

THE AQUAHOMAN

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The newsletter of the

OKLAHOMA
WATER RESOURCES CENTER

Inside this issue:

An Introduction to the Interim Director of the Water Center	2
2015 Request for Pre-Proposals in Water Research	3
<i>E. coli</i> as an indicator of water quality	4
News & Events	5
WWWeb Updates	5
Contact Info and Social Media Links	5

DIRECTOR:
Dave Engle

PROGRAM
COORDINATOR:
Leslie Elmore



From the Director's Desk (by Dave Engle)

Reflections

As I announced in the April edition of *The Aquahoman*, I am leaving my post as director of the Oklahoma Water Resources Center, effective July 1. While writing this piece, I reflected on how wonderfully challenging and rewarding these past six years have been, and how I have come to more fully appreciate the vast number and complexity of water challenges we face. Some of these challenges can appear overwhelming and beyond our ability to solve, but the future is bright because Oklahoma is well equipped with science-based solutions to water problems. Moreover, the state's collection of top-notch water scientists is ready and able to solve water problems.

Dr. Garey Fox, the best of the best water scientists, has agreed to provide leadership to the Water Center for the next year. Many of you know Garey from his outstanding research on subsurface transport of phosphorous,

mechanisms of streambank erosion, and surface water-groundwater interactions. Look for Garey to bring fresh ideas and energy to the post. You will enjoy working with him.

One of the best things about this job has been the people with whom I have been privileged to work. Dr. Bob Whitson, former Vice President, Dean and Director of the Oklahoma State University Division of Agricultural Sciences and Natural Resources (DASNR), tops the list. As I did many times before, I extend a thank-you to Bob for hiring me, for his visionary steps establishing the Water Center, and for his continual support and encouragement in the formative years of the Water Center. Other key DASNR leaders—Drs. Bob Westerman, Mike Woods, Jonathan Edelson, Jim Trapp, and Ross Love—provided guidance and resources that made my job interesting and fulfilling.

Leslie Elmore and Mike Langston served the Water Center as incredibly effective staff members, and



Dr. Dave Engle, Director

they made their boss look good! They constantly and consistently juggled multiple balls—and successfully handled them with grace and excellence. I found that each of these people are as important to the team's success as is the director, and I will be forever grateful for their contributions. The generosity of Malinda and Dick Fischer, donors who established the Thomas E. Berry Professorship in Water Research and Management, contributed much to whatever success I can claim.

Another key leadership transition at OSU height-

("Advances" continued on page 4)

An Introduction to the Interim Director of the Water Center

(by Garey Fox, Interim Director, Professor, and Orville L. and Helen L. Buchanan Endowed Chair)

It is a privilege to be able to serve in the role of Interim Director of the Oklahoma Water Resources Center starting July 1st. I want to first thank Dr. Dave Engle for the leadership he provided. Dave will continue to be a vital resource in my role as Interim Director. Mrs. Leslie Elmore will continue to serve on the staff of the Water Center and will be invaluable during this period of transition. I applaud Leslie for developing and maintaining a wealth of information on the Oklahoma Water Resources Center's website, water.okstate.edu, where you learn more about the Oklahoma Water Resources Center, the Water Research Symposium, Extension materials, and contacts.

I grew up on a beef cattle farm in north central Texas and developed an appreciation for water resources. After three years as an Assistant Professor in Civil Engineering at the University of Mississippi, I accepted a faculty position at Oklahoma State University (OSU) in Biosystems and Agricultural Engineering, where I have served for the past 8 years. **It has been my pleasure to work with a number of water research, extension, and education faculty and staff during my time at OSU.** During my opportunities to conduct field research and participate in outreach throughout Oklahoma, what impressed me was the willingness of Oklahomans to help and how they truly care about protecting the availability and quality of their water resources for future generations.

As Interim Director, I will lead the programs of the Oklahoma Water Resources Center, including the USGS grants program. I can guarantee you that **no one supports this mission of the Center more than me.** Personally I have been the lead project investigator or co-project investigator on five grants funded through the USGS 104(b), including one through the Mississippi Water Resources Research Institute. Additionally, I was one of only two grant recipients in Oklahoma for the nationally competitive USGS 104(g) program. **I understand the importance of these grant programs as a means for addressing critical state water issues,** and also as a springboard for larger research, extension, and education grants.

This grant program supports faculty research and extension at institutions across Oklahoma. We will con-

tinue to rely heavily on feedback and guidance of the Water Research Advisory Board (WRAB), a group of about 20 state regulators, policymakers, and other water resource professionals. Currently I have strong working relationships with several of Oklahoma's state and federal agencies and plan to strengthen the Oklahoma Water Resources Center's relationship to Oklahoma's state and federal agencies, especially through activities with the WRAB.

Also we want to invite everyone to participate in this year's [Water Research Symposium](#) held in conjunction with the Governor's Water Conference, scheduled for October 22-23, 2014, as we will be working hard to put together sessions to strengthen the value of the symposium for all water researchers and extension professionals in Oklahoma.

As Interim Director of the Oklahoma Water Resources Center, I **will be working with**



Dr. Thomas Coon, the new Vice President, Dean and Director of the OSU Division of Agricultural Sciences and Natural Resources, to establish a long-term vision for the Center at OSU. I look forward to establishing the future direction of the Oklahoma Water Resources Center with Dr. Coon, with input from our 80+ OSU water experts.

OSU is uniquely positioned to couple research and extension efforts, and we should build the Center around this strength. expertise represented by our water faculty and staff. I believe that OSU has a mission to address critical water issues of our state and region, which are only going to intensify in the near future!

As Director of the Oklahoma Water Resources Center for the next year, **a personal goal will be to strengthen existing relationships and create new programs with**

(Continued on page 4)



2015 Request for Pre-Proposals in Water Research

The Oklahoma Water Resources Center invites pre-proposals for water research projects from any Oklahoma research university through the USGS 104(b) grants program.

The 2015 application process will begin with one page pre-proposals **due July 31, 2014**. Multiple pre-proposals representing distinct research projects from the same researcher are welcome. The Water Research Advisory Board ([WRAB](#)) will meet mid-August to review the pre-proposals and select 5-8 projects, and the PIs will be invited to submit a full proposal. The actual number invited to continue in the competition will be determined by the WRAB based on the quality of the pre-proposals, the potential of the project to address important water problems in Oklahoma, and the availability of funds.

Funding: Funding is contingent upon USGS funds being provided. We anticipate contributing **up to \$25,000** to each successful proposal through the USGS 104(b) grants program. Applicants need to provide a 2:1 match in non-federal funds. All indirect costs (F&A) must be waived, but can be counted as match. Salaries, benefits, and other project-related expenses may also be counted as match. (For example, a project costing \$75,000 could apply for \$25,000 from the USGS 104(b) grants program and obtain a 2:1 match through the PI's institution and waived indirect costs for the remaining \$50,000.)

Timing: Grants will be awarded to support one-year projects. Longer projects must be divided into discrete, one-year proposals with distinct deliverables. The project year extends from March 1, 2015 to February 29, 2016. Project extensions will not be granted for FY 2015.

Format: Pre-proposals must be submitted in Word format, be single-spaced in 10-pt Arial font, and cannot exceed one page. The pre-proposal should briefly explain the project objectives, methods, and expected outcomes, and also list the project personnel. Where appropriate, pre-proposals should include extension/outreach efforts. Provide up to a one-sentence description of expertise of team members. However, budget information and detailed investigator qualifications are not necessary.

Deadline: Pre-proposals must be submitted to water@okstate.edu before midnight **July 31, 2014**.

***E. coli* as an indicator of water quality**

(by Dr. Josh Payne, Area Animal Waste Management Specialist)

Escherichia coli, often referred to as *E. coli*, are common bacteria found widely in nature including the gastrointestinal tracts of humans and warm-blooded animals. Many harmless strains of *E. coli* exist and are essential components of a healthy digestive tract; however, some strains can be pathogenic causing intestinal and urinary tract infections in both humans and animals. For example, *E. coli* O157:H7 produces a powerful toxin capable of causing such illnesses.

If pathogenic bacteria are present in water, they can pose a human health risk. The presence and level of certain bacteria in water bodies are a common indicator of water quality. Since it is not feasible for state agencies to test water bodies for the presence of every possible pathogen, *E. coli* is commonly tested as an “indicator organism.” The presence of *E. coli* in water indicates fecal contamination, which correlates to an increased risk that other pathogens are present. These other pathogens may include *Salmonella*, *Streptococci*, *Cryptosporidium*, *Giardia*, *Enterovirus*, etc. If high levels of indicator bacteria, such as *E. coli*, are found in recreational waters, these areas may be temporarily closed to the public until deemed safe. Sources of fecal contamination may include wildlife, pets, humans, livestock, poultry or other sources.

For additional information about *E. coli*, refer to OSU Factsheet “[E. coli: An Overview](#).”



(“Reflections” continued from page 1)

ens my optimism for the future of the Water Center and our collective ability to solve formidable challenges in water resources. Effective July 1, Dr. Tom Coon will assume the post of Vice President, Dean and Director of DASNR (more [here](#)). Dr. Coon serves currently as Director of Extension and professor in the Department of Fisheries and Wildlife at Michigan State University.

So, what an exciting period to work on behalf of the state’s water resources! I know that you join me in my enthusiasm and confidence in the Water Center to provide leadership and resources to conduct mission-driven research and deliver science-based information on water resources to benefit Oklahomans.

(“Introduction” continued from page 2)

other Water Center directors. Specifically I will be creating workshops or mini-symposia on some of the critical water topics in Oklahoma **to highlight the recent research and extension efforts in the region and also explore future research and extension possibilities** that will maintain and protect water supplies.

Theodore Roosevelt once said “Far and away the best prize that life has to offer is the chance to work hard at work worth doing”. In our attempt to maintain sustainable water supplies with a quality that supports their intended uses, **we, as water researchers and extension professionals, are working hard at work worth doing!** I welcome your input and feedback on programs provided through the Oklahoma Water Resources Center and can’t wait to work with you as we address Oklahoma’s current and future water issues.

Upcoming Events

2014 Arkansas Water Resources Center Annual Research and Watershed Conference in Fayetteville, AR; July 15-16

“Watersheds, Wicked Problems and Water Words” is the theme for this year’s conference.

2014 Oklahoma Irrigation Conference in Fort Cobb, OK; August 19

The conference will focus on water and irrigation issues facing crop production in Oklahoma.

2014 Governor’s Water Conference & Research Symposium in Oklahoma City, OK; October 22-23

More information about these events and others is available at <http://water.okstate.edu>.



OKLAHOMA WATER RESOURCES CENTER

WWWeb Updates

- ◇ The RFP and guidelines for proposals is at <http://water.okstate.edu/programs/owrri/grants>.
- ◇ There’s an easy way to keep current on water.okstate.edu updates: Subscribe to the RSS feed at <http://water.okstate.edu/updates/updates-collection/RSS>.
- ◇ New videos go online weekly. out our [video page](#) for some new videos discussing pond management.
- ◇ The newest Extension publications are linked at <http://water.okstate.edu/programs/extension/extensionpublications>.

Connect



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