

2022 Tennessee Water Resources Symposium

Presented by the TNAWRA

April 20-21, 2022

Virtual Meeting

Registration and Preliminary Agenda

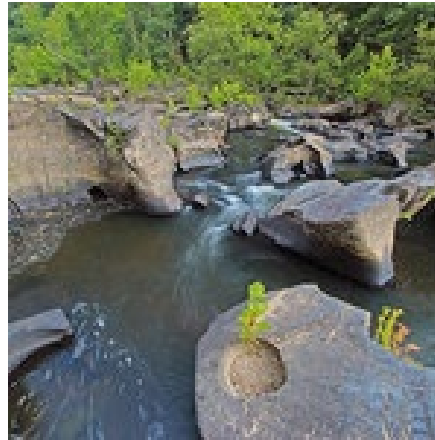


Photo courtesy of Alan Cressler, USGS



Hosted by

Tennessee Section of the American Water Resources Association

Planning Committee

- Ken Barry, S&ME, Inc.
- David Blackwood, West Tennessee River Basin Authority
- Mary Bruce, Nashville Metro Water Services
- Richard Cochran, TDEC, Division of Water Resources
- Paul Davis, Cumberland River Compact Board of Directors
- Jennifer Dodd, TNAWRA Past President/TDEC, Division of Water Resources
- Alfred Kalyanapu, Tennessee Technological University
- Deedee Kathman, *ref.*
- Tom Lawrence, TLE, PLLC
- Andrea Ludwig, University of Tennessee
- Ingrid Luffman, TNAWRA President/ETSU, Geosciences
- Regan McGahen, TNAWRA Treasurer/TDEC, Division of Water Resources
- Daniel Saint, TNAWRA President-Elect/Tennessee Valley Authority
- Scott Schoefnacker, CAESER
- John Schwartz, UT, Civil & Environmental Engineering
- Dana Waits, Wood, PLC
- Forbes Walker, UT, Biosystems Engineering & Soil Sciences
- Sherry Wang, *ref.*
- Adrian Ward, Barge Design Solutions, Inc.
- Lori Weir, TNAWRA Membership Chairperson/USGS
- Mike Williams, TNAWRA Secretary/Stantec

ATTN Engineers: Opportunity for PDHs/CEUs

WEDNESDAY KEYNOTE SPEAKER:

[T. Andrew Joyner, State Climatologist](#)
East Tennessee State University



THURSDAY KEYNOTE SPEAKER:

[Charles B. Sims](#)
University of Tennessee, Knoxville



Symposium Chair

Ingrid Luffman
ETSU, Geosciences
Tel: (423) 439-7551

2022 Tennessee Water Resources Symposium



Symposium Dates:

April 20-21, 2022

Pre-registration for Symposium:

Before April 16, 2022

Both Sponsoring and Exhibiting

- In-Situ

Exhibitors

- OTT Hydromet
- Trutta Environmental Solutions

Sponsors

- American Society of Civil Engineers, Tennessee Section/EWRI
- TTU, Center for the Management, Utilization & Protection of Water Resources



Apr 20	2022 TWRS AGENDA		
	Room A	Room B	Room C
8:00 a.m.	Welcome and Announcements		
8:15 a.m.	Wednesday Keynote Speaker (Room A): “The Tennessee Climate Office: A Statewide Hub for Climate Data & Services,” by T. Andrew Joyner, East Tennessee State University, Tennessee State Climatologist		
8:45 a.m.	Break		
	Floods & Hydrologic Modeling Moderator: Patrick McMahon, CEC, Inc.	Water Quality & Analyses Moderator: Rodney Knight, USGS	Microbial Assemblages Moderator: Qiang He, UTK
9:00 a.m.	Simulation of Flooding of Trace Creek in Humphreys County, Tennessee. <i>J. Brackins</i>	Do Harmful Algal Blooms Contribute to Mussel Die-Offs in the Clinch River, Tennessee and Virginia? <i>T. Byl</i>	Microbiological Linkages between Drinking Water and Source Water. <i>C. Swanson</i>
9:30 a.m.	Communicating Flood Risk with ArcGIS Story Maps Using the Trace Creek Watershed as a Case Study. <i>M. Arms</i>	Periphyton Characteristics are an Accurate Indicator of the Trophic Status of a Shallow Lake in Middle Tennessee. <i>J. Lebkuecher</i>	Impact of Urbanization on the Aquatic Microbiome in an Impaired Stream. <i>C. Cianciolo</i>
10:00 a.m.	Comparing Area Precipitation Interpolation Methods from Point Measurements for 5 basins in the Tennessee Valley. <i>N. Barber</i>	Land Use and Water Quality Trends in Coastal Alabama. <i>A. Arnold</i>	Microbial Populations Linked to Syntrophic Ethanol Conversion in Anaerobic Wastewater Treatment Processes. <i>H. Newberry</i>
10:30 a.m.	Break		
	Floodplain Modeling & Management Moderator: Ken Barry, S&ME, Inc.	Watershed Management Moderator: John Schwartz, UTK	Groundwater Studies, Memphis Moderator: Scott Schoefernacker, CAESER
10:45 a.m.	Improved Remote-Sensing Imagery Techniques to Identify Riparian Corridor Characteristics in Headwater Streams in West TN. <i>B. Tok</i>	OASIS and USGS Ecological-Flow Modeling for a Decision-Support System for Water management and Regulatory Assessments. <i>S. Qualls-Hickey</i>	Comparison of AEM and Electrical Resistivity Data to Identify Hydrogeologic Windows in UCCU in Shelby County, Tennessee. <i>R. Hasan</i>
11:15 a.m.	Large-Scale Hydraulic Modeling of the Tennessee River Basin. <i>J. Schlamp</i>	A Method for Mapping Environmental Justice Factors by Watershed. <i>M. Moffitt</i>	Groundwater Flow and Vulnerability in Germantown and Collierville, Tennessee. <i>D. Hainje</i>
11:45 a.m.	A River Runs Through It: I-24/I-75 Interchange Hydraulics. <i>M. Perkins</i>	Western Tennessee Floodplain Explorer - A Decision Support Tool to Maximize Floodplain Conservation Benefits. <i>S. Morris</i>	Investigation of Modern Water Leakage into the Semi-confined Memphis Aquifer at the Mallory Wellfield, Memphis, Tennessee. <i>H. Mullenax</i>
12:15 p.m.	Lunch Break		
1:30 p.m.-3:30 p.m.	Poster Session--in Poster Room		
April 21 8:15 a.m.	Thursday Keynote Speaker (Rooms A): “Climate Change Policy: A Shallow Dive into a Deep Challenge,” by Dr. Charles Sims, UT-Knoxville		
8:45 a.m.	Break		
	Stormwater Management Moderator: Mary Bruce, Metro Water Services	Watershed Planning & Assessment Moderator: Tom Lawrence, TLE, PLLC	GW/SW Management Moderator: Daniel Saint, TVA
9:00 a.m.	Advances in Green Infrastructure Designs Using High-Flow Biofiltration Technology for Stormwater Quality Treatment. <i>M. Miller</i>	Chattahoochee River High-Definition Stream Survey (HDSS): Delivering Powerful Data for Water Resource Management. <i>B. Connell</i>	Particle Tracking Analysis of Fish Return Outfall at Sequoyah Nuclear Plant. <i>J. Brazille</i>
9:30 a.m.	Hydraulic Modeling of Regenerative Stormwater Conveyances. <i>G. Palino</i>	Mud Creek Stream Mitigation Project: A Case Study of Watershed Restoration. <i>A. Brais</i>	Floating Aquatic Vegetation on Wheeler Reservoir, Alabama. <i>M. Boyington</i>
10:00 a.m.	A Stormwater Master Plan in Action. <i>T. Cropp</i>	Evolving Capabilities, Standards, and Expectations for Environmental Software. <i>G. Burnette</i>	Updated Map of Semi-confined Conditions in the Memphis Aquifer, Shelby County, TN. <i>D. Larsen</i>
10:30 a.m.	Break		
10:45 a.m.	Responding to a Changing Climate-Panel Discussion		
	Moderator: Ingrid Luffman, ETSU		
	T. Andrew Joyner, TN State Climatologist, East Tennessee State University	Charles B. Sims, Director, Energy and Environment Program, Baker Center for Public Policy, UTK	
	Andy Sanders, Germantown City Engineer		
	Preston Elliott, Environmental Bureau Chief, TDOT		
12:15 p.m.	TNAWRA Business Meeting		

2022 Tennessee Water Resources Symposium Pre-Registration Form

(Online registration is available at: <https://www.formstack.com/forms/TNAWRA-registration>)

Title _____ Mr., Ms., Dr. (circle one)
 Name _____
 What you prefer to be called _____
 Title _____
 Organization _____
 Address _____
 City, State, Zip _____
 Daytime Phone _____
 Email Address _____

Additional registrants if at the same address. If addresses differ or if more space is needed, please use a separate piece of paper.

2. Name: _____
 Email: _____
 Phone: _____

3. Name: _____
 Email: _____
 Phone: _____

4. Name: _____
 Email: _____
 Phone: _____

5. Name: _____
 Email: _____
 Phone: _____

6. Name: _____
 Email: _____
 Phone: _____

7. Name: _____
 Email: _____
 Phone: _____

8. Name: _____
 Email: _____
 Phone: _____

9. Name: _____
 Email: _____
 Phone: _____

10. Name: _____
 Email: _____
 Phone: _____

Type of Registration	Cost per person	Number of registrants	Subtotal
Regular Registration	\$100**		
Speaker & Moderator	\$100**		
Professional Poster Presenter	\$100**		
Sub Total			
Discount of \$10 per person (if more than 10 register)			
Student Registration*	\$25*		
Student Poster Registration*	\$25*		
Grand Total			

Send Registrations to:
 Lori Weir, TNAWRA
 640 Grassmere Park #100
 Nashville, TN 37211
 Phone: (615) 837-4720
 FAX: (615) 837-4783
 Email: lrweir@usgs.gov

*Student sponsorships for registration fees are available again this year. If you are a student and would like to be considered for sponsorship, please write "Student Sponsorship" on this form by your name.

Please circle one: Visa MasterCard American Express Discover
 Credit Card # _____ Exp. _____

CVV Number (last 3 digits on back V/MC; 4 digits on front of AmEx) _____

Signature _____ Billing address zip code of credit card statement _____

Please print name on card (if different from above): _____

**Pre-registration fee is \$100. Please register by April 16, 2022. Student registration is \$25. Make check payable to "Tennessee AWRA" or "TNAWRA." Visa, MasterCard, American Express, and Discover are also accepted.



Poster Session

The Poster Session will be virtual on Wednesday, April 20. The Poster Judges will be able to judge posters starting April 18 online. Poster judging will then continue on April 20 from 1:30 p.m. through 3:30 p.m. virtually. To encourage student participation, TN Section AWRA will present awards for the best student posters. If you are not affiliated with a university or a student poster presenter and would like to be a judge, please send email to:

Andrea Ludwig aludwig@utk.edu
Daniel Saint dpsaint@tva.gov or
Dana Waits dana.waits@woodplc.com

For a listing of this year's poster presenters, please visit:
<https://tnawra.org/poster-presenters>
Poster presenters, please visit the above URL to obtain details about format and how to display your poster and presentation.



Attn: ASCE Members

The ASCE EWRI Tennessee Chapter is again a sponsor of the TN AWRA Water Resources Symposium. This year's agenda identifies an "ASCE EWRI Track" that might be of particular interest to many civil engineers. Earn up to 10 Professional Development Hours by participating in these activities:

- Wednesday Keynote address by T. Andrew Joyner, East Tennessee State University, Tennessee State Climatologist
- Thursday Keynote address by Charles B. Sims, UT, Knoxville
- Break-out sessions with presentations on flood issues, stormwater quality, environmental sustainability, and more.
- Poster session

Of course, with your \$100 registration you can attend any of the sessions offered and come and go as you need. Take a look. We hope you can join us and keep yourself at the forefront of water resource issues in Tennessee.

