

2023 Tennessee AWRA SYMPOSIUM

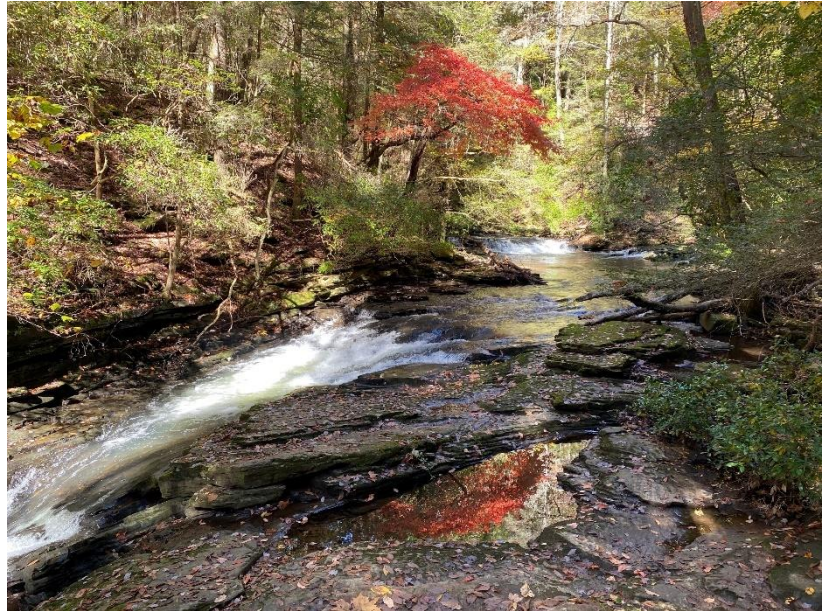
PROTECTING OUR WATER RESOURCES DURING EXPANSION

And many more water resource topics

Montgomery Bell State Park
April 12-14, 2023

Symposium Chair

Daniel Saint P.E., TN Section President
Tennessee Valley Authority, River
Management



Mystery photo courtesy of R. Deedee Kathman



Keynote Speaker on Wednesday, April 12th

Greater Nashville Regional Council

"Growth and Development Trends and the Implications of Regional Forecasts on Infrastructure and Environmental Quality"



Keynote Speaker on Thursday, April 13th

Brad Collett, Professor and Director, Tennessee RiverLine

"Tennessee RiverLine: Inspiring Resource Stewardship on North America's Next Great Regional Trail System"

Wednesday, April 12th	2023 TN AWRA SYMPOSIUM AGENDA	
7:00 am - 11:30 am	Exhibitor check-in/set-up	
8:00 am	Registration (Exhibitor Room)	
9:00 am	TVA presentation “Confronting Vegetation Management Challenges in TVA Reservoirs” Mid-session coffee break sponsored by KCI Technologies and NEXCOM	
12:00 pm	Lunch in Rooms A and B Luncheon Speaker: Greater Nashville Regional Council on the topic “Growth and Development Trends and the Implications of Regional Forecasts on Infrastructure and Environmental Quality”	
	Room A	Room B
	Water Supply and Contaminant Removal Moderator: Michael Hunt, Metro Water Services	Modeling and Data Management Moderator: Drew Westerman, USGS
1:30 pm	J. Sharkey “Water Use in the Tennessee Valley for 2020”	W. Peck “A Century of Migration of the Wolf River in Memphis
1:50 pm	C. Smugor “Potential of Electrochemical Oxidation for the Removal of Water Contaminants”	B. Waldron “Flood Trigger – Determining flood impacts in an urban/rural watershed using HEC-RAS and GIS in Shelby County, TN, toward developing an automated notification system”
2:10 pm	H. Newberry “Dissecting the Microbial Food Web in Anaerobic Wastewater Treatment Processes”	R. Reichenbacher “Integrating Databases for Improved 3-Dimensional Hydrostratigraphic Frameworks: A Case Study of the Mississippi Embayment
2:30 pm	G. Nail “Insurance Service Office recognition of Rural Lakes as Sources of Water for Firefighting”	G. Burnette “The Case for Teaching Data Management Principles to Environmental Students”
3:00 pm	Coffee Break in the Exhibit Room <i>sponsored by</i> Barge Design Solutions	
	Groundwater and Drinking Water Moderator: Scott Schoefernacker, U of M Caesar	Water Management and Emerging Technology Moderator: Wade Kress, USGS
3:30 pm	B. England “Quantifying Evaluating Disparities in Public Potable Water and Wastewater Systems using a Water Disparity Index”	R. Chuang “AloT EC Profiling and its Potential Application for Tennessee Water Resource Management”
3:50 pm	M. Salyers and E. Spann “Update Regarding the Tennessee Department of Environment and Conservation’s Division of Remediation’s Groundwater Protection Efforts for West Tennessee”	S. Bray “Advancements in Flocculant Based Technologies to Achieve Optimal Effectiveness and Efficiency in the Field”
4:10 pm	D. Sharafoddinzadeh “Investigating the effects of sand characteristics on contaminant adsorption patterns”	A. Mindermann “Leveraging Remote Monitoring Technology Advancements to Dynamically Monitor Water Resources”
4:30 pm	M. Yaeger “From Soil to Aquifer (Maybe): Understanding Water Movement, Storage, and Recharge Potential in West Tennessee Cropland”	P. Li “Watershed-based Environmental Justice in Tennessee – A GIS Approach”
6:00 pm	Dinner in Rooms A and B Social Hour <i>sponsored by</i> Van Essen Instruments and Stevens Water Monitoring Systems	
6:30-8:00 pm	Poster Session in Rooms A and B: All Poster Presenters will be available to answer questions about their displayed poster.	

Thursday, April 13th		
7:30 am	Coffee and Biscuits in Exhibit Room <i>sponsored by</i> Tennessee Water Resources Research Center	
	Room A	Room B
	Climate Change and Hydrology Moderator: Paul Davis, PE	Hydrology and Karst Watersheds Moderator: Shannon Williams, USGS
8:30 am	L. Davis “New perspectives on extreme floods on the French Broad River, Tennessee, derived from old floods	I. Luffman “Karst Water Resources at Rocky Mount Historic Site”
8:50 am.	R. Lombardi “Paleofloods provide insight into extreme flood risk on the Lower Tennessee River”	B. Miller “The karst hydrology of the Little Sequatchie watershed of southern Tennessee”
9:10 am	J. Schwartz “Examining Shifts in Biochemical Processes from Long-term Monitoring of Water Quality in the Great Smoky Mountains National Park”	A. Hourigan “Improving the Accuracy of Source Water Protection Areas by Mapping Karst Groundwater Flow with Fluorescent Dye Tracing”
9:30 am	J. Song “Changes in the Hydrologic Cycle from Pasture Conversion of Cool- to Warm-season Grasses in the United States Fescue Belt”	J. Parham “Duck River High Definition Stream Surveys: A Summary of 10 completed Projects since 2016”

10:00 am	Coffee Break in Exhibit Room <i>sponsored by</i> Tennessee Tech University Water Center	
	Stormwater Runoff and Controls Moderator: Ingrid Luffman, ETSU	Water Quality Moderator: Angel Fowler, RES
10:30 am	J. Bathi "Undergraduate Research Experience in Establishing Experimental Set-Up"	M. Johnson "A Proposal for a Watershed Prioritization Methodology for Community Riparian Restoration in Tennessee"
10:50 am	L. Wright "The Behavior of Metallic Engineered Nanoparticles in Stormwater Runoff"	J. Schwartz "Air Deposition of Microplastics in High Elevations of the Great Smoky Mountains NP"
11:10 am	M. Miller "A New ASTM Standard for Determining Trash and Debris Capture Performance by SCMs"	R. Jackwood "River Monitoring Network: Predicting Real-Time <i>Escherichia coli</i> Densities at River Access Points in Middle Tennessee"
11:30 am	A. Ludwig "Residential Rain Gardens to Protect Water Quality: Applications and Tools"	C. Swanson "Microbiome-Scale Identification of Potential Microbial biomarkers in Streams Impacted by Urbanization"
12:00 pm	Lunch in Rooms A&B Keynote Speaker: Brad Collett from UTK "Tennessee RiverLine: Inspiring Resource Stewardship on North America's Next Great Regional Trail System"	
	Stormwater Management Moderator: Brandy Hayes, RES	Nutrients Moderator: JR Rigby, USGS
1:30 pm	I. Simpson "Investigating temporal trends in urban stormwater quality to improve modeling and management"	J. Ayers "Effects of Nutrient Pollution and Urbanization on Diel Cycles and Stream Metabolism in Two Middle TN Streams"
1:50 pm	A. Ward "MWS Stormwater Master Plan"	R. Brown "Nutrient delivery, retention, and processing in a reconnected floodplain forest: Implications for greenhouse gas flux"
2:10 pm	M. Hunt "Tracking and Quantifying the Benefits of Nashville's Stormwater Control Measures in a Watershed-based Framework"	J. Murdock "Restoration design decisions can produce ecosystem service trade-offs in agricultural wetland restorations"
2:30 p.m	J. Hathaway "Smart Stormwater Technologies for Watershed Management"	E. Fidan "Patterns and drivers of nutrient trends in flood-impacted surface waters"
3:00 pm	Coffee Break in the Exhibit Room <i>sponsored by</i> Stantec, Inc.	
	Flood Mitigation and Management Moderator: Adrian Ward, Barge Designs	Algae and Aquatic Vegetation Moderator: Daniel Saint, TVA
3:30 pm	C. Foster & A.Thomas "When Dry Creek Gets Wet - Flood Mitigation at Dry Creek WRF"	M. Huddleston "Risks of Harmful Algal Blooms to Wildlife"
3:50 pm	B. Register "Proactive Management of Flooding with Innovative Technology for Every Budget"	S. Alpert & C. Myers "Success of Hydrogen Peroxide for Algal Management"
4:10 pm	M. Young "Evaluating Flood Hazards in a Rural TN Watershed through a Community-University Partnership"	J. Lebkeucher "Measurements of the Trophic State of Littoral Sites in Tennessee Reservoirs"
4:30 pm	M. Bhuyian "A West Tennessee Perspective on the Waverly Flood of 2021"	M. Boyington "Floating Aquatic Vegetation on Wheeler Reservoir, Alabama (Field Campaign Results)"
5:00 pm	Vendor Equipment Demonstration Session at the dock behind the hotel restaurant	
6:00 pm	Dinner in Rooms A&B followed by TN AWRA Business Meeting and Poster Session Awards Social Hour <i>sponsored by</i> Eureka Water Probes and CEC, Inc	

Friday, April 14th		
7:30 am	Coffee and Biscuits in Exhibit Room sponsored by RES	
	Stream Restoration	Moderator: Ken Barry, S&ME
8:30	A. Brais "eDNA Sampling for the Streamside Salamander (<i>A. barbouri</i>) at a Tennessee Mitigation Site"	
8:50 am	Simon "Regional Analysis of Trends in Vertical Adjustment, Bank Erosion and Effectiveness of Erosion-Control Measures: Returning to the Scene in West Tennessee 40-Years Later"	
9:10 am.	A. Spiller "Restoring Urban Streams Reevaluating Measures of Success"	
9:30 am	A. Hangul "Aquatic Organism Passage (AOP) Guidance"	
10:00 am	Coffee Break in Exhibit Room sponsored by Stevens Water Monitoring Systems	
10:30 am – 11:30 am	Stream Quantification Tool Update by John Schwartz followed by Q & A Session	
Conference Adjourns		