EDWARDS DARREN LEE	D - I	CENTERTON WATERWORKS
FLYNT DAVID R	D - I	DECATUR WATERWORKS
FOOT PHILLIP B	T - II	HAZEN WATERWORKS
FRANCIS SCOTT LANDON	D - II	NO SYSTEM OPERATED
FREEMAN CHERYL LEA	D - I & T - I	LURTON-PELSOR WATER ASSOC
GAITHER MICHAEL J	T - II	HAZEN WATERWORKS
GARNER RAYMOND D	D - I	HASKELL WATER SYSTEM
GREGORY EDWARD HENRY	D - IV & T - IV	FORREST CITY WATERWORKS
GRIGGS LUKE SAMUEL	D - II	VAN BUREN COUNTY W U A
HALBERT MONICA BRANDALIN	D - IV & T - IV	FORREST CITY WATERWORKS
HARROD GREG SCOTT	T - I	MAUMELLE WATER CORPORATION
HELLER BARRY E	T - I	MAUMELLE WATER MANAGEMENT
HENSON JOSEPH RAY	T - IV	SEARCY WATERWORKS
HOLDEN PERRY L	D - II	LINCOLN WATERWORKS
HOLZKAMPER FRANK WILLIAM	D - II	GENTRY WATER & HIGHFILL WATER
HOWARD JASON LOUIS	D - II	POTTSVILLE WATER ASSOCIATION
HUNTER BENJAMIN ALLEN	D - IV	BATESVILLE WATER UTILITIES
ISGRIGG CALVIN LEE	D - III	BENTONVILLE WATER UTILITIES
JONES MICHAEL HOWARD	T - I	BRADLEY CO & SE BRADLEY CO WATER
LANDERS KEARY D	T - III	BATESVILLE WATER UTILITIES
LAWRENCE HERMAN LEN	D - IV	MALVERN WATERWORKS
LEE KARL H	D - IV	FORT SMITH WATER UTILITIES
LINDBERG ERIC S	D - I	BUFFALO NRVU4-06 UPPER PRUITT
LINDLEY CHARLES EDWARD	D - I	CAVE SPRINGS WATERWORKS
MAIN BRIAN KEITH	D - III	BROOKLAND WATERWORKS
MARTIN GALEN TROY	D - IV	BENTON CO WATER
MCBRYDE KATHERINE MARIE	D - II	LADD WATER ASSOCIATION
MCDERMOTT JEFFERY CLARK	D - IV & T - III	KIMZEY REGIONAL WATER DISTRICT
MERRELL JOHN J JR	D - I	CHERRY VALLEY WATERWORKS
MORRIS ELMER G	D - I	MINERAL SPRINGS WATERWORKS
MOTEN JULIE ANN	D - II	DORCHEAT WATER ASSOCIATION
OWENS TIFFANY ELIZABETH	D - I	ENTERGY - INDEPENDENCE
PATTERSON ROBERT LOWELL	D - I	BULL SHOALS WATER SYSTEM
PHILLIP RICKY LYNN	D - I	BERRYVILLE WATERWORKS
PIERCE MATTHEW D	D - II	BARLING WATERWORKS
PIERCE TONY D	D - II	WHEATLEY WATERWORKS
POPE JAMES SCOTT	D - III	WARREN WATERWORKS
REARDON COREY NEIL	D - II	GRAVETTE WATERWORKS
REVES JAMES PAUL	D - II & T - II	DOVER WATERWORKS
RICHARDS ROYJOHN WAYNE	D - III	FURLOW , HWY 319 & NO PULASKI PFB
ROWE EARL DAVID	T - II	NO SYSTEM OPERATED
RUPLE JEFF	D - IV	VILONIA WATERWORKS
SCHAPER GRANT DAVIS	D - IV	FORT SMITH WATER UTILITIES
WACKES TROY HENRY	D - II	GRAVETTE WATERWORKS
WALKER PRESTON MICHAEL	D - I	RIVERSOUTH RURAL WATER DIST
WHEATLEY RYAN LEE	D - IV	MALVERN WATERWORKS
WILKEY VERNON RAY	T - II	GREENWOOD WATERWORKS
WILKINS MARK ALLEN	D - I	DECATUR WATERWORKS
YOUNG MICHAEL R	D - II	LINCOLN WATERWORKS
ZAVORKA JIM EDWARD	D - II	BULL SHOALS WATER SYSTEM

Lead and Copper Rule Revised in October Notice

Gerald Ward, Environmental Specialist

The Lead and Copper Rule (LCR) established regulations for community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) to control lead and copper contaminants at the consumer's tap. The regulation was originally promulgated in 1991 and revised in 2001. After a 2004 incident regarding lead levels in the District of Columbia, EPA took on a national review of the LCR and proposed another set of revisions which became final in a *Federal Register* notice on October 10, 2007.

The revision covers seven areas dealing exclusively with lead. No changes were made regarding copper.

- Definitions for compliance and monitoring periods;
- Minimum number of required samples;
- Reduced monitoring criteria;
- Advanced notification and approval requirements for water systems that intend to make any long term change in water treatment or add a new source;
- Notices of monitoring results to consumers whose homes or building were tested for lead;
- Public education requirements;
- Lead service lines deemed replaced through testing.

The compliance period is a three year period beginning January 1 and ending December 31. There are three compliance periods within a nine year compliance cycle. The monitoring period for reduced monitoring is a four month period beginning June 1 and ending September 30, or some other consecutive four month monitoring period determined by the State. Systems on triennial reduced monitoring must collect their compliance samples during a consecutive four month time period every three years. As such, a system is not allowed to collect compliance samples during year 1 of the first compliance period and collect compliance samples during year 2 or 3 of the second compliance period. Systems with monitoring waivers would be required to collect compliance samples every nine years during the same 4 month monitoring period. Again, the system would not be allowed to collect samples during year 1 of the first nine year cycle and year 2 through year 9 during the second nine year cycle thus allowing more than 9 years elapsed time between sample collections!

Discretionary power has been granted to the primacy States which allows them to determine which avenue of approach to follow with regards to monitoring for small systems. For purposes of this article, a small system is a community water system or a non-transient non-community water system with a population of 3300 or less. The first approach for a small system with fewer than 5 sample taps allows the system to collect samples from all sample taps and take repeat samples on different days until a total of 5 samples have been collected. The average of the two highest results would be compared to the action level for compliance determination.

An alternate provision allows states to have small systems collect one sample from each tap and compare the highest result to the action level to determine compliance. Using this method of sample collection would prevent the water system from collecting repeat or investigative samples, should the highest sample result be greater than the AL. To qualify for this provision, the system must make a written request to the State. The request must be approved by the State in writing, or by onsite verification.

In accordance with the 2007 LCR revisions, water systems that exceed the EPA action level for lead will be deemed to have exceeded as of the last day of the monitoring period. Public education for systems exceeding the action level for lead will be due 60 days from the end of the monitoring period. With respect to systems on reduced monitoring who exceed the AL for lead, Water Quality Parameter samples (WQPs) will also be due 60 days from the end of the monitoring period.

Water systems that exceed the action level will no longer be allowed to initiate or remain on reduced monitoring based on their WQP results. The Engineering Section has required all systems that exceed the action level for lead be placed on routine monitoring (i.e., the number of samples collected is doubled and the frequency of collection is changed to every six months). Additionally, the State has large systems return to routine WQP monitoring beginning the next new monitoring period. As such, tap sample monitoring parallels the WQP monitoring and provides a more accurate assessment of the water quality.

Under the previous LCR, water systems were required to notify the State within 60 days of making any change in treatment or the addition of a new source. The revised rule will require water systems to notify the state and receive approval in advance before making any long term changes or adding a new source. Theoretically this should assist States in making determinations where rule conflicts may arise. Earlier this year, EPA Published the *Simultaneous*

See LCR next page

***LCR** continued from page 16*

Compliance Guidance Manual for the Long Term 2 and Stage 2 DBP Rules. The document is designed to aid in identifying situations where optimal corrosion control treatment may be affected by long-term changes in treatment and/or source water. Appendix D of the manual pertains to Lead and Copper Rule compliance. The manual can be found at http://www.epa.gov/safewater/disinfection/stage2/pdfs/guide_st2_pws_simultaneous-compliance.pdf .

Water Systems will now be required to provide consumer notice of lead tap sample monitoring results to all consumers who occupy homes or buildings that are tested for lead. Public Water Systems must certify in writing that they have completed the required notification. The certification must be received by the State no more than 10 days after the 30 day time period for notification or 40 days after the water system receives notification. In addition water systems must now include information and definitions of the Maximum Containment Level Goal (MCLG) and the Action Level (AL) along with the monitoring results.

A non-transient non-community water system may post the results and definitions on a bulletin board in the facility, with the State's approval. The NTNCWS must certify to the State in writing within 40 days of receiving the requirement letter from the State.

Public education requirements will now require all community water systems to include an educational statement about lead in their Consumer Confidence Report. The new language will include reference to home plumbing and service lines as the source of high lead levels in drinking water. In addition the National Lead Information Center phone number has been replaced by the EPA Safe Drinking Water Hotline.

EPA is also changing the content of the Public Education for systems that exceed the action level for lead in 10% or more of their samples. The mandatory language contained in the revision will consist of an opening statement, health effects language and sources of further information. The new language will be less lengthy than the previously required 1800 plus words. Water systems will have some flexibility in tailoring the public education message to fit their community with the States approval.

The delivery requirements for public education are being expanded to include delivery to licensed child care centers, obstetricians-gynecologists, midwives and preschools. Water systems are required to contact the local health agency by phone or in-person as well as in writing to request their assistance in the distribution of educational material regarding lead in drinking water and how people can reduce their exposure to lead. Systems must contact their local health unit even if it's outside their service area. Local health units may provide the water system with a specific list of additional organizations serving target populations. The additional organizations may be outside the service area of the water system. However, water systems must deliver the materials to the organizations on the supplied list. EPA is requiring water systems to perform additional outreach activities. Water systems may chose from a list of activities with the States approval. Systems with a population greater than 3300 are required to conduct activities from the list while a system with a population of 3300 or less need only conduct one from the list. EPA removed the proposed requirement for medium and large systems to provide two public service announcements each year. However, the water system must issue press releases throughout the entire period that the system is exceeding the lead AL. Large systems must also post and keep information on their web site until the system tests below the action level. All systems must print the information on their water bills every quarter.

Service lines classified as "replaced through testing" must now be reevaluated. Water systems that have initiated a lead service line replacement program, then discontinued the program, and then resumed the program must reevaluate service lines classified as "replaced through testing". Since the original lead service line replacement program was based on a 7% per year replacement schedule (15 years to completion), any system resuming service line replacement must recalculate the total number of lead service lines and use the following formula to calculate the annual line replacement necessary to remain in compliance. [(Number of lead service lines) / (15 minus the number of years since the initial service line replacement commenced)] = annual number that must be replacement.

EPA has adopted a compliance date for this revision of 180 days from publication or a state's adoption of the regulation up until 2009. The LCR revisions can be found at http://www.epa.gov/safewater/lcrmr/index.html. For additional information, contact Gerald Ward or Raymond Thompson at the Engineering Section at 501-661-2539 or 501-661-2668 respectively, or e-mail us at Gerald.Ward@Arkansas.gov or Raymond.Thompson@Arkansas.gov.♦

WATER SYSTEM IMPROVEMENTS

ASHDOWN: 300 gpm well to replace an existing well in the Mesamore area.
BATESVILLE: refurbishment of clarifier and filters. Capacity to remain at 12 MGD.
BEAVER WATER DISTRICT: refurbishment of the 40 MGD Steele Water Treatment Plant. Total capacity with the Croxton plant will be 140 MGD.
BEEBE: new 0.5 MG elevated storage tank located west of Hwy 167.
CROSSETT: treatment plant improvement consisting of an additional aerator, clarifier, and filter improvements to increase capacity to 3.8 MGD.
HWY 63 WATER USERS: 150 gpm treatment plant expansion consisting of an additional pressure filter and high service pump replacement.
LAFE RURAL WATER ASSOC.: 400 gpm well, 0.2 MG standpipe, and 4000 L.F. of 8 inch main south of Lafe near Hwy 135.
MAGNOLIA: construction of a 1 MGD clearwell at the water treatment plant.
OLA: addition of a 0.22 MG distribution system standpipe.
OSCEOLA: addition of a 0.25 MG elevated tank near Hwy 239.

Award Winners Recognized at ARWA & Southwest Section AWWA Conferences

Award winners were announced at the recent conferences for Arkansas Rural Water Association and the Southwest Section AWWA.

Arkansas Rural Water held its conference in October, 2007 in Hot Springs with the theme of "30 Years of Excellence" in recognition of the organization's 30 years of service to water and wastewater utilities in the state. The conference included technical and management sessions, exhibitors, and a golf tournament.

At the conference banquet, a photo presentation of past ARWA personnel and board members was shown and special recognition given to a number of people, such as Ernie Faucett, who were instrumental in ARWA's formation and direction.

Award winners at the conference included James Yancey from Dover - Manager of the Year; Danny Smith of Watson Chapel - Water Operator of the Year; Mike Stewart of Hwy 63 Water – Director of the Year; Denise Slater of Hwy 63 Water – Office Manager of the Year. Western Greene County Water won the water taste contest.

The Southwest Section American Water Works Association, comprising the states of Arkansas, Oklahoma, and Louisiana, held its annual conference in Springdale, AR in October, 2007. The conference theme was "Head for the Hills" with the local host committee consisting of staff from Beaver Water District, Rogers Water Utilities, Benton-Washington Water Authority, Garver Engineers, McGoodwin Williams & Yates Engineers, City of Fayetteville, and Central Arkansas Water. The conference included technical and managerial sessions, an exhibit hall, and a golf tournament.

Alan Fortenberry, P.E., Chief Executive Officer of Beaver Water District was awarded AWWA's George Warren Fuller Award with the award presented by AWWA Vice President Don Degan. Marie Crawford, Director of Communications for Central Arkansas Water, was awarded the Southwest Section's Glen T. Kellogg Award and the award was presented by Jim Harvey, former CEO for Central Arkansas Water. Arkansas' Western Greene County Water won the water taste contest.

Major Monitoring, MCL, Treatment Technique, & Licensing Violations

Community & Nontransient Noncommunity Public Water Systems – July - September , 2007

ALL SEASONS MHP	Tmon 7,8,9
ALPINE WATER	BMCL 7
ALTHEIMEIR WATER	Bmon 8
AUTUMN ACRES MHP	BMCL 7
BALD KNOB WATER	Bmon 8
BARLING WATER	Bmon 8
BAUXITE WATER	OperLic 7,8
BEN LOMOND WATER	Bmon 9
BENTON CO WATER AUTHORITY #4	Bmon 7
BENTON CO WATER AUTHORITY #4	Dmon 8
BOYDELL WATER ASSOC	BMCL 8
BRANCH WATER	BMCL 7
BRECKENRIDGE UNION WATER ASSOC	BMCL 9
CABOT WATER	BMCL 9
CAMPBELL STATION WATER	OperLic 7
COAL HILL WATER	Bmon 9
COTTON PLANT WATER	Dmon 7
COTTON PLANT WATER	Bmon 8
DAMASCUS WATER	Bmon 9
DEER WATER ASSOC	Bmon 8,9
DEER WATER ASSOC	Tmon 7
DENNING WATER	Bmon 8,9
EL DORADO WATER	BMCL 7
FOUKE WATER	OperLic 7
GRANGE-CALAMINE WATER ASSOC	Bmon 9
HOLLY GROVE WATER	BMCL 7
HUMPHREY WATER	BMCL 7
HUTTIG WATER	Bmon 9
HWY 63 WATER ASSOC	BMCL 9
HWY 71 WATER ASSOC	Bmon 8
HWY 82 WATER ASSOC	OperLic 7,8
INDEPENDENCE JACKSON REGIONAL WATER	BMCL 9
KELSO-ROHWER WATER ASSOC	BMCL 8
LACEY-LADELLE WATER ASSOC	BMCL 8,9
LAKE LUCERNE ESTATES	Bmon 7
LAKESIDE WATER ASSOC	BMCL 7
LITTLE RIVER COUNTRY CLUB	BMCL 9
MAMMOTH SPRING WATER	Bmon 7
MONTROSE WATER	BMCL 7
MORNING STAR WATER ASSOC	FMCL 7,8,9
MOUNTAIN PINE WATER	BMCL 9
MOUNT SHERMAN WATER ASSOC	RMCL 7,8,9
MULBERRY WATER	Bmon 9
NASHVILLE RURAL WATER ASSOC	Bmon 9
OAK RIDGE CENTRAL SCHOOL	Dmon 8
OUTSIDE KINGSLAND WATER ASSOC	Bmon 8,9
PANGBURN WATER	Bmon 8
PFEIFFER WATER AUTHORITY	Bmon 8
PICKENS WATER	BMCL 8
RED BUD MHP	BMCL 7
RICHWOOD WATER ASSOC	BMCL 8
SDM WATER ASSOC	BMCL 7
SDM WATER ASSOC	RMCL 7,8,9
SDM WATER ASSOC	FMCL, 7,8,9
SOUTH MOUNTAIN WATER ASSOC	RMCL 7,8,9
SOUTHSIDE PUBLIC WATER AUTHORITY	Bmon 7,8
SUMMIT WATER	Bmon 9
TOLLETTE WATER	Bmon 7
TURRELL WATER	OperLic 7
UNITED WATER ASSOC	Bmon 7
WALKER WATER ASSOC	OperLic 7,8,9
WIEDERKEHR VILLAGE WATER	Bmon 8,9
WINTHROP WATER ASSOC	Bmon
WINTHROP WATER ASSOC	BMCL 9
YELLVILLE WATER	Dmon 7
YORKTOWN WATER	BMCL 7

KEY: Bmon = Bacti Monitoring; BMCL = Bacti MCL; Dmon = Disinfection By Product Rule Monitoring; DMCL=Disinfection By Product Rule MCL or Treatment Technique; Tmon = SWTR Major Monitoring; TMCL = SWTR Treatment Technique; SWTR= Failure to Filter; RMCL = Radiochemical MCL; FMCL = Fluoride MCL; SMCL = Synthetic Chemical MCL; OperLic = Operator Licensing; 7=Jul,8=Aug, 9=Sep.

REPORT OF THE

Arkansas Drinking Water Advisory and Operator Licensing Committee

A. Martin Nutt, Training and Certification Officer

A quarterly meeting of the Arkansas Drinking Water Advisory and Operator Licensing Committee was held on July 10, 2007. Members present were Les Patterson, P.E., Chair; Charles Nickle, P.E., Vice-Chair; Robert Hart, P.E., Executive Secretary; Rodney Williams, P.E.; Steve Di Cicco; and Terry House. Not present was Scott Borman. Arkansas Department of Health staff members present were Martin Nutt and Jeremy Rowe. Guests present were Dennis Sternberg, Arkansas Rural Water Association; Jonathan Richardson, Arkansas Environmental Academy; Cindy Garner and Suzanne Stair, Arkansas Department of Environmental Quality; and Gary Duncan, Brenda Henderson, and Kenneth Anderson from the City of Bauxite.

Standing Business

A High School Waiver Request for Mr. Kenneth Anderson of Bauxite was approved.

The Committee discussed the aspects of electronic tracking of operator training including industry education and buy-in, conference attendance, and different methods of tracking. The Committee agreed that implementation of electronic tracking should be gradual and begin with whether or not an operator picked up his/her packet at a conference.

Hart reported that an internal committee of the Engineering Section had met and developed a proposed guideline for the licensure of Engineering Staff. The guideline proposes an increasing grade of license based on pay scale, and while the guideline does not make licensure mandatory it does state that licensure can be a factor in an employee's performance evaluation. The Committee had previously encouraged the licensure of Engineering staff as a way to increase their credibility in the field and expressed support for the guideline. Patterson stated that holding an operator license, even if a P.E., would increases credibility in the field.

Hart reported on the implementation of the Public Water System Service Fee as a result of Act 292 of 2007.

Nutt reported that a Training Materials CD ROM, including a revised Compliance Summary, would soon be available to replace paper copies of license application study packet items.

Nutt also reported that new OpCert Grant contracts were in place with the Arkansas Environmental Academy and the Arkansas Rural Water Association. The new contracts allowed for the funding of eligible operators (operators from systems serving a population less than 3300) to attend all mandatory courses and non-mandatory courses as approved by the Committee. Nutt and Hart addressed training contract reimbursement problems encountered and Hart stated that he hoped to have the problem addressed quickly.

Old Business

Nutt stated that the Committee, in the April meeting, had decided to move ahead with the Association of Boards of Certification's Multiple Entry concept but not before the Committee develops a plan to educate the industry concerning the implementation. Nutt reiterated that ABC may at some point refuse validation of Arkansas's current exams but had not given the program a deadline.

New Business

Committee goals were set for the current term.

- Continue to investigate and implement electronic tracking of training attendance. Scott Borman will chair the sub-committee.
- Encourage ADH Engineering staff to obtain Water Operator Licenses. Hart will continue to head the effort.
- Change current license exams to match ABC's Exam Concepts. Di Cicco will chair the sub-committee with input from Nickle, Williams, and representatives from each of the three training organizations.
- Educate the industry, legislators, and mayors pertaining to the uses of Public Water System Service Fees and their benefit to the industry. House will chair the sub-committee.

Licensing program goals were set out by Nutt.

- Update the Licensing Committee information CD.
- Full review of the licensing program guidelines.
- Streamline the certification and renewal process to incorporate the web-based training database.

Reports to the Committee

Hart, in his Engineering Section report, stated that verification of service connections and fee confirmation letters had been sent to all Arkansas water systems earlier in the week. Hart noted that the fee would still be assessed at 25 cents per connection until authority was granted to implement the fee increase.

Hart updated the Committee on the de-merger of DHHS. He reported that EPA had conducted a data verification audit of the drinking water program in May. Hart stated that an audit report would be finalized later in the year but that auditors had verbally advised him of a positive "notable lack of discrepancies" in the audit. EPA did recommend that Engineering move to the federal database program, with Hart noting the federal database would have a significant learning curve.

Hart reported that, after interviewing several well qualified applicants, the Chief Engineer position had been filled by Jeff Stone, P.E. The position had been vacated by Hart when he took the Section Chief position vacated by Harold Seifert in January.

Hart also mentioned the death of Engineering staff member Joel Whiteside who logged into the tracking database all engineering plans and processed review fees.

Both Hart and Nutt addressed complaints associated with the renewal and plan review process, describing where errors could occur in the receipting process from both an agency and operator/water system standpoint. Hopefully, errors would be addressed more efficiently as the de-merger of DHHS progressed.

Nutt reported that 3604 renewal invoices had been sent to approximately 2400 license holders. Nutt noted a one to two week lag time between receipt and posting of fees. Nutt stated that the program was performing a 100% audit of renewal training records, that the web-based training database helped significantly in that process and approximately 10% of renewals were being withheld until their lack of training or documentation was corrected. Nutt stated that the second and final invoice incorporating a late penalty of five dollars would be sent out at the end of July to those operators who had not renewed.

Nutt referred to the exam passage rate spreadsheet which included rates for the past year and reviewed the passing percentages. Nutt also noted the persistence of a significant lag time in application and exam processing times due to additional financial duties assigned to licensing staff members.

Nutt reviewed the enforcement data with the Committee pointing out that 3 systems were approaching administrative penalty. Nutt mentioned that monthly grading significantly aided the enforcement process and compliance for water systems. Sternberg suggested to Hart and Nutt that grant monies might be made available for school owned water systems to connect with other systems in an effort to maintain compliance.

Richardson reported that the Arkansas Environmental Academy had held 12 water training classes serving approximately 170 students since the last meeting. He also noted AEA was remodeling the training rooms.

Sternberg reported that the Arkansas Rural Water Association Training Facility was being well used by both the water and wastewater industries. He reported on the Operator Expo held in June and thanked Nutt, Rowe and Stair for participating in the Scholarship Dunking Booth, which raised $245. Sternberg also stated that ARWA would be celebrating 30 years in the industry at this year's conference.

Sternberg made the Committee aware that ARWA had lost EPA funding affecting two programs: water technical assistance and training, and source water protection assistance. Sternberg stated that ARWA would honor the classes committed to on the 2007 calendar but that other duties associated with affected programs would cease due to lack of funding. Sternberg hoped to regain that funding during the next federal budget cycle. Sternberg reported that ARWA had been able to keep the water training for the remainder of the year thanks to the Arkansas Natural Resources Commission agreement to fund it. Sternberg noted that staff reductions due to funding loss had been handled by staff attrition and no layoffs were necessary at this time. In fact, Carol Boaz was hired as the new Secretary replacing Nadine Curtis after her retirement.

Sternberg then passed out for review a summary of this year's classes offered through ARWA.

Other Business

Hart nominated Nickle as the Chair-Elect. DiCicco seconded the nomination. The Committee voted and Nickle was elected.

The next Committee Meeting was tentatively set for October 10, 2007, but later rescheduled to November 7, 2007. ♦

WATER OPERATOR LICENSE EXAMINATIONS

Listed below are the dates and locations of examination sessions as scheduled, as of **December 1, 2007**. 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	TIME
1/11/08	McGehee	Municipal Building, 901 Holly Street	9:00 AM
1/17/08	Hot Springs	Wastewater Training Bldg, 798 Adams	9:00 AM
1/18/08	Heber Springs	ASU, 71 Cleburne Park Road, Rm 110	9:00 AM
1/31/08	Maumelle	Wastewater Plant, 425 B Hyman Drive	9:00 AM
2/1/08	West Fork	Wenzel Community Center, 222 Webber	9:00 AM
2/8/08	Heber Springs	ASU, 71 Cleburne Park Road , Rm 110	9:00 AM
2/21/08	Russellville	Tri-County Water , 5306 North Arkansas	9:00 AM
2/28/08	Camden	AR Env. Academy, 100 Carr Road	9:00 AM
2/29/08	Lonoke	ARWA Facility, 240 Dee Dee Lane	9:00 AM
2/29/08	Nashville	Carter Day Facility, 200 Nichols Dr	9:00 AM
3/6/08	Hot Springs	Wastewater Training Bldg, 798 Adams	9:00 AM
3/14/08	Nashville	Carter Day Facility, 200 Nichols Drive	9:00 AM
3/14/08	Lonoke	ARWA Facility, 240 Dee Dee Lane	9:00 AM
3/28/08	Heber Springs	ASU, 71 Cleburne Park Road, Rm 110	9:00 AM
3/28/08	Camden	AR Env. Academy, 100 Carr Road	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: http://www.healthyarkansas.com/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.

PREPARATION = SUCCESS

AWW&WEA District Meetings

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

DATE	TIME	CITY	LOCATION	SPONSOR
January 2008				
3	5:00PM	Malvern	Senior Adult Center	Central District, AWW&WEA
10	5:30PM	Clarksville	Western Sizzlin	AR Valley District, AWW&WEA
10	5:30PM	Batesville	Western Sizzlin	North Central District, AWW&WEA
10	5:30PM	Holly Grove	to be announced	Eastern District, AWW&WEA
15	6:30PM	Hamburg	Catfish Inn	Southeast District, AWW&WEA
16	9:00AM	Bentonville	First Baptist Church	Northwest District, AWW&WEA
17	1:00PM	Jonesboro	Ron's Catfish	Northeast District, AWW&WEA
24	6:30PM	Texarkana	Ole Feed House	Southwest District, AWW&WEA
February 2008				
7	5:00PM	Conway	Nazarene Church	Central District, AWW&WEA
7	6:30PM	Fort Smith	Golden Corral	Western District, AWW&WEA
14	5:30PM	Russellville	Western Sizzlin	AR Valley District, AWW&WEA
14	5:30PM	Batesville	Western Sizzlin	North Central District, AWW&WEA
14	5:30PM	Wynne	to be announced	Eastern District, AWW&WEA
16	6:30PM	Kelso-Rowher	to be announced	Southeast District, AWW&WEA
19	9:00AM	Decatur	City Municipal Bldg	Northwest District, AWW&WEA
21	1:00PM	Jonesboro	Western Sizzlin	Northeast District, AWW&WEA
28	6:30PM	Nashville	Western Sizzlin	Southwest District, AWW&WEA
March 2008				
6	5:00PM	Benton	Brown's Country Restaurant	Central District, AWW&WEA
6	6:30PM	Fort Smith	Golden Corral	Western District, AWW&WEA
13	5:30PM	Lee County	to be announced	Eastern District, AWW&WEA
13	5:30PM	Clarksville	Western Sizzlin	AR Valley District, AWW&WEA
13	5:30PM	Batesville	Western Sizzlin	North Central District, AWW&WEA
18	6:30PM	Crossett	Western Sizzlin	Southeast District, AWW&WEA
18	9:00AM	Rogers	Rogers Activity Center	Northwest District, AWW&WEA
20	1:00PM	Jonesboro	CWL Service Bldg	Northeast District, AWW&WEA
27	6:30PM	Camden	River Woods	Southwest District, AWW&WEA

ENGINEERING SECTION
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