SC Water Resources Conference Schedule - (Day 1) Wednesday, October 16

Day 1	SC Water Resources Conference Schedule - (Day 1) Wednesday, October 16					
7:30 a.m.	**Registration Opens (Exhibit Hall)**					
8:30-10:00	**Opening Remarks -** Dr. Jeffery Allen, Conference Chairman, SC Water Resources Center, Clemson University **Welcome -** Dr. Matthew Holt, Dean, College of Agriculture, Forestry and Life Sciences, Clemson University **Morning Plenary Session -** South Carolina Government Agency Update **Panel Participants-** Myra Reece, Interim Director, SC Department of Environmental Services Ben Duncan, Chief Resilience Officer, SC Office of Resilience Shannon Bobertz, Chief of Staff, SC Deparment of Natural Resources					
10:00-10:30	**Morning Break (Lower Level)**					
	TRACK 1 **Water Policy and Planning** *Lexington Room A*	**TRACK 2** **Surface Water and Groundwater Systems** *Lexington Room B*	**TRACK 3** **Climate, Weather, and Stormwater Issues** *Lincoln*	**TRACK 4** **Hydrologic Monitoring and Modeling** *Senate*	**TRACK 5** **Water Quality and Public Health** *Congaree*	**TRACK 6** **Agriculture and Infrastructure Issues** *Hall of Fame*
10:30-12:00 SESSION 1	**Session 1** **State Water Planning 1**	**Session 1** **Water Contamination**	**Session 1** **Climate Preparedness**	**Session 1** **Water Monitoring**	**Session 1** **Water As Habitat**	**Session 1** Soil Mgmt and Irrigation
Moderator	*Scott Harder*	*Alicia Wilson*	*Thomas Williams*	*Tom Walker*	*Haley Denison*	*Dara Park*
Presenter 1 10:35-11:00	**South Carolina State Water Planning Scott Harder, SCDNR**	**Saline and Brackish Groundwater Resources for Salt-Tolerant Crops: A Sustainable Water Treatment Paradigm Jing-Hua Tzeng, Clemson University**	**King Tides Along the Northern South Carolina Coast: Distribution of Causes Thomas Williams, Baruch Institute of Coastal Ecology and Forest Science**	**Tidally Influenced Stormwater Retention Ponds: Considering the Drivers of Microalgae Community Composition Levi McKercher, University of South Carolina**	**Rain Gardens as a Wildlife Habitat Samantha Porzelt, Clemson University**	**The Impact of Cover Crop Residues on Soil Water Repellency in Southern United States Cropping Systems Payton Davis, Clemson University**
Presenter 2 11:05-11:30	**Groundwater Modeling in the South Atlantic Coastal Plain: Updates, Advances, and Future Directions Bradley Harken, USGS**	**Ultraviolet Absorbance as a Support Tool for Characterizing Dissolved Organic Carbon Sources in Blackwater Streams, Edisto River Basin Casey Jones, USGS**	**National Weather Service Hydrology Program Updates Blair Holloway, National Weather Service-Charleston, SC**	**Advancing Agricultural Water Management: An IoT-Based Lysimeter System for Crop ET Measurement Mohd Fazly Mail, Clemson University**	**Right Plant, Right Place: Guiding Plant Selection for Floating Wetlands in Brackish, Coastal Ponds Claire Escamilla, Clemson University**	**Evidence for the Need to Consider Soil Water Repellency for Food Security and to Protect South Carolina Natural Water Resources Dara Park, Clemson University**
Presenter 3 11:35-12:00	**Long-Term Projections of Water Demand in South Carolina Alex Pellett, SC DES**	**Geomorphohydrologic Analyses for Determining Soil Subsidence, Sinkhole Formation Vulnerability, and Groundwater Contamination Susceptibility Sudhanshu Panda, University of North Georgia**	**City of Columbia and Benedict College: Public-Private Partnership for Sustainable Infrastructure Jessica Furrer, Benedict College**	**Georgia Crop Production Suitability Analyses with Evapotranspiration Regime Change Rahul Mohanty, University of North Georgia**	**Rinse, Recycle, Repeat: An Oyster's Unconventional Journey from the Upstate to the Lowcountry Haley Denison, Renewable Water Resources**	**Automation Development of Combined Intelligent Irrigation and Fertigation for Cotton Production in South Carolina Javad Alavi, Clemson University**
12:00-1:30 LUNCH	**Lunch Plenary Session -** Dr. Matthew Holt, Dean, College of Agriculture, Forestry and Life Sciences, Clemson University **(Exhibit Hall)**					

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TRACK 1 | TRACK 2 | TRACK 3 | TRACK 4 | TRACK 5 | TRACK 6

	Water Policy and Planning *Lexington Room A*	Surface Water and Groundwater Systems *Lexington Room B*	Climate, Weather, and Stormwater Issues *Lincoln*	Hydrologic Monitoring and Modeling *Senate*	Water Quality and Public Health *Congaree*	Agriculture and Infrastructure Issues *Hall of Fame*
1:45-3:15 SESSION 2	**Session 2 Water Planning & Infrastructure**	**Session 2 System Analytics**	**Session 2 Climate Modeling**	**Session 2 Flooding**	**Session 2 Watershed Stakeholders**	**Session 2 Socio-Ag Uses**
Moderators	*Tom Walker*	*Toby Feaster*	*C. Prakash Khedun*	*Vidya Samadi*	*Sarah White*	*Dawoon Jeong*
Presenter 1 1:50-2:15	**Broad River Basin Plan Implementation: Outreach and Education**	**Groundwater Conditions and Management in the Pee Dee Capacity Use Area Gina Carney, SC DES**	**Modeling Compound Droughts in Southeastern US by Analyzing Effect of Hot and Dry Conditions on Vegetation Health Suman Dhamala, Clemson University**	**Advanced Deep Learning Approaches for Flood Stage Level Prediction Krishna Panthi, Clemson University**	**Stakeholder Perspectives on Alternatives to Plastic For Use in Restoration, Aquaculture, amd Water Quality Sectors Sarah White, Clemson University**	**Agent-Based Models of Agricultural Decision Making Lea Jenkins, Clemson University**
Presenter 2 2:20-2:45	**A Review of State and Scientific Water Demand Projection Methods Laljeet Sangha, University of Califonia-ANR**	**Long-Term and Longitudinal Trends of Physical Parameters in the Middle Savannah River Rachael Gonzalez, Phinzy Center for Water Sciences**	**Climate Variability Patterns Affect the Timing of Extreme Streamflow in South Carolina C. Prakash Khedun, Clemson University**	**The Logic Behind Deep Learning Interpretability for Rainfall-Runoff Modeling Vidya Samadi, Clemson University**	**Community Science Microplastic Monitoring in the Charleston Harbor Estuary Britney Prebis, College of Charleston**	**Peer Effects in Irrigation Adoption in South Carolina Dawoon Jeong, Clemson University**
Presenter 3 2:50-3:15	**Cyber Threats to the Hoover Damn: How Chinese-linked Groups Can Infiltrate the US Water Systems Priscilla Johnson, Priska Consulting LLC**	**On-demand Low-flow Frequency and Mean Annual Flow Statistics for Streams in the Carolinas and Georgia Toby Feaster, USGS**	**Comprehensive Intercomparison of Hydrological Models for Surface Water Availiabiltiy in the Southeastern United States: Addressing Structural Limitations and Calibration Strategies Kunal Bhardwaj, Clemson University**	**Application of Neural Network Models for Flood Prediction Across Complex River Systems, Mostafa Saberian, Clemson University**	**Be Septic Safe: Nature Called & Clemson Extension Answered with Various Outreach Programs To Educate Citizens on Taking Care of Business Charly Greenthaler, Clemson University**	**Wastewater Reuse for Hydroponic Crop Production: Lessons Learned from a Bi-national Exchange David Ladner, Clemson University**
3:15-3:45	**Afternoon Break (Lower Level)**					

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	TRACK 1 Water Policy and Planning *Lexington Room A*	TRACK 2 Surface Water and Groundwater Systems *Lexington Room B*	TRACK 3 Climate, Weather, and Stormwater Issues *Lincoln*	TRACK 4 Hydrologic Monitoring and Modeling *Senate*	TRACK 5 Water Quality and Public Health *Congaree*	TRACK 6 Agriculture and Infrastructure Issues *Hall of Fame*
3:45-5:15 SESSION 3	**Session 3 State Water Planning 2**	**Session 3 Restoration**	**Session 3 Land Use and Water Quality**	**Session 3 Water Monitoring**	**Session 3 Floating Wetlands**	**Session3 Agricultural Mgmt**
Moderator	*Scott Harder*	*Alex Pellett*	*Alicia Wilson*	*Chris Post*	*Saran White*	*C. Prakash Khedun*
Presenter 1 3:50-4:15	**Planning for a Sustainable Water Resources Future by Using the EnvisionTM Sustainability Rating System for Infrastructure Projects Rebecca Berzinis, AtkinsRealis**	**Restoring Salt Marsh by Hand in Asleyville Joshua Robinson, Robinson Design Engineers**	**Seeing Into the Future: An Aquatic Planning Tool for Visualizing Land Use and Climate Impact to Stream Fishes Across the Carolinas Colby Denison, Clemson University**	**Real-Time Bridge Scour Monitoring in South Carolina Tim Lanier, USGS**	**Eco-Friendly Floating Wetland Scaffolds: A Non-Plastic Approach Ada Camila Montoya, Clemson University**	**On-Farm Water Management Charly Greenthaler, Clemson University**

Presenter 2 4:20-4:45	**Groundwater Resources Management and Planning of the Coastal Plain in South Carolina** **Ashley Carothers, SC DES**	**Low-tech Stream Restoration in the Piedmont Region** **C. Alex Pellett, SC DES**	**Rising Water Tables and Septic Systems: Estimating Risk in Coastal South Carolina** **Alicia Wilson, University of South Carolina**	**Advanced Deep Learning Approaches for River Gauge Height Prediction** **Krishna Panthi, Clemson University**	**Constructed Floating Wetlands: Part 1-Current Knowledge and Opportunities** **Sarah White, Clemson University**	**Quantifying Drought Induced Yield Loss in South Carolina Using Probabilistic and Machine Learning Approaches** **C. Prakash Khedun, Clemson University**
Presenter 3 4:50-5:15			**Climate Change and Sustainable Development: A Community Approach in India** **Babita Babita, Ramesh Chand Institute of Management Mirpur**	**Bridge-Based Water Monitoring Using the Intelligent River System** **Christopher Post, Clemson University**	**Constructed Floating Wetlands: Part 2- Advances and Expanding Applications** **William Strosnider, University of South Carolina**	**Shaws Creek Preserve, a Case Study for Public-Private Partnership for Water Supply Protection and Conservation** **Allen Conger, Congaree Environmental Consulting**
5:30-7:00	**Reception & Paul A. Conrad Poster Session** (Lower Level)					
Day 2	**SC Water Resources Conference Schedule - (Day 2) - Thursday, October 17**					
7:30 a.m.	**Registration Opens**					
8:30-9:00	**Welcome and Conference Remarks** - Jeffery Allen, Conference Chairman, SC Water Resources Center, Clemson University					
9:00-10:00	**Morning Plenary Session -** South Carolina Legislative Panel **Moderator -** Jeffery S. Allen, Clemson University SC Water Resources Center **Panel Participants -** To Be Announced **(Ballroom)**					
10:00-10:30	**Morning Break** ***(Lower Level)***					
	TRACK 1 **Water Policy and Planning** *Lexington Room A*	**TRACK 2** **Surface Water and Groundwater Systems** *Lexington Room B*	**TRACK 3** **Climate, Weather, and Stormwater Issues** *Richland Room A*	**TRACK 4** **Hydrologic Monitoring and Modeling** *Richland Room B*	**TRACK 5** **Water Quality and Public Health** *Richland Room C*	**TRACK 6** **Water Quality and Public Health** *Congaree*
10:30-12:00 SESSION 4	**Session 4** **Watershed Protection**	**Session 4** **Integrated Models**	**Session 4** **Flood Resilience**	**Session 4** **Flood Planning**	**Session 4** **HAB's & Nutrients**	**Session 4** **Water Quality & Conservation**
Moderators	*Rick Huffman*	*Tom Walker*	*Brooke Saari*	*Kim Morganello*	*Ibrahim Busari*	*Heather Nix*
Presenter 1 10:35-11:00	**Riparian Buffers, Life at the Water's Edge** **Rick Huffman, ASLA, Earth Design, Consultant**	**Integrated Models for Water Supply Planning and Operations** **Megan Rivera, Hazen**	**Establishing the Coastal Resilience Collective: Assessing Priorities for an Emerging Coastal Resilience Community of Practice** **Amanda Guthrie, SC Sea Grant Consortium**	**Advancing Flood Predictive Models Using A Machine Learning Approach for Stage Forecasting in Streams** **Steve Godfrey, Woolpert**	**Advancing HAB Predictions: Leveraging Machine Learning for Accurate Chlorophyll Forecasting in Freshwater Lakes** **Arash Karimzadeh, Woolpert**	**Machine Learning Models for Levee Breach Flow Estimation** **Shivakumar Balachandran, University of South Carolina**
Presenter 2 11:05-11:30	**Riparian Buffers, Life at the Water's Edge** **Rick Huffman, ASLA, Earth Design, Consultant**	**Soil Moisture Dynamic in a Silvopasture System: A Case Study of South Carolina** **Gafar Agunbiade, Clemson University**	**Rain and Tide: Compound Flood Vulnerability** **Hannah Quast, College of Charleston**	**Fripp island Stormwater Master Plan: Building a Path Towards a More Resilient Stormwater System in a South Carolina Barrier Island Community** **Kim Morganello, Weston & Sampson**	**Guarding Drinking Water Safety Against Harmful Algai Blooms: Could UV/C12 Treatment in Answer** **Susan Richardson, University of South Carolina**	**Delivering Research to Those Who Need It: South Carolina Water Chats** **Heather Nix, Clemson University**

Presenter 3 11:35-12:00	**Utilizing Watershed Based Planning and Implementation to Unlock Federal Funding for Land Protection in the Upstate** Katie Hottel, Upstate Forever	**Using an Integrated Delivery Approach with Stream and Floodplain Restoration as a Tool to Improve Water Quality and Meet TMDLs in a Eutrophic Central FL Basin** Mary Szafraniec, RES	**Approaches to Address Flooding and Improve Resilience at the Site, Jurisdictional, and Watershed Scales** Meghan Gloyd, Biohabitants Inc.	**A New Opportunity to Evaluate Flooding in the Winyah Bay Tidal River System with Tropical Storm** Debby Tom Williams, Baruch Institute of Coastal Ecology and Forest Science	**Phytoplankton Group-Specific and Community Responses to Co-limiting Nutrients in a Managed Reservoir: Lake Murray** Jay Pinckney, University of South Carolina	**Understanding the Contribution of Water-Based Recreational Tourists to Water Quality Improvement: A Systematic Review** Mina Kim, University of South Carolina
12:00-1:30 LUNCH	**Lunch Plenary Session -** Josh Arrants, Naturalist/Owner Arrants Outdoors, LLC **(Ballroom B / C)**					

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	TRACK 1 Water Policy and Planning	TRACK 2 Water Quality and Public Health	TRACK 3 Climate, Weather, and Stormwater Issues	TRACK 4 Hydrologic Monitoring and Modeling	TRACK 5 Water Quality and Public Health	TRACK 6 Water Quality and Public Health
	Lexington Room A	*Lexington Room B*	*Richland Room A*	*Richland Room B*	*Richland Room C*	*Congaree*
1:45-3:15 SESSION 5	**Session 5 Coastal Planning**	**Session 5 Watershed Analysis**	**Session 5 Stormwater Engineering**	**Session 5 Modeling Tools**	**Session 5 Communities & Collaboration**	**Session 5 Wastewater & Contaminants**
Moderators	*Jeff Allen*	*Brooke Czwartacki*	*Deb Sahoo*	*David Ladner*	*Calvin Sawyer*	*Guinn Wallover*
Presenter 1 1:50-2:15	**Dorchester County Greenbelt Master Plan: Crafting Place-Based Policy & Practices for Land Conservation Success** Kimberly Morganello, Weston & Sampson	**Watershed Modeling Using QSWAT to Find the Water Quality at Two Fish Hatcheries in Chattahoochee River** Aarush Kote, University of North Georgia	**Aiken Stormwater Vaults: Performance Evaluations and Observations After One-Year of Operations** Jason Hetrick, McCormick Taylor	**The ALGE Operational Water Quality Forecast Tool** David Werth, Savannah River National Laboratory	**Smart Utilities, Healthy Communities: Using AI to Solve the Water Quality Crisis in South Carolina and Beyond** Rick Oppedisano, Delta Bravo AI	**Comparing Visual and Digital Soil Color Assessments for Onsite Wastewater Treatment System Evaluation** Isabella Hill, Clemson University
Presenter 2 2:20-2:45	**Beaufort Adapts: Sea Level Rise Impacts on Groundwater and Septic Systems** Norman Levine, College of Charleston	**Observing Flow and Sedimentation in 3 ACE Basin, SC Salt Marshes** Jessica Sullivan, University of South Carolina	**Benefits and Challenges to Incorporating Pollinator-Friendly Vegetation Into Detention Ponds** Taylor Brewer, Beaufort County Stormwater Utilitiy Management	**Developing Effective Long-Term Budgeting Models for Stormwater Management** Sean Fleming, The Lake Doctors	**Agency Collaboration for Education and Compliance Certification** Calvin Sawyer, Clemson University	**Expanding the Mission: A Utility-Lead Septic Maintenance Strategy in Mt Pleasant, SC to Promote Public Health and the Environment** C. Guinn Wallover, Mt Pleasant Waterworks
Presenter 3 2:50-3:15	**Development and Implementation of a Comprehensive Tourism Safety Index for Beaches** Estefania Basurto-Cedeno, University of South Carolina	**Linking Land Development to Habitat Quality: Using Tidal Creeks to Assess Ecological Response to Watershed Development** Pamela Marcum, SC DNR	**Water Resources Engineering on an Industrial Scale: Scout Motors** William Lamb, PE, Thomas & Hutton	**Stochastic Simulation & Hydraulic Modeling of Compound Flooding in the South Carolina Lowcountry** Nolan Williams, Robinson Design Engineers	**A Case for Community-Engaged Research** Amy Scaroni, Clemson University	**What's In the Water? Building a Contaminants of Emerging Concern Program in the Southeast** Brooke Saari, SC Sea Grant Consortium
3:15 - 3:45	**Afternoon Break (Lower Level)**					

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	TRACK 1 Water Policy and Planning	TRACK 2 Surface Water and Groundwater Systems	TRACK 3 Climate, Weather, and Stormwater Issues	TRACK 4 Hydrologic Monitoring and Modeling	TRACK 5 Water Quality and Public Health	TRACK 6 Water Quality and Public Health
	Lexington Room A	*Lexington Room B*	*Richland Room A*	*Richland Room B*	*Richland Room C*	*Congaree*

3:45-5:15 SESSION 6	**Session 6 Water Assessment**	**Session 6 Contaminant Elimination**	**Session 6 International Water Issues**	**Session 6 Hydro Modeling**	**Session 6 Water Contaminants**	**Session 6 Ecosystem Monitoring**
Moderators	*Laljeet Sangha*	*William Strosnider*	*Jeff Allen*	*Tom Walker*	*Amy Scaroni*	*Ibrahim Busari*
Presenter 1 3:50-4:15	**Understanding Post-Pandemic Visitors for Managing Recreational Waters in South Carolina Seonjin Lee, University of South Carolina**	**Plastics-free Alternatives in the Coastal Environment: Traditional Ecological Knowledge Coupled with Modern Engineering William Strosnider, University of South Carolina**	**Quantifying the Role of Hydrologically Sensitive Areas and Inverse Weighting Matrices for Water Quality Assessment Ali Alnahit, King Saud University**	**A Comparison of PET Methods and Their Impact on Hydrologic Modeling Using a Lumped Basin Model for 3 Sub-Catchments of the Yadkin-Pee Dee River Basin Emma Collins, National Weather Service**	**Automated, In-situ Bacteria Measurement-Case Studies from Several Communities James Riddle, Woolpert Inc.**	**Assessing Ecosystems Health Through the Lower Winyah Watershed Report Card Evan Patrohay, USC Baruch Institute**
Presenter 2 4:20-4:45	**An Assessment of Drinking Water Equity in SC: Access, Affordability, Quality, and Private Well Resources Catherine Min, University of South Carolina**	**Sand River Stormwater CMAC Project: Performance Evaluations and Observations After One-Year of Operation Jason Hetrick, McCormick Taylor**	**Climate Change and Water Management in India: Some Challenges Jagbir Singh, University of Delhi**	**Georgia Crop Production Suitability Analyses with Evapotranspiration Regime Change Rahul Mohanty, University of North Georgia**	**The Presence of Antibiotic-Resistent E. Coli and Coliforma in Urban Floodwaters of Charleston SC Vijay Vulava, College of Charleston**	**Enhancing Harmful Algai Bloom Monitoring with Advanced Chlorophyll-a Predictions Using Date Assimilation Techniques Ibrahim Busari, Clemson University**
Presenter 3 4:50-5:15	**Quantifying Unreported Irrigation Water Use in South Carolina Laljeet Sangha, University of California-ANR**				**Machine-Learning Based Microwave Spectroscopy for Detection and Analysis of Biochemical Pollution in Water Jaden Tolbert, Clemson University**	**ECOSTRESS Satellite Data Based Evapotranspiration and Evapotranspiration Stress Index Correlation with Instrumental ET Data Generated Using Surface Interpolation Algorithm Rohan Mohanty, University of North Georgia**
5:15	**Conference Closes**					