New leadership, familiar challenges

Gov.-elect Asa Hutchinson will lead a Legislature with a lot of new faces. With the private option, prisons and tax cuts set to dominate the agenda, will lawmakers give infrastructure the support it needs?

Also inside:
- Hope for progress in Congress? Maybe
- State's first design-build highway project takes shape
- State Water Plan says surface water must be diverted
The ACEC’s annual Engineering Excellence Awards (EEA) competition recognizes engineering firms for projects that demonstrate a high degree of achievement, value, and ingenuity. EEA entries are accepted into one of 10 project categories: Studies, Research, and Consulting Engineering Services; Building/Technology Systems; Structural Systems; Surveying and Mapping Technology; Environmental; Water and Wastewater; Water Resources; Transportation; Special Projects; and Energy. Project entries must be designed by engineers located in Arkansas.

STATE SUBMISSION DEADLINE: FEBRUARY 6, 2015

For a call for entries packet contact:
Executive Director Angie Cooper
awcooper@arkansasengineers.org

Winners will be announced during the EEA dinner March 12, 2015 at Heifer International Headquarters in Little Rock.
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For more information, contact Mike Griffin | Director of Aviation
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Infrastructure important, most in D.C. say
At the ACEC/A's annual Agency Forum, Steve Hall with ACEC's national office says infrastructure is an issue that brings Republicans and Democrats together.

I-30 project is first to use design-build
Garver officials describe the process for the biggest project in the Connecting Arkansas Program – a $450 million improvement of I-30 through Little Rock and North Little Rock.

Water Plan: Must divert surface water
The draft of the Arkansas Water Plan Update is completed, and it confirms that Arkansas is using far too much groundwater. There is a solution – using the state's abundant surface water. It won't be cheap, but it will be effective.

Cover Story / New leaders, same challenges
As the 2015 Arkansas legislative session nears, many new faces in Little Rock will be facing familiar problems – how to properly fund infrastructure when it's competing with other priorities for limited dollars.

Member Spotlight / Burns & McDonnell
The national firm with 5,000 employees has a growing presence in an office staffed by Arkansas engineers.

Scott Bennett, P.E., director of the Arkansas Highway and Transportation Department, will be an important advocate for infrastructure funding during the 2015 legislative session.

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It’s what motivates, connects, and inspires us all.

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The value of advocacy

My grandfather always said, “Never talk about politics or religion.” That was sage advice, since both subjects can lead to unresolvable disagreements among friends and acquaintances. However, political advocacy is an essential tool for the engineering industry and one of the most valuable functions of ACEC. ACEC’s political advocacy, spearheaded by the ACEC Political Action Committee (PAC), benefits Arkansas member firms on both national and state levels.

ACEC/PAC is the nation’s only political organization that advocates for engineering firms and their legislative interests. It supports congressional candidates of both parties who support the engineering industry’s agenda. For the past election cycle, ACEC/PAC raised more than $1.5 million, all from individual member contributions. That puts it in elite company with other large PACs and is by far the largest PAC in the design industry, garnering the attention and respect of lawmakers. For comparison, according to www.opensecrets.org, the Association of General Contractors raised under $900,000, and the American Institute of Architects raised a little more than $270,000.

Every year, ACEC/PAC sets fundraising goals for each state, and each state’s “PAC Champion” follows through by contacting members for contributions. Arkansas’ fundraising goal this year was about $8,000. Thanks to the hard work of our PAC Champion, Jeff Geurian, P.E., of CEI Engineering, and the contributions of individuals, ACEC/Arkansas met its goal in almost record time. In fact, ACEC/Arkansas has consistently met its goal for several years, assisting Arkansas’ influence with the ACEC/PAC trustees.

The good news on a national scale is that 95 percent of all ACEC/PAC-supported candidates were victorious. The good news for ACEC/Arkansas is that ACEC/PAC total contributions to Arkansas candidates are significantly higher than the amount raised within our state. While Arkansas’ goal was $8,000, the national ACEC/PAC contributed $36,000 to the state’s congressional and senatorial campaigns this past cycle.

With the support of ACEC/PAC, and due to the annual legislative visits by individuals including ACEC/Arkansas board members, key issues are being addressed. Past successes include creating the Water Infrastructure Finance and Innovation Authority, and current issues include establishing long-term transportation revenues, maintaining the business option of using the cash accounting system, and the extension of critical tax provisions of interest to engineering firms. On a state level, the ACEC/Arkansas PAC is also active and contributed $10,000 to state candidates. Unlike the national PAC, which must be funded by individuals, state PAC funding is generated by voluntary member firm contributions.

While PAC funding is important on a state level, action by the ACEC/Arkansas Government Affairs Committee may provide even more value to the industry. Our committee chair, Dennis Ford, P.E., with FTN and Associates, is currently putting together a stellar committee composed of engineers from a broad array of disciplines. With the help of that committee, the ACEC/Arkansas board members, and our dedicated executive director and acting lobbyist, Angie Cooper, ACEC/Arkansas will be proactive and vigilant during the upcoming state legislative session. I am convinced that ACEC/Arkansas’ value to member firms is never more apparent than during a legislative session.

Political advocacy is an important part of ACEC’s mission and provides significant value to member firms and engineering in general. With the upcoming legislative session, I cannot guarantee that I will stay away from politics in the future. However, I will follow at least half of my grandfather’s advice and avoid the topic of religion.
In my last article, I touched on my beliefs regarding some of the rules and regulations as applicable to engineers. I basically stated that I believe that we should welcome being held to some higher standards with regard to licensure, regardless of what industry we may work in. For this column, I'd like to touch on another standard that we should hold for ourselves, and the higher bar that we should set for our goals.

February 22-28 is recognized as National Engineers Week, and this is something that we should be proud of. There is a lot of work performed by engineers behind the scenes that may not make the news and wouldn't make a box office hit for a Hollywood film. It does, however, make a difference in the daily lives of millions of people. Whether it's designing the road that someone drives on to get to work, the car that they drive to get there, the utility systems that keep the city running, the computer that they use every day ... you get the picture. In general, there are not many things in our lives that are not influenced by some engineer along the way.

The issue is that people see the end products, but not what it takes to get them designed, built, and reliable. How many times do we look at buildings or dams, cars or planes, computers or robots, and say how amazing we think they are? The fact of the matter is, there was a lot of engineering behind each one of these accomplishments. We are living at a time when the development of technology has produced advancements that were unimaginable just a few years ago. The possibilities ahead are just as unimaginable to us today, but we have the potential – indeed, the obligation – to have a great influence on them. This is where my challenge comes in.

I believe that one of the most powerful influences that we can have is to pass on our love of engineering and fascination with advancement to younger generations. In order to have future generations of great engineers that will make these advancements, we must help them develop the vision, desire and belief that they can do the unimaginable. The best part about it is that in my experience, doing this is not only easy, but it also can be fun and rewarding.

I have had multiple opportunities recently to speak with groups regarding how to get involved in engineering. I have addressed fourth and fifth grade elementary students, new college students, and even teachers from across the state. At first I was a bit concerned that discussions on engineering may be beyond the attention span of fourth graders, or just another lecture to the new college students, but I was mistaken. By presenting the material in an age- and context-appropriate manner, the responses have been incredible.

I have found that many people do not recognize what engineers do or understand just how broad our involvement is. I have also found that once people realize what engineers do, and the effect that we have on their daily lives, they develop a new level of interest and enthusiasm. Maybe it has made enough of a difference to at least one of them to help them decide to become an engineer later in life, and who knows what unimaginable impact they may have?

My challenge is for each one of us to reach out to those around us, especially the younger generations, and help plant the seeds in their lives. We can help develop the interest and nurture the education that will give us the next generation of engineers, and who knows where they may lead us? I can only imagine.
The project creates an east-west corridor connecting Don Tyson Parkway to I-49, offering an alternative to the congested U.S. Highway 412. Prior to its opening, Garver Senior Project Leader Ron Petrie said in a company news release, “Motorists suffered long waits at intersections in Springdale. During peak hours traffic regularly backed up a mile long from I-49.”

The interchange offers access to Tyson Foods World Headquarters and Arvest Ballpark, home of the Northwest Arkansas Naturals baseball team. The project improves the potential for commercial development west of the interstate and around the ballpark. According to the release, several businesses have announced plans to open in the area.

Those pending developments and the Highway 412 congestion meant it was important to meet all schedule milestones for permitting, design and construction. Construction initially was scheduled to be completed in early 2015. Actual opening of the interchange was on July 7, 2014.

“This project is another example of how Garver utilizes its strong relationships with regulatory agencies to meet requirements and deliver a complex transportation project of this size ahead of schedule on a routine basis,” said Project Manager Jeff Webb.

Garver client David Cameron, city administrator, Siloam Springs, said, "(White) and the entire Garver staff serve as a tremendous asset to the city of Siloam Springs. We greatly appreciate the partnership and are certainly proud of the recognition that (he) rightfully deserves.”

Garver’s White named to Ark Biz’s “20 In Their 20s” list

Arkansas Business has named Garver Project Manager Adam White to its “20 In Their 20s” list, also known as The New Influentials. White is the only member of the list who works in the A-E industry.

White serves on Garver’s Aviation and AssetMax teams. He came to Garver as an intern while studying civil engineering at the University of Arkansas and was hired full-time after graduation.

“Aviation isn’t something they teach,” White told Arkansas Business. “It’s not a common trade. At Garver, I got exposed to it and I liked it. That’s the good thing about internships – you get exposed to everything. There is a lot more interaction with clients, so there is a lot more project management and face-to-face time.”

Garver interchange supports growth in Northwest Arkansas

A newly opened Springdale interchange designed by Garver is relieving congestion and improving commercial opportunities, and it is doing it months ahead of schedule.

Invest in U

With a record number of engineering students at the University of Arkansas, now is a good time to brand your company by joining the Corporate Partners Program.

Invest in your future workforce.
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bwhender@uark.edu
479-575-6265

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Hanson Pipe & Precast
Jack Tyler Engineering of Arkansas
McGeorge Contracting
Snyder Environmental & Construction
annual convention in Hot Springs Oct. 30.

The award is in recognition of Harper's long service to the AEF, excellence in leadership, and dedication to environmental education. He served on the AEF board of directors from the mid-1980s until he retired from Alcoa in 2006.

FTN Associates, Ltd. is an engineering, water resources, and environmental consulting firm that provides specialty services to private and governmental clients in Arkansas and throughout the Mid-South. The headquarters is in Little Rock, and there are branch offices in Fayetteville, Baton Rouge, and Jackson, Miss.

Crafton Tull designing urban sustainability project in Little Rock

Crafton Tull is working with the city of Little Rock to design a demonstration project on Main Street for water quality best management practices in an urban environment.

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Hawkins-Weir says Durham, Kaufman are associates

Hawkins-Weir Engineers is pleased to announce the promotions of Josh Durham, P.E., and A.J. Kaufman, P.E., to the position of associate. Durham has been with Hawkins-Weir’s Van Buren office since he graduated from the University of Arkansas with an M.S. in civil engineering in 2009. Kaufman joined the firm’s Little Rock office in 2013.

Hawkins-Weir specializes in municipal water and wastewater and also provides services for private clients. Headquartered in Van Buren, it recently expanded with a new office in Little Rock.

Tudor now AHTD’s number 2; Banks is chief engineer

Lorie Tudor, P.E., is now the Arkansas State Highway and Transportation Department’s deputy director and chief operating officer, while Emanuel Banks, P.E., has been named deputy director and chief engineer.

Tudor now is the second highest-ranking staff member at AHTD beneath Director Scott Bennett, P.E. Prior to her appointment, she had served as assistant chief engineer for planning since 2011.

She joined the AHTD’s staff in 1981 and has held various titles in planning, research, and program management, including assistant division head and division head of programs and contracts.

Banks has been assistant chief engineer for operations since 2008. He began his career with the department in 1987 and has served as design engineer in roadway design, advanced construction field engineer, assistant resident engineer, resident engineer, staff construction engineer, district engineer, and state construction engineer. Banks replaces Ralph Hall, who retired with more than 42 years of service.

Durham and Kaufman

Hawkins-Weir says Durham, Kaufman are associates

Kevin Thornton, P.E., replaces Tudor as assistant chief engineer for planning. He started with the AHTD in 1986, eventually becoming division head of programs and contracts in 2011.


Calendar of events

Feb. 6
Deadline for entries for Engineering Excellence Awards

Feb. 22-28
National Engineers Week

March 12
Engineering Excellence Awards
Heifer International Headquarters

A RENDERING of the Main Street project.

The project spans four blocks and highlights multiple Low Impact Development approaches, including pervious pavers, pervious concrete, rain gardens, bio-swales, vegetated walls, and vegetated filter strips. These strategies will slow the flow of storm water and filter it as it ultimately makes its way into the Arkansas River.

The project is funded by an EPA grant secured by the UA Community Design Center for the city, which then hired Crafton Tull to handle the detailed design work.

Crafton Tull has long been committed to sustainability and ranks among the top 100 firms nationally based on percentage of LEED-accredited professionals.

President & CEO Matt Crafton said, “The Main Street demonstration falls right in step with our goal of advocating environmental responsibility through informed, creative, and efficient solutions. The opportunity to serve this community by helping reduce negative environmental impact is made that much more exciting given that many of our employees call central Arkansas home.”

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Celebrating engineering excellence
Let’s brag on ourselves.
Someone has to.

The general public rarely appreciates the work that engineers do. Architects design sweeping works of art, and some of them, such as Frank Lloyd Wright, become famous. No one outside of our profession has ever heard of a great engineer, even though it was his or her infrastructure design that made that architectural work of art possible.

No, the general public expects our work to be flawless – and uncelebrated. The bridge is built, and they drive their cars over it. They turn the faucet on, and the water comes out. They drink it, and it’s safe.

That’s why the Engineering Excellence Awards are so important. Once a year, engineers gather with their competitors to celebrate the best of our industry. Firms display their best work. Sometimes it’s beautiful, even breathtaking. Sometimes it’s merely incredibly functional – not that impressive to the naked eye, but representing expert skill nonetheless. Beautiful or functional, the entries represent what engineers do, which is lay the foundation upon which the rest of society depends.

The Engineering Excellence Awards give engineers a chance to pat themselves and each other on the back and perhaps give each other a new standard to try to reach. They also give ACEC/A firms a chance to share a little of what they do with the general public. I encourage you all to post photos of your entries online and submit press releases to your local media.

For the Engineering Excellence Awards to be successful, we need entries. Awards will be granted in 10 project categories: Studies, Research, and Consulting Engineering Services; Building/Technology Systems; Structural Systems; Surveying and Mapping Technology; Environmental; Water and Wastewater; Water Resources; Transportation; Special Projects; and Energy.

The deadline for entry this year is Feb. 6. Entries must be designed by engineers located in Arkansas. Email me at awcooper@arkansasengineers.org for entry packets.

The awards banquet in the past has been at the Governor’s Mansion, but that venue could not be confirmed in time because of the change in administrations. So instead, it will be March 12 at Heifer International headquarters in Little Rock – a beautiful, sustainable building with a dual mission of serving as Heifer’s corporate offices and educating the public. You’ll enjoy learning about the facility and about how Heifer helps the world’s impoverished create better lives by raising livestock. Like engineers, Heifer International is a builder – of communities, of opportunities, and of hope.

Engineers practice excellence every day, but they’re not so excellent at publicizing that fact. Our failure in this area does have consequences in the halls of Congress and the State Capitol – both in terms of how our profession is treated and what priorities are funded.

The Engineering Excellence Awards are a very small attempt to make up for that big deficiency, but they are a start. Submit your entries and come to the banquet. Join your fellow engineers in celebrating this wonderful, world-changing profession.

I promise that you’ll have an excellent evening.
Infrastructure important, say most in D.C.

At Agency Forum, ACEC’s Hall says both Republicans, Democrats see need

By Steve Brawner
Editor

Republicans and Democrats in Washington don’t agree on a lot of things these days, but one issue is capable of uniting them – infrastructure.

Steve Hall, ACEC’s vice president of government affairs, told engineering executives at the ACEC/A’s Agency Forum Dec. 5 that one of the most important job-producing bills passed in 2014 related to infrastructure – the Water Resources Development Act, or WRDA. The bill funds $12.3 billion in Army Corps of Engineers projects and enacted reforms to streamline the environmental review process for water and wastewater projects. It created a WIFIA pilot program (Water Infrastructure Finance and Innovation Authority) that provides federal loans and loan guarantees to leverage private sector investment. WRDA also included a mandate for using qualifications-based selection in the federal government’s Clean Water State Revolving Fund program, used by each state to finance water projects.

WRDA’s success hopefully will signal progress on the really big piece of transportation legislation coming in 2015 – the highway funding law. The current law, MAP-21, nearly expired at the same time that the Highway Trust Fund nearly became insolvent in 2014, but Congress passed a last-minute patch that will last until May 2015.

Hall said Republicans and Democrats both see highway infrastructure as a major priority. In fact, the Senate Environment and Public Works Committee passed a transportation funding bill in 2014 that largely could be replicated in the 2015 legislation. Supportive lawmakers would like to pass a six-year version of MAP-21, which originally covered less than two years, in order to give highway departments more planning time.

However, just maintaining the program at current levels would require $100 billion in new revenues plus inflation. The easiest and simplest way to raise money for infrastructure is increasing the motor fuels tax, which has remained unchanged since 1993, but elected officials believe the idea has little public support. Sales taxes, tolling, transfers from the rest of the budget, and other mechanisms are other potential revenue sources.

Policy makers have moved farther toward agreement on comprehensive tax reform that would lower corporate and individual tax rates while ending some deductions in the tax code. Passage would be “a bit of a long shot,” Hall said. However, a tax reform package could include mechanisms that increase funding for transportation.

“This is a wonderful vehicle for paying for MAP-21,” he said. “If we can bury a financing mechanism in a larger tax bill that lowers corporate and individual rates, for a lot of lawmakers that really want to do something to help the Highway Trust Fund, this may give them the cover they need to do that.”

The other major infrastructure legislation coming in 2015 is the funding reauthorization for the Federal Aviation Administration, whose current authorization expires in September. Airports are hoping funding will be increased for the Airport Improvement Program, which has been flat for several years. The bill also could include provisions that govern the use of drones, which increasingly are being used by engineering firms.

Infrastructure advocacy a must

Infrastructure requires support both in Congress and among the public, Hall said. In Washington, ACEC’s political program grew from $300,000 in campaign donations in the 2002 election cycle to $1.5 million in 2014, and 95 percent of the candidates it supported won on Election Day. ACEC’s national political action committee contributed to the campaign of incoming U.S. Rep. Bruce Westerman, a professional engineer who now will represent Arkansas’ 4th District.

Meanwhile, advocates must persuade average Americans of the need to invest in infrastructure. Otherwise, members of Congress who vote to increase funding could lose in their own party’s primary to anti-spending candidates who undo the increase, and then no one will vote for an increase in the future.

The advocacy organization America’s Infrastructure Alliance has been developing messaging on social media and has bought time supporting pro-infrastructure candidates at movie theaters, a cheaper venue than television commercials. Its focus groups and polling showed advocates should be prepared to use a variety of messages. The argument that infrastructure spending contributes to economic development didn’t always resonate, Hall said. In one congressional district, the most effective argument was the constitutional one, that infrastructure has been a core responsibility of the federal

STEVE HALL, ACEC’s vice president of government affairs, address participants in this year’s ACEC/A Agency Forum.
government since the country’s founding. Elsewhere, the legacy argument was persuasive – that previous generations invested in America, and it’s the current generation’s responsibility to do the same for its children and grandchildren.

Hall expressed hope that 2015 could be better than previous years. There’s a potential for passage of a number of energy bills, including one that would build the Keystone XL Pipeline that may make it to President Obama’s desk in a form that would be difficult to veto. The incoming Republican chair of the Senate Committee on Energy and Natural Resources, Sen. Lisa Murkowski, is a pragmatist who works well with Democrats. Sen. James Inhofe, R-Okla, the incoming head of the Senate Environment and Public Works Committee, is in sync with the outgoing chair, Sen. Barbara Boxer, D-Calif. Rep. Bill Shuster, R-Penn., chair of the House Transportation and Infrastructure Committee, is a transportation advocate who works well with both parties, Hall said.

Meanwhile, some progress occurred as the year continued. A two-year budget deal replaced some of the indiscriminate sequestration cuts that affected the engineering community. Also, there was no crisis over raising the debt ceiling in 2014. “Last year (2013) was about as bad as it gets,” he said. “Not a whole lot happened, culminating in a government shutdown at the end of the year. It was almost like the two sides kind of got it out of their system by that point, and towards the end of the year as we rounded the corner to 2014, we started to see some breakthroughs and light at the end of the tunnel.”

A design-build process enables design and construction phases to overlap, saving time and money. In fact, shaving a year off construction can save $18-20 million in interest costs, Mott said. The contractor probably will be a national firm, with a mix of national and local engineering firms contributing to the work. This also is the first time a PEL process has been used in Arkansas. Created by the Federal Highway Administration, the method considers environmental, community and economic goals early in the planning process and is meant to encourage more collaboration. Fewer alternatives are presented to the next phase’s National Environmental Policy.
Act (NEPA) consultant. The method was developed because too many projects in urban corridors couldn't seem to get off the ground, Holder said.

The project is currently in the design-build procurement phase, and a NEPA environmental design consultant was being selected at the time of the Agency Forum. The consultant will take the project through the clearance process, determine how many lanes will be built, and conceptualize interchanges and construction sequencing. However, the project will be only 20-30 percent planned at that point. "We don't want to design this thing and tell the contractor exactly what we want," Holder said. "We want the contractor to come in and bring ideas to us, bring innovation, because that leads to cost savings, because they know what they're doing out in the field."

Requests for qualifications will be issued in October 2015, with firms given about four months to respond. Requests for proposals will be issued in the spring of 2016 to three or four firms. Designers will be given a notice to proceed in the spring of 2017, with construction beginning in early 2018.

Meanwhile, work is continuing on the Interstate Rehabilitation Program, a $1.2 billion program that will be funded by pay-as-you-go funds and up to $575 million in GARVEE bonds approved by the voters in 2011. Kevin Thornton, P.E., Arkansas Highway and Transportation Department assistant engineer for planning, told attendees that 15 projects covering more than 135 miles and costing about $268 million have been completed since the project was first let in late 2012. Under construction are another seven projects representing 40 miles and costing $205 million. Two projects were to be let in December, and 12 were to be let in 2015 covering 70 miles and costing $262 million. From 2016-22, AHTD will let to contract 43 projects covering 246 miles and costing $525 million.

In another presentation, Lance Jones, chief of the Arkansas Department of Health's field surveillance section, said real estate plan submittals are still low as a result of the recession – 1,069 in fiscal year 2013 versus 1,965 in FY 2006. However, there has been a slight increase lately. He said his agency has improved its turnaround time for initial reviews from 6.5 days in 2004 to three days in 2014.

Jones also updated attendees on the EPA's Stage 2 Disinfectants and Disinfection Byproducts Rule. DBPs are created when a disinfectant such as chlorine acts on organic matter such as decayed leaves, producing a compound posing a cancer risk. Under the old rules, systems were considered acceptable if an average of sample sites was in compliance. Under the new rules, if a single site is not in compliance, the entire system is cited. The rule has forced water systems to maintain water quality throughout the process.

Jones said that violations have fallen from about 140 in 2008 to about 30 in 2013 and 2014, but the agency is expecting an uptick because all systems will be affected by the Stage 2 rule.

Steven Beam, P.E., with Burns & McDonnell, the head of the ACEC/A's Public Relations Committee, encouraged attendees to check out ACEC/A's website, www.arkansasengineers.com, which he said will be updated to better guide readers to various sections, including one for public policy and one tailored strictly for professional engineers. He also encouraged attendees to "like" ACEC/A's Facebook page. While ACEC/A President Brad Hammond, P.E., of McGoodwin Williams and Yates was speaking, Beam snapped a photo and posted it to the page. He said ACEC/A will try to make use of social media during the upcoming legislative session.

Other speakers were Katherine Yarbbery, P.E., engineer supervisor for the Department of Environmental Quality No-Discharge Permits Section, and Sandra Otto, P.E., Arkansas Federal Highway Administration division administrator.

The Agency Forum was sponsored by BancorpSouth Insurance Services, which offers risk management and business services. James Clark with BancorpSouth told attendees, "We have seen a lot of momentum with companies that we work with, and we're looking forward to being involved on a broader basis."

Water Plan: Must divert surface water

State uses 11 billion gallons a day, mostly groundwater and mostly for irrigation

By Steve Brawner
Editor

Between $3.4 billion and $7.8 billion should be invested to help Arkansas take advantage of surface water instead of unsustainably pumping from depleting groundwater sources. The good news: The state has more than enough surface water to meet its needs.

Those are some of the conclusions of the Arkansas Water Plan 2014 Update, a nonbinding strategic plan that guides the regulatory and legislative priorities of the Arkansas Natural Resources Commission.

A draft has been approved by the commission. Rulemaking will occur in early-to mid-2015 and will focus on procedures for adopting recommendations as well as creating a framework for future updates.

The plan, first published in 1975, was last updated in 1990, and the current update began in 2011. CDM Smith and FTN Associates teamed with ANRC to develop the 2,622-page plan.

The plan says Arkansans use 11 billion gallons of water daily or 12.4 million acre-feet per year, which is enough to cover the state in 4.2 inches of water.

Ed Swaim, ANRC water resources division manager, told participants at ACEC/A's Agency Forum Dec. 5 that, by 2050, that number rises to 14 million acre-feet per year, which would raise the water level to 4.9 inches.
About 71 percent of state needs are supplied by pumping groundwater. Demand for groundwater is already 8.7 million acre-feet per year and is expected to grow, while groundwater can supply only 1.9 million acre-feet per year at a sustainable pumping rate. Arkansas County has already bottomed out in places and is using surface water. Mississippi County will lose maybe 40-50 feet of its water table in the coming years, Swaim said.

“The folks with the superabundant groundwater, they don’t like to acknowledge it, but their day is coming. They’re going to see these declines,” Swaim said.

Eighty percent of all water use in Arkansas goes to crop irrigation, followed by thermoelectric power, which uses 11 percent, and public drinking water, which uses 3.5 percent. Industrial demand currently is 291 million gallons a day and is decreasing. Over a year’s time, the state averages 259.2 million gallons a day for flooding fields for duck hunting.

“At some point, we’ll use about as much water to hunt ducks as we do to make things in the state,” Swaim said.

As a result of this water use, rapid depletion is occurring in the Grand Prairie’s alluvial aquifer, the Sparta Aquifer in south Arkansas, and areas east of Crowley’s Ridge where the Mississippi River doesn’t penetrate the clay soil.

Groundwater conservation efforts could reduce the supply gap by 12 to 22 percent, which would be helpful but not nearly enough to solve the problem. But Arkansas has abundant surface water through a network of rivers and lakes along with rainfall totaling four or five feet per year, Swaim said.

Gaged streamflow in the state is 92.5 million acre-feet per year, of which only 57.5 million acre-feet are needed to maintain current needs for transport, fish and wildlife, and maintaining the flow into neighboring states. And that’s not counting the Mississippi River, which was left out of the report because it borders other states, and tapping it would be problematic. Of the rest, a quarter can be diverted under current state law. That would provide about 8.6 million acre-feet per year – about the same as the current groundwater deficit. More would be available by changing the law.

“There’s plenty of water if we manage it right, but it’s going to be expensive,” Swaim said.

The cost of diverting enough surface water to meet Arkansas’ needs is between $3.4 billion and $7.8 billion. Pumping surface water horizontally will be cheaper for farmers than pumping groundwater vertically, Swaim said. Arkansas’ annual agricultural production has a $9.7 billion market value, according to the plan.

Aside from addressing the groundwater depletion issue, another $10 billion is needed between now and the mid-2020s for other water and wastewater infrastructure needs.

The plan recommends that the Arkansas Natural Resources Commission have the authority to force the merger of small water and sewer systems that cannot meet their financial obligations on their own. It also calls on the commission to encourage more voluntary sustainability planning by water systems.

Swaim emphasized that, unlike the 1990 update that was drafted internally, this current update involved significant public input, including more than 250 public meetings and presentations. Rice farmers, power plants, the natural gas industry and even fish farmers were involved in determining current and future needs.
New leaders, same challenges

Republicans and Democrats agree on the need for infrastructure, but other needs loom large as the legislative session nears

By Steve Brawner  
Editor

Ask any of the state’s 134 legislators to name the two most important words entering this upcoming session, and you’ll get a variety of answers.

Many probably would say “private option,” the program that uses federal Medicaid dollars to purchase private insurance for 200,000 lower-income Arkansans. Whether or not that program survives will be the session’s big question. Other legislators would say “tax cuts,” the signature issue of Gov.-elect Asa Hutchinson. A few might say “public schools,” which are assured by the Supreme Court’s Lake View decision of being funded before any other state priorities. There’s also the possible $100 million “new prison” being requested by the Department of Corrections.

Unfortunately, not many would answer “infrastructure funding.” Despite being understood as important by everyone, including Arkansas voters, infrastructure often is an afterthought in Little Rock.

Indeed, lawmakers will have so much on their plates when they gather in January that it could be hard for infrastructure supporters to catch their attention. Because of term limits, 41 of the 100 House members will be freshmen trying to grasp the complexities of the legislative process and the thousands of bills that will come before them. Meanwhile, Arkansas politics is in the midst of dramatic change. Republicans now hold 87 of the 134 seats (one is vacant) in the Legislature. In contrast, six years ago, 98 members were Democrats. The session will be the first since 2007 where the state will not be led by a sitting governor. Since winning in November, Gov.-elect Asa Hutchinson has been scrambling to make hundreds of hires and appointments as well as produce his own budget and legislative agenda. During the campaign, he did not talk much about infrastructure or other engineering-related issues, and his proposal to cut $100 million in taxes leaves less available for asphalt, concrete and pipes.

Show us the money for roads

Traditionally, highways have been largely funded through motor fuels taxes, which have the advantage of being a “user fee” where a government service is funded by those it benefits. Unfortunately, fuel taxes, which are levied by the gallon, do not raise as much money as they once did because passenger vehicles have become more fuel efficient. In a presentation before legislators Dec. 17, Scott Bennett, P.E., director of the Arkansas Highway and Transportation Department, said Arkansas motorists purchased about 86 million fewer gallons of fuel in 2013 than in 2007, resulting in $54 million less in revenues, while driving 1.1 billion more miles on highways that are becoming ever more expensive to maintain. Instead of a crisis, the state has a long-term funding shortfall – $20.4 billion in needs over 10 years but only $3.6 billion in identified funding sources.

Unfortunately, additional potential funding sources are limited. There are few places in Arkansas where enough vehicles pass to make tolling cost-effective, except for interstates, where federal restrictions apply. The easiest way to raise funds, increasing the gas tax, is a political nonstarter. At the federal level, it hasn’t budged since 1993. Rep. Andy
Davis, R-Little Rock, a professional engineer and a member of the House Transportation Committee, said there will be no push to raise it at the state level, either. After all, Hutchinson ran promising to enact a $100 million tax cut. “I can’t see anybody doing that. If they did try to run it, I don’t see any chance it passes,” he said.

Since raising new revenues for highways isn’t likely, the other place to find dollars would be somewhere else in the state budget. Unfortunately, that would mean less money for other state priorities that have strong supporters in and around the Capitol. In 2013, Rep. Jonathan Barnett, R-Siloam Springs, filed a bill that would have transferred money from the sale of new and used cars and car parts to highways. According to the AHTD’s Bennett, that kind of sales tax would be a stable source of revenue. It enjoyed broad early support but then collapsed under strong opposition from Gov. Mike Beebe as well as representatives of other interest groups, such as higher education, that feared a loss of funding for their own needs. Rep. Dan Douglas, R-Bentonville, plans to resurrect that bill in 2015 with new provisions that will make it more acceptable to its previous opponents. “We’ve got to do something. These are highway use items,” he said in an interview.

Barnett, a former state highway commissioner, is term-limited out of office, and his loss will be a significant one for infrastructure supporters. Asked who could fill the void, Sen. Jake Files, R-Fort Smith, pointed to Bennett. “I think Scott Bennett steps into a larger role, and I think that’s a positive because I think he presents issues fairly. ... He’s got credibility among the legislators that he deals with, and I think they’ll see it fairly as well,” Files said.

The Arkansas Highway and Transportation Department has a couple of other bills in mind. One would expand its ability to do design-build projects, which are currently possible only for those projects in the Connecting Arkansas Program funded by the half-cent sales tax approved by voters in 2012. AHTD also is hoping to run a bill that would make it possible for public-private partnerships to invest in the highway system. Presently, AHTD itself can do tolling, but a private entity can’t operate a toll road or provide other services that can be done in other states, such as a motorist assistance patrol to help stranded drivers. Also, AHTD is one of several entities associated with the Intermodal Transportation and Commerce Task Force, which supports eventually creating a Department of Transportation, like most other states have. More study is needed, and it won’t happen this session, but it’s something to keep an eye on.

Barnett’s departure will leave one other ex-highway commissioner in the Legislature – Rep. Prissy Hickerson, R-Texarkana. Hickerson recalls that when she joined the commission in 1997, Arkansas’ interstates were among the worst in the nation. The state had developed a bad reputation in the trucking and tourism industries, and the public was demanding that something be done. That public outcry does not exist now because 78 percent of Arkansas’ interstates are in good condition, and most of the rest is in fair condition.

“A lot is going to depend on what all we’re facing,” she said. “It’s going to depend on the governor and what he is willing to support. I know he is an advocate for better highways and transportation systems for Arkansas, but you’re going to have to have the support of the leadership to get anything through the Legislature. I think we saw that last time.”

Playing defense this session
ACEC/A, whose lobbying efforts will be led by Executive Director Angie Cooper along with the Government Affairs Committee, enters the session with no legislative agenda. The legislation it most would like to pass would require plaintiffs to obtain a certificate of merit from an independent design professional certifying a lawsuit should continue. The goal is to stop frivolous lawsuits early in the process. But court rulings against similar

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measures involving doctors have made it clear that a certificate of merit statute would be unconstitutional in Arkansas. Tort reform would be needed but is unlikely this session.

Instead, ACEC/A’s legislative team expects to play defense – stopping bad bills more than trying to pass good ones. An example would be a proposal in 2013 to require engineers to be present during the construction of a trench. ACEC/A helped stop that wasteful and unnecessary bill before it advanced too far. Its sponsor was defeated in the November elections.

Rep. Davis said engineers should watch for proposals changing how engineers are licensed. Arkansas is one of the country’s most heavily licensed states with many boards and commissions, he said. Now there’s talk of creating one large agency that would grant licenses for many different professions. Engineers need to make sure they aren’t swept up in that, Davis said.

As always in Little Rock, the squeaky wheels will get the oil, and engineers tend not to be that squeaky. As Garver’s Dan Williams, a member of ACEC/A’s Government Affairs Committee, explained, a change in mindset is needed.

“I think engineers in general don’t do nearly as good a job as, say, the contractors in just having those relationships and calling on our legislative body. ... I think as a group, engineers ... keep their head down and work and think stuff like that’s just going to take care of itself,” he said. “I think we just don’t recognize the importance of getting involved.”

Just because they haven’t doesn’t mean they can’t, however. In fact, engineers can be quite effective contributors to the legislative process. For example, Rep. Bruce Westerman, formerly of Mid-South Engineering, is headed to Congress after serving as Arkansas House majority leader.

Engineers’ interests are Arkansas’ interests. Schools and hospitals can’t be great if they’re poorly designed and unsafe. The economy grows best where highways and bridges encourage commerce. Without clean water, people get sick.

Engineers know all of these better than anyone, and that’s why Rep. Davis, a professional engineer and owner of the supplier New Water Systems, says the profession must be involved.

“I regularly speak to engineering groups, and I tell them, you’ve got to get more involved in the legislative process,” he said. “The Legislature is going to focus on the things that people bring to them and things that we perceive are the hot topic issues for our constituents. So my constituents come to me and talk about things like taxes, job creation, health care. Nobody’s coming to me and saying, ‘I need better roads,’ or ‘We need this in water,’ in large part because most citizens don’t know what’s the condition of their water plant or their wastewater treatment plant, or how old is the bridge that I drive over every day.”
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Burns & McDonnell is proof that the investment Arkansas is making in its infrastructure is creating jobs in the state.

“We just reached our 5,000-employee mark, and our expansion in Arkansas is part of our plan to continue that growth,” said Steven Beam, P.E., manager for Burns and McDonnell’s Springdale office.

The company was founded in Kansas City, Missouri, in 1898 by Clinton S. Burns and Robert E. McDonnell. Today it has 11 “global practices,” or areas of expertise, with locations across the country as well as in Canada and Qatar. For more than a quarter of a century, it has been entirely employee-owned.

Beam opened the firm’s Springdale office in May 2013 after the firm was selected by the Arkansas Highway & Transportation Department as an on-call engineering consultant. It now includes two other professional engineers and one engineer intern: Ryan Castor, P.E., Shawn Taylor, P.E., and Tyler Moncrief, E.I. The Springdale office is capable of delivering transportation, water and wastewater projects. Beam said plans are to continue growing by adding staff and capabilities in 2015 and beyond.

While Burns & McDonnell’s Arkansas office is new, it has had a presence in the state for many years. Long-term clients include the city of Fort Smith, Springdale Water Utilities, city of Bentonville, Arkansas Army National Guard, and American Electric Power. Additionally, all members of the staff are either native Arkansans or have spent their entire careers practicing engineering in Arkansas.

Current Burns & McDonnell projects as part of the Connecting Arkansas Program (CAP) include the widening of U.S. Highway 65 south of Harrison, and widening I-49 between Highway 71B and Highway 72 along with designing interchange improvements in the Rogers and Bentonville area. Another project is the Eighth Street interchange in Bentonville, which involves the construction of an interchange along with widening about 2.5 miles of Eighth Street. Burns & McDonnell also just completed the design-build delivery of a 73,000-square-foot ammunition facility for Remington Arms in Lonoke, serving as both designer and general contractor.

“Therefore, our office is in Northwest Arkansas, it’s been great to be able to work on such meaningful projects to our region along the I-49 corridor,” Beam said.

In total, the firm is working on the planning or design for five interchanges along I-49 in Washington and Benton Counties.

“Not only will CAP be great for the state’s transportation network, it’s been great for businesses like ours and communities like Springdale because of the new jobs it has created and private investment it spurs,” Beam said. “Few public investments provide the same return as investing in infrastructure. We’re proud to be a part of stewarding tax dollars to provide safe, reliable, cost-effective infrastructure to our fellow Arkansans.”
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