

2022 UCOWR/NIWR Annual Water Resources Conference

Final Program

(only presenters are listed; co-authors are listed in the Event App Program and abstracts are available for viewing)

- Blue = Special Session
- Orange = Interactive Session (Panel, Workshop, Participatory)
- Gray = General Technical Session

* = student involved in the oral student presentation competition. Scan the QR code to the right to access the evaluation form or [click here](#).



Tuesday, June 14

- 7:30 AM - 3:30 PM** **Registration (First Floor)**
- 7:30 AM - 8:30 AM** **Breakfast (Regency C)**
- 8:30 AM - 9:50 AM** **Plenary Session I: Kathie Dello, State Climatologist NC; Scott Curtis, The Citadel (Regency DEF) (Welcome: Bridget Guerrero, Kevin Wagner, Michael O'Driscoll; Moderator: Michael O'Driscoll)**
- 9:50 AM - 10:10 AM** **Break: coffee available (Regency C)**

10:10 - 11:40 AM

Concurrent Technical Sessions I (90 minutes) (Moderator)		
Session 1 Redbud BC	Water, Irrigated Agriculture, and Sustaining Rural Communities in the Southern Ogallala Region (Donna McCallister)	
10:10 AM	Sustainability of Water Resources in the Southern High Plains: A Case Study of the Dockum Aquifer	Donna McCallister
10:25 AM	A Spatiotemporal Economic Analysis of Crop Production in the Texas High Plains	Lal Almas
10:40 AM	Producer-initiated Groundwater Conservation in Northwest Kansas	Bridget Guerrero
10:55 AM	Panel Discussion Following Talks	
Session 2 Redbud A	Water Resource Modeling (Yining Bai)	
10:10 AM	Updating the Historical Records of the Carrizo-Wilcox Aquifer Groundwater Availability Model for Improved Model Predictions	*Michael Ramos
10:25 AM	Assessment of System Responses in Surface Water-Groundwater Interactions using SWAT-MODFLOW Modeling: Lower Kobo Valley, Ethiopia	Kedir Bushira
10:40 AM	Methodology for Sustainable River Mining in Alluvial Rivers: A Case Study using Puerto Rico Guidelines	Walter Silva-Araya
10:55 AM	Water Reuse System Design by Reusing Existing Pipeline: An Analysis with WaterCAD Model	Hafiz Ahmad
11:10 AM	Modular Convection-Enhanced Evaporation (CEE) System for Brine Management	Natasha Wright
Session 3 Dogwood	Agricultural Conservation Practices and Water Quality (Ibrahim Busari)	
10:10 AM	Effect of Cover Crops on Nitrate Leaching in a Continuous Corn-Soybean Rotation in Southern Illinois	*Ashani Thilakarathne
10:25 AM	Impacts of Cover Crops on Nutrient Loading in Streams on a Paired Watershed Scale	*Steven Bachleda

TUESDAY

10:40 AM	Integrating Watershed Modeling and Paleolimnological Techniques to Understand the Role of Geographically Isolated Wetlands in Mitigating Non-point Source Pollution in Agricultural Landscapes	Frances O'Donnell
10:55 AM	Virtual Fencing for Improved Grazingland Water Quality	Kevin Wagner
11:10 AM	Quantifying Conservation Practice Effectiveness Statewide: Balancing Variability with Usability	Katy Mazer
11:25 AM	Cover Crops, Soil Moisture, and Precipitation Affect Nutrient Loss of Spring Applied Phosphorus Fertilizer	*Harpreet Kaur
Session 4 Magnolia	Protecting Human Health Through Water Resources Management (Lucas Gregory & Anna Gitter)	
10:10 AM	There's Something in the Water: Mental and Physical Health Consequences Associated with Tap Water Contamination in Six Nations of the Grand River First Nation	Sarah Duignan
10:25 AM	SmartPath: A Grower Directed Tool Box to Protect Human Health Through Advanced Irrigation Water Quality Management	Lucas Gregory
10:40 AM	TBD	
10:55 AM	QMRA of Recreational Beaches Impacted by Dog, Gull, and Human Fecal Sources	Anna Gitter
11:10 AM	The Role of Environmental Buffers in Potable Water Reuse	Olya Keen
11:25 AM	Panel Discussion	
Session 5 Gardenia	Engaging Stakeholders in Water Resource Management (Kim Morganello)	
10:10 AM	Accomplishing Common Goals through a Regional Stormwater Partnership	Regina Guyer & Marissa Meltzer
10:25 AM	Staggered Volunteering: An Approach to Managing Public Participation in Water Quality Restoration During a Pandemic	Jake Mowrer
10:40 AM	Engaging the Earth Science Community for Developing a River Morphology Information System (RIMORPHIS)	Amanda Cox
10:55 AM	Stakeholder Engagement in Watershed Management: Lessons from Two Texas Watersheds	Evgenia Spears
11:10 AM	On-campus Stream Restoration as Interdisciplinary Senior Capstone	Chelsea Peters
11:25 AM	A Collaborative Research Framework for Co-Producing Knowledge to Enhance Climate Resilience	Loretta Singletary
11:50 AM - 12:50 PM	UCOWR Delegate Luncheon (Regency C). Must be pre-registered. Bring ticket from registration packet. Everyone else lunch on their own.	
11:50 AM - 12:50 PM	Friends of Reedy River Field Trip, max = 20 (60 minutes) Must be pre-registered to attend. (Meet near Registration desk)	
1:00 PM - 2:15 PM	Water Monitoring Demonstration Workshop Hosted by In-Situ (Meet near Registration desk)	
1:00 PM - 2:15 PM	Concurrent Technical Sessions II (75 minutes) (Moderator)	
Session 6 Redbud BC	Assessing and Managing Water through Climate Extremes (Ginger Paige)	
1:00 PM	Is There a New Era of Flood Risk? A Rapid Assessment and Improved Perspective on a County-wide Scale	JC Hollingsworth

1:15 PM	Barriers and Opportunities for Ecosystem-based Adaptation to Climate Change Impacts in the Cache River Watershed of Southern Illinois	Kofi Akamani
1:30 PM	Integrating Data Sets to Understand Climate Change Vulnerability for Aquatic Fauna in West Virginia Watersheds	*Joseph Molina
1:45 PM	Eclipsing Problems Embedded in Composite Drought Indices	Mohammad Hadi Bazrkar
2:00 PM	Extreme Flooding: A Non-Stationary Hydrologic Assessment of Seasonal Floods in South Carolina	*Ryne Phillips
Session 7 Dogwood	Citizen Science in SE Waters: Common Challenges, Unique Approaches (Rachel McGuire)	
1:00 PM	Introduction & Panel Overview	
1:05 PM	Mississippi Water Stewards: Building Capacity for Watershed Protection through Community-based Monitoring	Beth Baker
1:15 PM	Watershed Watch in Kentucky: A Case-Study of a Nonprofit-Based Community Science Organization	Steven Evans & Malissa McAlister
1:25 PM	Challenges, Growth, and Future Objectives of the South Carolina Adopt-a-Stream Program	Katie Callahan
1:35 PM	Georgia Adopt-a-Stream	Harold Harbert
1:45 PM	Addressing Reach, Recruitment, and Retention of Volunteer Water Quality Monitors with Alabama Water Watch	Rachel McGuire & Mona Dominguez
1:55 PM	Panel Discussion with Q&A	
Session 8 Magnolia	Lightning Talks (Bridget Guerrero)	
1:00 PM	A Vision for Building Trust and Reciprocity in Watershed-Scale Community-Based Science through Interconnected Science Participation Programs	Stephen Moysey
1:05 PM	Indigenous Communities' Prioritized Information and Data Needs to Enhance the Climate Resilience of Water Resources on Reservation Lands: A Participatory Research Approach in the Arid Southwestern U.S.	Loretta Singletary
1:10 PM	Factors Affecting United States Geological Survey Freshwater Irrigation Withdrawal Estimates in Utah	*Jason Manley
1:15 PM	Efficacy and Design of Saturated Riparian Buffers (SRBs) in Central Illinois	*Emma Eldridge
1:20 PM	A Comparison of the Denitrifying Capabilities of Bioreactors Comprised of Woodchips, Pine Bark, and Peanut Hulls Paired with Expanded Slate as a Phosphate Adsorbent at High Flow Rates	*Ann Marie Lindley
1:25 PM	Impacts of Flue Gas Desulfurization Gypsum Application on Surface Runoff Water Quality in Southern Illinois	Kevin Turnbow
1:30 PM	Using Remote Sensing Techniques to Identify Concentrated Pockets of Coal Ash within a Recreational Lake	Joni Backstrom
1:35 PM	Assessing Indicators of Soil Quality and Forest Productivity across a Chronosequence of Afforested Cropland in Cypress Creek National Wildlife Refuge	*Maggie Herrmann
1:40 PM	Question & Answer	

TUESDAY

Session 9 Gardenia	Water Resources Education (Chelsea Peters)	
1:00 PM	The Hybrid Training Model: Effective, In-Depth Water Resource Management Education	Kim Morganello
1:15 PM	Community Cloud Computing Services to Support Water Science Education and Research	Anthony Castronova
1:30 PM	Evaluating the Efficacy of Targeted Educational Interventions to Improve Residential Outdoor Water-Use Efficiency	*Rosa Garcia
1:45 PM	Direct Mailing Educational Campaign Impacts on the Adoption of Grazing Management Practices	Allen Berthold
2:00 PM	Innovating Water Conservation Strategies through North Carolina's Agricultural Water Resources Assistance Program (AgWRAP)	Sydney Mucha

2:15 PM - 2:35 PM

Break: snacks available (Regency C)

2:35 PM - 3:50 PM

Concurrent Technical Sessions III (75 minutes) (Moderator)		
Session 10 Redbud BC	Sustainable Irrigation Practices in Southern Agriculture (Drew Gholson)	
2:35 PM	Irrigation Best Management Practices: Influencing Factors in Arkansas, Louisiana, and Mississippi	Merri Day
2:50 PM	Role of Sponsored Conservation Programs on Adoption of Irrigation Water Best Management Practices in the Lower Mississippi River Basin	Nicolas Quintana
3:05 PM	Economic Value of Irrigation Water in Oklahoma Panhandle Counties	Lixia Lambert
3:20 PM	Impact of Low Energy Precision Application (LEPA) Adoption on Irrigation Decisions and Water Saving in High Plains Aquifer Kansas	Amer Al-Sudani
3:35 PM	TBD	Mary Love Tagert
Session 11 Dogwood	The Case for Watershed Based Planning to Reduce Pollution and Protect Surface Water Quality (Amy Scaroni)	
2:35 PM	Resources and Lessons Learned from the WBP Development Process	Kathryn Ellis
2:50 PM	Watershed Modeling to Improve Water Quality: Lessons Learned as a Professional Engineer	Debabrata Sahoo
3:05 PM	Quantifying Ecosystem Services to Aid in Watershed Management and Planning	*Lucas Clay
3:20 PM	A Road Map to Restoration: Community Driven Watershed Planning on Edisto Island, SC	Amy Scaroni
3:35 PM	An Adaptive Management Case Study of the May River Watershed Action Plan Implementation in Bluffton, SC	Kimberly Jones
Session 12 Magnolia	FACETS Project Overview and Farm-Forest Scale Analyses 1 (Michael Dukes)	
2:35 PM	Stakeholder-Driven Modeling in Support of Groundwater Sustainability: The Floridan Aquifer Collaborative Engagement for Sustainability (FACETS) Project	Wendy Graham
2:50 PM	Agronomic and Nitrogen Dynamics of a Corn-Carrot-Peanut Crop Rotation	Michael Dukes
3:05 PM	Large Scale Implementation of Soil Moisture Sensors in Georgia: What Did We Learn?	Wesley Porter

TUESDAY

3:20 PM	Quantifying Environmental and Economic Tradeoffs for Agricultural and Silvicultural Practices in the Floridan Aquifer Region	Nathan Reaver
Session 13 Gardenia	Southeastern U.S. Coastal Flooding: Part 1 (Vidya Samadi)	
2:35 PM	Assessing the Complex Processes that Drive Coastal Flooding in Northeastern South Carolina	Tom Williams
2:50 PM	Recent Trends in Sea-level Rise Vulnerability and Adaptation Modeling Methodologies	Janardan Mainali
3:05 PM	Flood Prediction Using an Artificial Recurrent Neural Network	*Rishav Karanjit
3:20 PM	Developing an Improved Compound Flood Modeling Using Fully Coupled, Distributed Hydrologic Model	*Ahad Tanim
3:35 PM	Compound Hazards in Coastal Regions of the Southeast USA in the Present and Climate Change Conditions	*Ramprasa Yaddanapudi

2:35 PM - 4:00 PM

Introduction to GIS Workshop (Crepe Myrtle) Led by the Clemson Center for Geospatial Technologies. Bring your laptop.

3:50 PM - 4:10 PM

Break: coffee available (Regency C)

4:10 PM - 5:10 PM

Concurrent Technical Sessions IV (60 minutes) (Moderator)		
Session 14 Redbud BC	Sustainable Irrigation Practices in Southern Agriculture: Panel Discussion (Nicolas Quintana)	
4:10 PM	Panelists: Ali Ajaz, Program Specialist, Texas Water Resources Institute, Texas A&M AgriLife Don Christy, Executive Director, Yazoo Mississippi Delta Joint Water Management District, Stoneville, MS Drew Gholson, Coordinator, National Center for Alluvial Aquifer Research Jason Krutz, Director, Mississippi Water Resources Research Institute, Mississippi State University Mary Love Tagert, Assistant Extension Professor, Mississippi State University Kevin Wagner, Director, Oklahoma Water Resources Center, Oklahoma State University	
Session 15 Dogwood	Challenges and Tools for Wastewater Treatment and Reuse (Udayakumar Sekaran)	
4:10 PM	Occurrence and Characteristics of Microplastics in a Wastewater Stabilization Pond and an Oxidation Ditch Wastewater Treatment Plant at the University of Mississippi	James Cizdziel
4:25 PM	Mount Pleasant Waterworks Explores Direct Potable Reuse (DPR) as a Source Water Sustainability Option.	Jestine Deepe
4:40 PM	Heteroatom Doping Modulating the Physicochemical Properties of Waste Derived Carbon: A Potential Candidate for Lead and Arsenic Capturing from Wastewater	*Hafiz Aamir
4:55 PM	Nitrogen and Phosphorus Remediation in Mesocosm-Scale Floating Treatment Wetlands for Wastewater Treatment	*Matthew Barnes
Session 16 Magnolia	FACETS Project Overview and Farm-Forest Scale Analyses 2 (Nathan Reaver)	
4:10 PM	Modeling the Impacts of Agricultural Practices on Nitrate Loads, Streamflow and Crop Yields in the Santa Fe River Basin	*Dogil Lee

4:25 PM	Simulating Nitrate Loading and Nitrate Transport to the Devil's Springs Complex in the Santa Fe River Basin, FL using SWAT-MODFLOW and MODPATH	Rob De Rooij
4:40 PM	Evaluating the Water Quantity and Environmental Benefits of Sustainable Agricultural Management Practices in the Lower Apalachicola-Chattahoochee-Flint River Basin, USA	Ritesh Karki
4:55 PM	A Stochastic Dynamic Optimization Approach for Understanding Expected Land Use Changes to Meet Potential Water Quality Regulations: A Case Study from Georgia, United States	Yu-Kai Huang
Session 17 Gardenia	Southeastern U.S. Coastal Flooding: Part 2 (Chris de Bodisco)	
4:10 PM	Evaluating Economic Impacts due to Storm-based and Tidal Flooding in the Coastal Southeastern U.S.	Robert Carey
4:25 PM	Exploring Landscapes of Unequal Exposure to Risk: Mapping Poverty Clusters in Relation to Pluvial Flooding	Narcisa Pricope
4:40 PM	Planning, Modeling, and Monitoring of Green Infrastructure Interventions for Flood Mitigation in the East Central Florida Coastal Zone	Jason Evans
4:55 PM	Intersection of Hybrid Infrastructure and Perceptions of Risk	Jon Calabria

4:10 PM - 5:10 PM

Career Panel for Students and Young Professionals (Crepe Myrtle)

5:30 PM - 7:30 PM

Welcome Reception & Poster Session (see page 13) (Regency AB)

8:00 PM - 10:00 PM

Student Trivia Event (Crepe Myrtle)

Wednesday, June 15

7:30 AM - 3:30 PM

Registration (First Floor)

7:30 AM - 8:30 AM

Breakfast - Roundtable Discussions (Regency C)

8:30 AM - 9:20 AM

Plenary Session II - Jeffrey Allen, Clemson University, Warren A. Hall Medal Recipient (Regency DEF) (Moderator: Jeff Peterson)

9:20 AM - 9:40 AM

Break: coffee available (Regency C)

9:40 AM - 10:40 AM

Friends of Reedy River Field Trip, max = 20 (60 minutes) Must be pre-registered to attend. (Meet near Registration desk)

9:40 AM - 10:40 AM

Concurrent Technical Sessions V (60 minutes) (Moderator)

**Session 18
Redbud BC**

Opportunities for International Collaboration on Water and Food Security (Lal Almas)

9:40 AM

Egypt Food Security Research Project: Can the Desert Help Meet Egypt Food Demand?

Lal Almas

9:55 AM

The Art of Building International Higher Education Partnerships in Pakistan to Advance Water Security and Resilience

Steven Burian

10:10 AM

Multiscale Coastal Vulnerability Analysis of South Carolina Coast Integrating Socio-environmental Geospatial Dataset

*Ahad Tanim

10:25 AM

Collaborative Experience in Ogallala Water CAP

Bridget Guerrero

WEDNESDAY

Session 19 Dogwood	Finding Stable Middle Ground in Stream Improvement Practices (Katie Collins)	
9:40 AM	Panel Discussion with Katie Collins, Eve Brantley, Amanda Gumbert, Mitch Woodward There is a need for manageable, intermediate options to address eroding streambanks and enhance riparian areas, leading to improved water quality and in-stream habitat. The panel will discuss efforts being made in the Southeastern US to provide education and technical training about intermediate stream solutions.	
Session 20 Magnolia	Building Resilience in Water Systems (Kofi Akamani)	
9:40 AM	Preparing for, Responding to, and Mitigating Compound Coastal Water Hazards for Resilient Rural Communities	Scott Curtis
9:55 AM	Conceptual Decision Support Tool for Climate-Resilient Infrastructure in Adapting to Climate Change and Sea Level Rise	Xixi Wang
10:10 AM	Moving Beyond Resilience: Antifragility Assessment and Design of Flood Control Systems	*Farboud Khatami
10:25 AM	Assessing General and Specified Resilience in Resource-dependent Communities: A Case Study of the Cache River Watershed of Southern Illinois	*Raymond Bieri
Session 21 Gardenia	Addressing Challenges of Climate Change on Wastewater Management in Coastal Communities 1 (Michael O'Driscoll)	
9:40 AM	Rising Coastal Groundwater Levels and Their Effects on Decentralized Wastewater Infrastructure: Examples from Dare County, NC	Michael O'Driscoll
9:55 AM	Regulatory Frameworks for Addressing Climate Impacts to Onsite Wastewater Systems: Existing Barriers and Potential Paths Forward	Katie Hill
10:10 AM	Climate Change and Rainfall Extremes within Eastern North Carolina and the Implications for Onsite Wastewater Treatment Systems	Jared Bowden
10:25 AM	Inflow and Infiltration (I&I) in a Coastal Central Sewage Collection System: Effects of Climate Variability	Lawrence Cahoon

10:40 AM - 11:00 AM

Break: coffee available (Regency C)

11:00 AM - 12:00 PM

Concurrent Technical Sessions VI (60 minutes) (Moderator)		
Session 22 Redbud BC	Irrigation Advances, Challenges, and Management in Ag and Urban Settings (Kevin Wagner)	
11:00 AM	Using a Wireless Sensor Network to Automate Irrigation of Cotton using a Lateral Move Irrigation System	Jose Payero
11:15 AM	Less is More: Eco-Intensification using Recycled Drainage Water for Fertigation	Laura Bowling
11:30 AM	Understanding Irrigation Patterns of Public Parks and Recreational Landscapes in College Station, TX	*Rosa Garcia
Session 23 Redbud A	Water Resource Economics (Evgenia Spears)	
11:00 AM	Willingness to Pay for Aquatic Invasive Species Management	Lucia Levers
11:15 AM	Economic Analysis of Sand Sources on the Lowermost Mississippi River for Coastal Restoration Projects	Hua Wang

WEDNESDAY

11:30 AM	Breakeven Price to Incentivize Agricultural Water Rights Leasing	*Rajendra Khanal
11:45 AM	A Hydro-Economic Optimization Model of Agriculture under California's Sustainable Groundwater Management Act	Lucia Levers
Session 24 Dogwood	Environmental Monitoring (Leigh-Anne Krometis)	
11:00 AM	Thermal Variability and Patterns in a Karst Mixed Land-use Basin of Central Pennsylvania	*Lexie Orr
11:15 AM	Soil Disturbance Assessment through Comparative TDS Emissions from Headwaters	Fernando Rojano
11:30 AM	Hydrogeophysical Investigation of Agricultural Soil Salinization in the Eastern North Carolina Coastal Plain	Stephen Moysey
11:45 AM	Volunteer Monitoring in the Upper White River Basin, Arkansas: What Can We Learn?	*Erin Grantz
Session 25 Magnolia	Groundwater Mapping and Modeling Approaches (Frances O'Donnell)	
11:00 AM	Agriculture Nutrition Effects of Increased Oil and Gas Activity from the Carrizo-Wilcox Aquifer in the Winter Garden Region of Southwest Texas	*Ysenia Granados
11:15 AM	GastonWaterMap: A Web GIS for Informing Residents of Groundwater Contamination in Gaston County, NC	*Zachery Slocum
11:30 AM	Aquifer Vulnerability Assessment for Land Use and Water Quality Management: A GIS Based DRASTIC Index Method, Windhoek Aquifer, Namibia	Kedir Bushira
11:45 AM	Developing a Decision Tree-based model for Reoperation of California's Reservoir Systems and Flood Waters Managed Aquifer Recharge	*Mahdi Erfani
Session 26 Gardenia	Addressing Challenges of Climate Change on Wastewater Management in Coastal Communities 2 (Michael O'Driscoll)	
11:00 AM	Nitrogen Treatment Efficiency of Onsite Wastewater Systems in the Coastal Carolinas	Charles Humphrey
11:15 AM	Attenuating Decentralized Wastewater Nitrogen using Nature-based Features	Guy Iverson
11:30 AM	Spotlighting the Hawai'i Cesspool Hazard Assessment & Prioritization Tool	Christopher Shuler
11:45 AM	Hybrid Constructed Wetlands for Aquacultural and Municipal Wastewater Treatment in the Coastal Plain	Natasha Bell

12:10 PM - 1:50 PM

Awards Luncheon (Regency C) Must be pre-registered to attend. Bring ticket from registration packet.

2:00 PM - 3:15 PM

Concurrent Technical Sessions VII (75 minutes) (Moderator)		
Session 27 Redbud BC	Human Dimensions of Water: Barriers, Conflicts, and Justice (Catherine Janasie)	
2:00 PM	Empowering Citizens with "Our Voice Our Water" in Municipal Stormwater to Build Resilience and Two-Way Communications	Regina Guyer, Bryan Patterson, Kari Raburn
2:15 PM	Documenting Water Quality, Access, and Associated Water Coping Behaviors in Central Appalachia	Leigh-Anne Krometis
2:30 PM	New Dimensions of a Famous Water Conflict: Public Interest, Indigenous Rights, and the Los Angeles Aqueduct	Sophia Borgias

WEDNESDAY

Session 28 Dogwood	Building Resilience into International Water Resources Collaborations (Katy Mazer)	
2:00 PM	Facilitators: Katy Mazer, Laura Bowling In this participatory session, we will review the collaboration principles for international water research from Mazer et al. 2020 and discuss how to bolster vulnerabilities to create more resilient partnerships. We will discuss best practices for supporting host countries and building a pathway for sustainably achieving collaboration goals.	
Session 29 Magnolia	Bridging the Digital Water Divide - Improved Integration of Emerging Technologies (Eve Brantley and Cal Sawyer)	
2:00 PM	Panel Discussion with Debabrata Sahoo, Paul Dow, Cal Sawyer, and Eve Brantley The session will focus on some of the early adoptions and applications of digital data for hydrologic assets around data-collection, correction, compilation, computation, and consulting. Panelists will also address emerging technologies such as machine learning, cloud computing, Internet of Things, blockchains and their integration in solving some of the challenges around Digital Water.	
Session 30 Gardenia	Water Management Issues in the Upper Colorado River Basin (Ginger Paige and Kristi Hansen)	
2:00 PM	Demand Management in the Upper Colorado River Basin: Economic Considerations	Kristi Hansen
2:15 PM	Measurement and Modeling of Consumptive Use in the Upper Green River Basin; Important Information to Inform Management Strategies in the Upper Colorado River Basin	Ginger Paige
2:30 PM	Lessons from Synchronously Modeling Flex Accounts in a Combined Lake Powell-Lake Mead System with 26 Colorado River Managers and Experts	David Rosenberg
2:45 PM	Discussion Time	

2:00 PM - 3:30 PM

Macroinvertebrates Identification Workshop (Meet near Registration desk)

3:15 PM - 3:35 PM

Break: snacks available (Regency C)

3:35 PM - 4:35 PM

JCWRE Editors and Associate Editors Meeting (Redbud A)

3:35 PM - 4:50 PM

Concurrent Technical Sessions VIII (75 minutes) (Moderator)		
Session 31 Redbud BC	Getting to the Heart of Science Communication (Faith Kearns)	
3:35 PM	Workshop Session: Pre-registration required to attend. Session is full. Check with registration desk for openings.	
Session 32 Dogwood	Bringing Flow Ecology to Water Planning: A South Carolina Example (Eric Krueger)	
3:35 PM	Developing Flow-ecology Relationships for SC Streams using Biotic Communities and Modeled Flow Metrics	Brandon Peoples
3:50 PM	Quantifying Flow-ecology Relationships to Inform Flow Management in South Carolina	Luke Bower
4:05 PM	Biological Standards for Water Withdrawal Management: Application in the Edisto River, South Carolina	Eric Krueger
4:20 PM	The Value of Freshwater Interventions: SC Residents' Willingness-To-Pay for Improved Water Quality	Carl Ureta
4:35 PM	South Carolina River Basin Planning – Balancing Social, Economic, and Environmental Needs	Scott Harder

Session 33 Magnolia	Water Policy and Law (Sydney Mucha)	
3:35 PM	Vulnerability and Recommended Mitigations Concerning Water Resilience to Cyber-based, Malevolent Acts on Community Water Systems	Michael Kuitu
3:50 PM	Per-and Polyfluorinated Substances Legal and Regulatory Update	Catherine Janasie
4:05 PM	The Effect of Management Agency on Reservoir Recreation Participation	*Mary Boateng
4:20 PM	Efficient Management of Water Resources in the Eastern US	*Nataly Medina
Session 34 Gardenia	Going Mainstream with Green Infrastructure for Urban Water Quality (Andrea Ludwig)	
3:35 PM	Monitoring Infiltration Rates of Coastal Low Impact Development Practices in Georgia	Jessica Brown
3:50 PM	Regenerative Stormwater Conveyance: From Research to Application	*Gillian Palino
4:05 PM	Breaking Down LID+GSI Barriers: A Code Audit Tool for Florida Communities	Eban Bean
4:20 PM	Building Community Infrastructure	Eve Brantley
4:35 PM	Advancing Green Stormwater Infrastructure: A Land Grant Mission Success Story	Andrea Ludwig

5:00 PM - 6:00 PM

Speed Networking for Students (Crepe Myrtle)

6:00 PM - 8:30 PM

Social Outing Drop-in for Students and Professionals (Fireforge Crafted Beer - local taproom)

Thursday, June 16

7:30 AM - 8:30 AM

Breakfast (Regency C)

8:30 AM - 9:50 AM

Plenary Session III - **Shana Jones**, University of Georgia; **Toby Feaster**, USGS (Regency DEF) (Moderator: Jerry Kauffman)

9:50 AM - 10:10 AM

Break: coffee available (Regency C)

10:10 AM - 11:40 AM

Concurrent Technical Sessions IX (90 minutes) (Moderator)

Session 35 Redbud BC	Harmful Algal Blooms and Their Drivers (Brian Haggard)	
10:10 AM	How Interactive Biotic and Abiotic Factors Drive Cyanobacteria Bloom Dynamics: Synthesizing 14 Years of Ecological Research in Vancouver Lake, WA, USA	Gretchen Rollwagen-Bollens
10:25 AM	Microcystin Thresholds and Response to Nutrient Additions at Lake Fayetteville, Arkansas	Brian Haggard
10:40 AM	Chlorophyll-A Estimation in Lakes using Multi-parameter Sonde Data	*Xiaofeng Liu
10:55 AM	Prediction of Chlorophyll-A Concentrations in a Piedmont Lake in South Carolina using Continuous Water Quality Data and a Machine Learning Algorithm	*Ibrahim Busari
11:10 AM	An Analysis of Environmental Conditions Impacting Cyanobacterial Algal Blooms in Drinking Water Sources in Upstate South Carolina	*Gregory Langlois
11:25 AM	Satellite-based Assessment of Lake Lanier Chlorophyll-A	Husayn El Sharif

THURSDAY

Session 36 Dogwood		
Advanced Water Monitoring Technology and Techniques (Aaron Akin)		
10:10 AM	Turbidity Informed Real-Time Control of a Dry Extended Detention Basin: A Case Study	Aaron Akin
10:25 AM	Low-Cost Reliable Water Resource Monitoring using the Intelligent River® System	Christopher Post
10:40 AM	Hybrid Artificial Intelligence and Computer Vision Image Processing Framework for Automatic Water Level Estimation	*Mohammad Erfani
10:55 AM	Developing Temporal Convolutional Neural Networks and Application of Transfer Learning for Hydrologic Modeling in Ungauged Basins	*Mahdi Erfani
11:10 AM	Vision Analysis of Water Texture and Color Using Early-level Computer Vision Techniques and Deep Learning	*Mohammad Erfani
Session 37 Magnolia		
Water Quality in Watersheds (Ashani Thilakarathne)		
10:10 AM	Catawba-Wateree Integrated Water Resources Plan: Developing Long-term Water Quantity and Quality Resilience for Drinking Water Supply	Sara Yeh & Jimmy Bagley
10:25 AM	Stormwater Quality Treatment with Bioretention Cell: Is It a Filter or Sponge?	Tolessa Deksissa
10:40 AM	The River Basins Research Initiative: Three Decades of Undergraduate Research in the South Carolina Piedmont	Gregory Lewis
10:55 AM	Determining Runoff Quantity and Quality from Differing Land use and Land Cover Types in the Cross Timbers Ecoregion	*Austin Phillippe
11:10 AM	Assessing Water Quality Conditions at the Buffalo National River over the Last 20 Years	*Erin Grantz
Session 38 Gardenia		
Educating and Engaging Communities to Enhance Water Quality Knowledge and Build Community Resilience - An Interactive Session with the Watershed Game (Karen Bareford, Jessica Brown, Mark Risse)		
10:10 AM	Watershed Game Overview and Play Facilitators: Karen Bareford , Alabama Water Institute and Mississippi-Alabama Sea Grant Consortium; Jessica Brown , UGA Marine Extension and Georgia Sea Grant; Mark Risse , UGA Marine Extension and Georgia Sea Grant	

11:50 AM - 1:20 PM
1:20 PM

Friends of Reedy River Field Trip, max = 20 (90 minutes) Must be pre-registered to attend. (Meet near Registration desk)
Conference Concludes

Poster Presenters

Welcome Reception and Poster Session: Tuesday 5:30 PM - 7:30 PM (Regency AB) (* = student presenter in poster competition; judges pre-assigned)

1	*Asha Shibu	Managing Negative Values in Reservoir Inflow Computation - A Case Study
2	*Cissy Ming	A Tale of Two Reservoirs: Geochemical Drivers Impacting Effectiveness of Hypolimnetic Oxygenation for Manganese Treatment
3	*Clare Escamilla	Guiding Successful Application of Floating Treatment Wetlands in Brackish Coastal Ponds
4	*Emily Jordan	Nutrient Dynamics in Restored and Unrestored Streams in Two Contrasting Watersheds
5	*Erin Grantz	Watershed Prioritization to Reduce Nutrient Export: A Framework for the State of Arkansas Based on Ambient Water Quality Monitoring Data
6	Esmail Mokari	Estimating Soil Evaporation in a Flood Irrigated Pecan Orchard
7	*Holly Wren	Allelopathic Effect of Cereal Straw Extracts on Growth of <i>Raphidocelis subcapitata</i> and <i>Microcystis aeruginosa</i>
8	*Jonathan Teboul	WaterCorps: Progress on Building a Student-led Environmental Consulting Organization for Serving Eastern North Carolina Communities
9	*Jose Garcia	Groundwater Modeling: Investigating the Water Availability and Water Levels of the Southern Carrizo-Wilcox Aquifer within the Winter Garden Region
10	*Joshua Gallegos	Groundwater Modeling of Kingsville Dome In-Situ Recovery (ISR) Uranium Mine
11	*Kaitlyn Smith	Standard Precipitation and Modeling Groundwater Availability in the Winter-Garden Region of the Carrizo-Wilcox Aquifer
12	*Lacy Barnette	Analyzing Producer Interviews to Identify Water Improvements from Regenerative Agriculture Practices
13	*Luna Yang	Classification of Watersheds in the Conterminous United States Using Shape-Based Time-Series Clustering and Random Forests
14	*Myagmarsuren Bat-Erdene	Regional Hydrological Methods for Estimation of Maximum Flood Discharges in Ungauged Dry Streambeds, Gobi Region, Mongolia
15	Nicole Colston	Connecting Citizens and Scientists in a Virtual World: Using Emerging Technologies to Broaden Opportunities for Water Education
16	Nicole Colston	"Make It Rain" Gauge: Designing an Augmented Reality (AR) Display to Recruit Drought Monitors
17	Sangamesh Angadi	Irrigation and Fertility Management Strategies for Guar in the Southern High Plains
18	*Sara Lambert	The Impacts of Water and Sediment Control Basins (WASCoBs) on Water Quality Near Atterberry, Illinois
19	Sarah White	Irrigation Reservoir Water Quality Dynamics Under Stormwater and Irrigation Return Flow
20	*Sreemala Das Majumder	Greenhouse Gas Emissions from Constructed Wetlands: a systematic review
21	Stephen Bollens	Feeding Dynamics of the Invasive Calanoid Copepod, <i>Pseudodiaptomus inopinus</i> , in Two Northeast Pacific Estuaries
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23	Udayakumar Sekaran	On-farm Demonstration and Promotion of Soil Moisture Sensors-based Irrigation Management in South Carolina
24	Udayakumar Sekaran	Mapping of Center Pivot and Lateral Move Irrigation Systems in South Carolina
25	*Wendy Buchanan	Determining the Optimum Soil Moisture Sensor Threshold for Irrigated Soybean in South Carolina
26	Yining Bai	A Compartmental System Dynamics Approach to Surface Water - Groundwater Conjunctive Management