

“The Value of Water”

Arkansas Water Resources Center Annual Water Conference
Fayetteville Town Center, Fayetteville, AR
July 23-24, 2018

Monday July 23

Check-in, Coffee, Juice, Pastries
7:00 – 8:30

Session 1: What is the Value of Water?
8:30 – 9:55

- 8:30 Conference Welcome and Introduction
Brian Haggard, Arkansas Water Resources Center, University of Arkansas Department of Biological and Agricultural Engineering
- 8:40 The Value of Industry to the Community and Water Systems
Heath Ward, Springdale Water Utilities
- 9:05 Raising the World’s Expectations for How Much Good Food Can Do
Jamie Burr, Tyson Foods
- 9:30 TBA
Debbie Moreland, Arkansas Association of Conservation Districts

Networking Break
9:55 – 10:25

Session 2: Microbial Response to Water Quality
10:25 – 11:40

- 10:25 Satellite Remote Sensing of Algal Blooms in the Southcentral USA
Abubakarr Mansaray, Oklahoma State University Department of Environmental Science
- 10:40 The Role of Morphometry and Hydrology in Promoting Eutrophication and Harmful Algal Blooms in Reservoirs
Reed Green, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 10:55 Interaction between Lead and Biofilm in Drinking Water Distribution Systems
Kaleb Belcher, University of Arkansas Department of Civil Engineering
- 11:10 How the Long-Term Concentrated Poultry Feeding Operations Influence the Microbial Community at the Bottom Sediments in the Constructed Wetland?
Changyoon Jeong, Louisiana State University Ag Center
- 11:25 Impacts and Implications of Wildlife on Water Quality Management
Kevin Wagner, Oklahoma Water Resources Center

Lunch (provided) and Poster Session 11:45 – 1:45

Session 3: Ecosystem Services 1:45 – 2:45

- 1:45 Restoring America's Greatest River: Collaborative Conservation on the Lower Mississippi
Angeline J. Rodgers, US Fish & Wildlife Service/Lower Mississippi River Conservation Committee
- 2:00 Proposed Nutrient Trading Regulations for Arkansas: Innovation in the Marketplace or Creating Loopholes for Polluters?
Teresa Turk, National Oceanic and Atmospheric Administration, retired
- 2:15 Landuse Effects on Surface Infiltration in the Lower Mississippi River Valley
Rebecca Anderson, University of Arkansas Department of Geosciences
- 2:30 The Stormwater Benefits of High-Performance Urban Trees
Matthew Werle, GreenBlue Urban

Networking Break 2:45 – 3:15

Session 4: Water Quality in the Buffalo River Watershed Part I 3:15 – 4:30

- 3:15 Preliminary Study Update: A Comparison of Nutrient Water Quality in the Buffalo River Upstream and Downstream of Big Creek
Billy Justus, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 3:30 Stable Isotope and Geochemical Characterization of Nutrient Sources in the Big Creek Watershed of Northwest Arkansas
Kelly Sokolosky, University of Arkansas Department of Geosciences
- 3:45 The Buffalo River, Karst, and CAFOs
Chuck Bitting, National Park Service
- 4:00 What's in the water? Results from *E. coli* investigations at sampling sites in close proximity to C&H Hog operation, Newton Co Arkansas
Carol Bitting, Karst Hydrogeology of the Buffalo National River
- 4:15 Overview of Buffalo National River's Continuous Dissolved Oxygen Monitoring Program
Ashley Rodman, National Park Service
- 7:00 Evening Social at Marley's Pizzeria

Tuesday July 24

Check-in, Coffee, Juice, Pastries

7:45

Session 5: Water Quality in the Buffalo River Watershed Part II

8:30 – 9:30

- 8:30 Preliminary Study Update: An Evaluation of Continuous Dissolved-Oxygen Variability for Boston Mountain Streams
Luke Driver, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 8:45 Preliminary Study Update: Mill Creek (Newton Co.) Microbial Source Tracking Study
Billy Justus, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 9:00 The Role of Karst Groundwater in Big Creek Basin, a Major Tributary of the Buffalo National River, and it's Relation to Tourism
Van Brahana, University of Arkansas Department of Geosciences, retired
- 9:15 History of Filamentous Algae in the Buffalo River
Nathan Wentz, Arkansas Department of Environmental Quality

Break

9:30 – 9:45

Session 6: Water Needs in Agriculture

9:45 – 10:45

- 9:45 Reducing Uncertainty in Estimates of Irrigation Water-Use
Drew Westerman, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 10:00 Tailwater Recovery Systems in the Cache River Critical Groundwater Area: Preliminary Data Set on Herbicide Concentrations
Cammy D. Willett, University of Arkansas Department of Crop, Soil, and Environmental Sciences
- 10:15 Factors Influencing the Adoption of Irrigation Measurement Tools in the Arkansas Delta
Robert Rosene, University of Arkansas Department of Agricultural Economics and Agribusiness
- 10:30 Field measurements of wave-induced erosion of irrigation reservoir levees
Daniel G. Wren, US Department of Agriculture – Agricultural Research Service

Break

10:45-11:00

Session 7: Aquifer Water Quality and Quantity

11:00 – 12:00

- 11:00 Are Regional Groundwater-Flow Models Useful at Local Scales? An Example from the Ozark Plateaus Regional Aquifer Study
Brian R. Clark, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 11:15 Evaluating the hydrogeologic framework of the Mississippi Alluvial Plain using geophysical methods
Drew Westerman, US Geological Survey Lower Mississippi-Gulf Water Science Center

- 11:30 Machine-learning models to map specific conductance and chloride in the Mississippi Embayment regional aquifer system
Katherine J. Knierim, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 11:45 TBA
TBA, TBA

Lunch (provided)
12:00 – 1:15

Symposium for the Arkansas Chapter of the American Water Resources Association

Session 8: Value of Citizen Science Programs in Watershed Water-Quality Management Part I

1:15 – 2:40

- 1:15 Special Session Introduction
Reed Green, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 1:20 Beaver Secchi Day
Matthew Rich, Beaver Water District
- 1:40 LakeSmart and StreamSmart Programs
Angela Danovi, Ozarks Water Watch
- 2:00 Arkansas Master Naturalists – Statewide Volunteer Monitoring Efforts
Ken Leonard, Arkansas Master Naturalist
- 2:20 CyanoHAB Monitoring Techniques
Brie Olsen, Arkansas Department of Environmental Quality

Networking Break
2:40 – 3:00

Session 9: Value of Citizen Science Programs in Watershed Water-Quality Management Part II

3:00 – 4:05

- 3:00 National Scale -- North American Lake Management Society's Secchi Dip-In & GLEON's Lake Observer App
Reed Green, US Geological Survey Lower Mississippi-Gulf Water Science Center
- 3:20 Source Water Collaborative Tool Box
Darcia Routh, Arkansas Department of Environmental Quality
- 3:40 Forestry and Drinking Water
Bob Morgan, Arkansas Forests and Drinking Water
- 4:00 Final Words
Reed Green, US Geological Survey Lower Mississippi-Gulf Water Science Center

Conference Adjourns, AR-AWRA Business Meeting
4:05