



Shaping Our Water Future





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Acknowledgements

We gratefully acknowledge the contribution of the following people who helped make this Symposium a success.

Symposium Program Committee

- Cynthia L. Barnett, UF Graham Center and College of Journalism and Communications
- Drew Bartlett, FL Department of Environmental Protection
- Paula Cobb, Duke Energy
- Christa Court, UF Food and Resource Economics Department
- Matthew J. Cohen, UF School of Forest Resources and Conservation
- Todd Crowl, Florida International University
- Joseph J. Delfino, UF ESSIE/Environmental Engineering Sciences
- Steve Dwinell, FL Department of Agriculture and Consumer Services
- Casey Fitzgerald, St. Johns River Water Management District
- Richard Hutton, Gainesville Regional Utilities
- Jeffrey C. Johnson, UF Anthropology Department
- David A. Kaplan, UF ESSIE/Environmental Engineering Sciences
- Jim Laing, South Florida Water Management District
- Kati W. Migliaccio, UF Department of Agricultural and Biological Engineering
- Martha C. Monroe, UF School of Forest Resources and Conservation
- Temperince Morgan, The Nature Conservancy of Florida
- K. Ramesh Reddy, UF Soil and Water Sciences Department
- Spiro E. Stefanou, UF Food and Resource Economics Department

University of Florida Water Institute Staff

- Megan Almaguer, Program Assistant
- Mary Garvin, Administrative Specialist II
- Carol Lippincott, Research Coordinator III
- Lisette Staal, Research Coordinator III

Volunteers

Volunteers include graduate and undergraduate students from the Department of Agricultural and Biological Engineering, Department of Anthropology, Department of Environmental and Global Health, Engineering School of Sustainable Infrastructure & Environment, School of Natural Resources and Environment, College of Public Health and Health Professions, UF/IFAS Extension, Environmental Horticulture Club, Wetlands Club and Water Institute Graduate Fellows program.



Welcome from the University of Florida

President **W. Kent Fuchs**



Faculty, students and special guests, on behalf of the University of Florida, welcome to the 6th Water Institute Symposium!

In a water-dependent state, the work of UF's Water Institute and this impressive symposium always strike me as both urgent and timely. This year's symposium is particularly so, occurring on the heels of a year of extreme rains, record flooding in Florida and other regions and continuing concerns about the health and abundance of Florida's freshwater resources - from the Everglades to the signature springs that surround us here in North Florida.

None of these challenges can be solved in isolation or without input and direction from across the sciences and public policy landscapes. That's what makes this symposium and its tradition of bringing together scientists, industry representatives, public policy leaders, environmental advocates, communicators, students and others so vital.

Since the UF Water Institute was established in 2006, it has done much to further science, education and policy surrounding a broad array of freshwater issues. In this achievement, the institute embodies UF and our mission of serving the public good as one of the nation's leading research universities. I am proud of the Water Institute's contributions to freshwater science from Gainesville to the globe. I thank each of you for your part in this scholarship, and for your participation in this year's symposium.

I wish you a thought-provoking, engaging and inspiring gathering - one with a positive and lasting impact on an issue that is critical to all the world.

Sincerely,

W. Kent Fuchs President, University of Florida

Senior Vice President for Agriculture and Natural Resources

Jack Payne



Dear symposium guests,

Welcome to two days with some of the most influential thought leaders in Florida water. The sixth UF Water Institute Symposium brings together people from academia, government, industry, the non-profit sector, and the humanities who have water on the brain all the time.

These are the folks who will, as the symposium's title suggests, help shape our water future. We are glad to see you among them.

Whether you're on the podium or in the audience, your presence here contributes to a larger cause. We at the University of Florida's Institute of Food and Agricultural Sciences support the UF Water Institute as part of our mission to promote the sustainable use of our most precious natural resource.

Lately we've hired five regional specialized Extension agents for water, assembled a team of new faculty focused on creating a less thirsty model for the development of new Florida neighborhoods, and opened a research station that will reinforce our sustainability approach to water use in the agricultural region of Suwannee Valley.

There are so many ways to come at the science of water. We hope you'll help us discover even more. Thank you for attending.

Sincerely,

Jack Payne Senior Vice President for Agriculture and Natural Resources UF Institute of Food and Agricultural Sciences

UF Water Institute Director **Wendy Graham**



Dear Colleagues,

Thank you for joining us for the 6th UF Water Institute Symposium.

This symposium provides an intellectually stimulating venue that links leading researchers, educators and students with resource managers, policymakers, non-governmental organizations, authors and artists interested in exploring interdisciplinary solutions to current water challenges.

Over the course of the next two days over 160 contributed oral, poster and panel presentations will focus on drivers and impacts of change on Florida's coastal, wetland, spring, river and aquifer systems. Tradeoffs among development, conservation and restoration strategies will be examined, and potential solutions for sustaining our water systems will be explored.

Water problems are often categorized as wicked problems because our scientific understanding is incomplete, our goals contradictory, and complex interdependencies result in unexpected outcomes. We welcome you to join with us to ask difficult questions, listen to unexpected answers, engage in constructive dialog, and learn from those outside your area of expertise so that together we can envision and chart a path to a sustainable water future.

Thanks again for attending the 6th UF Water Institute Symposium. We value your contributions and encourage your active participation.

Wendy Graham Carl S. Swisher Chair in Water Resources Director University of Florida Water Institute



Event Floor Plan - 2nd Floor - J. Wayne Reitz Union



Agenda - n	desday, rebluary 0, 2016	
7:30 AM - 8:30 AM	Registration and Check-In	Registration Desk
8:30 AM - 10:00 AM	Opening Plenary Session	Grand Ballroom
	 Dr. Wendy Graham, Director, University of Florida Water Ins Dr. Jack Payne, Senior Vice President for Agriculture and Nat University of Florida Harry Sideris, State President—Florida, Duke Energy Florida 	tural Resources,
	 Keynote: Sandra Postel, Director, Global Water Policy Project Replenish: The Virtuous Cycle of Water and Prosperity 	
	Spo	onsored By: Duke Energy
10:00 AM - 10:30 AM	Book Signing Sandra Postel will be availabe to sign her new book <i>Replenish: Thand Prosperity.</i>	Reception Lobby he Virtuous Cycle of Water
10:00 AM - 10:30 AM	Refreshment Break	North Hallway
10:30 AM - 12:00 PM	Forest Ecohydrology (Moderator: David Kaplan, Environmental Engineering Sciences, ESS	Room 2315 SIE, University of Florida)
	 Subodh Acharya, Postdoctoral Researcher, School of Forest R Conservation, University of Florida <i>Forest Management for Water Conservation: Understanding Driv Use and Yield</i> Damian Adams, Associate Professor, School of Forest Resourd University of Florida <i>Economic tradeoffs between carbon sequestration and water yield it</i> Kathryn McCurley, Graduate Research Fellow, PhD Program <i>Impacts of decreasing tropical forest cover on local hydrologic regin</i> Patrick J. Minogue, Associate Professor of Silviculture and Ex University of Florida <i>Effect of harvesting pine straw on ammonia volatilization followin and non-coated urea fertilizer applications on a North Florida slass</i> Ana Carolina Oliveira Fiorini, PhD candidate, University of Florida in a Payment for Environment Service: "Produtores case study 	ces and Conservation, in southern pine forests the University of Florida mes tension Specialist, g polymer-coated h pine plantation
10:30 AM - 12:00 PM	Engaging Stakeholders in Developing Solutions to Water Issu	es Room 2320
	 (Moderator: Paula Cobb, Duke Energy) Tirusew Asefa, Planning & System Decision Support Group I Understanding Climate Variability and Climate change in Plannin Water Supply: A Stakeholder-Scientist Collaborative Approach Charles Barrett, Water Resources RSA, UF/IFAS Extension The Suwannee River Partnership Education Team improves comm relationships and improves adoption of Best Management Practice Jessica Ann Bolson, Research Scientist, Florida International A stakeholder-science based approach for understanding urban was sustainability challenges across the U.S. 	ng for Future nunication, builds es University

- Brenda J. Mills, Principal Project Manager, South Florida Water Management District Solutions Found Together: Getting Water Off Farms and into Nature
- Jennison Kipp Searcy, Resource Economist and Sustainable Floridians State Coordinator, UF/ IFAS Program for Resource Efficient Communities

The "Watery" Work of Community Engagement and the CIVIC Extension Program

Sponsored By: OUC-The *Reliable* One

10:30 AM - 12:00 PM

Water and Regional Science

Room 2335

Economic prosperity, quality of life, and the environment are all inextricably linked by water. The interdisciplinary field of regional science – with its focus on the important roles of local and regional processes to socioeconomic performance and sustainability, its explicit treatment of spatial relationships, and its increasing attention devoted to modeling the linkages between the human system and the environment – is ideally suited to contribute high quality, policy relevant research on water.

(Moderator: Christa Court, Food and Resource Economics Department, University of Florida)

 Christa D. Court, Assistant Scientist, Food and Resource Economics Department, University of Florida

Water and Regional Science

- Kieran Patrick Donaghy, Professor, City and Regional Planning, Cornell University Integrated Assessment Modeling of Regional Water Infrastructure Problems
- Xiang Bi, Assistant Professor, Food and Resource Economics Department, University of Florida

Public Preferences for Water Resource Management of the Ocklawaha River

Jad Ziolkowska, Assistant Professor, University of Oklahoma
 Desalination for Future Water Supply in the US - Economic, Environmental and Social Issues

Sponsored By: Southern Regional Science Association

10:30 AM - 12:00 PM

Agricultural Water and Nutrient Management 1

Room 2365

(Moderator: Jim Laing, South Florida Water Management District)

- Kevin Athearn, Regional Specialized Extension Agent, Rural and Agribusiness Development, IFAS Extension, University of Florida

 Improvements in Water and Nutrient Management by Suwannee Valley Watermelon Growers
- Lincoln Zotarelli, Associate Professor, Horticultural Sciences Department, University of

Nitrogen fertilizer management for potatoes under different irrigation systems

- Maria Isabel Zamora Re, Graduate Student, University of Florida BMPs evaluation at field scale to reduce nitrogen leaching without impact on corn yield
- Unmesh Koirala, Graduate Student, School of Forest Resources and Conservation, University of Florida

Enterprise-level Economic Impacts of Agricultural BMP adoption to Meet Florida Water Quality and Quantity Standards

Sponsored By: Tampa Bay Water

10:30 AM - 12:00 PM

Challenges & Opportunities for Spring System Restoration 1

Auditorium

(Moderator: K. Reddy, Soil and Water Sciences Department, University of Florida)

- Casey Fitzgerald, Director, Springs Protection Initiative, St. Johns River Water Management District
 - Restoration of Florida's Iconic Springs: Legislative, "Turn Dirt" and Scientific Solutions
- James Jawitz, Professor, Soil and Water Sciences Department, University of Florida *Through the hidden veins of the earth: How do water and solutes get to Silver Springs?*
- Rob de Rooij, Research Assistant Scientist, University of Florida Water Institute Conduit and Fracture Flow Modeling

• Patrick W. Inglett, Associate Professor, Soil and Water Sciences Department, University of Florida

Identifying N Sources and Transformations in the Silver Spring Springshed, USA

 Andy Canion, Supervising Environmental Scientist, St. Johns River Water Management District

Geospatial Modeling Approaches to Support Springs Protection Projects at SJRWMD

Sponsored By: Gainesville Regional Utilities

12:00 PM - 1:30 PM

Buffet Luncheon

Grand Ballroom

1:30 PM - 3:00 PM

Wetland Ecosystems

Room 2315

(Moderator: Joseph Delfino, Environmental Engineering Sciences, ESSIE, University of Florida)

- Ian Hahus, PhD Candidate, University of Florida

 Exploring the space-time continuum: the influence of model resolution and timestep on the performance of a landscape-scale wetland model
- Joann Mossa, Professor, Geography, University of Florida

 Decreased Floodplain Inundation and Lateral Connectivity of the mid-Apalachicola River following Dredging-Related Channel Changes
- Robert V. Sobczak, Hydrologist, Big Cypress National Preserve
 The Hydrology of the Big Cypress Before Canals (and the Myth of the Rain-Driven Swamp)
- Laura Isabel Lotero, Graduate Student, University of South Florida The Role of High-Elevation Parámo Wetlands in Generation of Streamflow and Water Supply in the Northern Andes, Colombia

Sponsored By: AWRA Florida

1:30 PM - 3:00 PM

Sharing Information: Effective Communication Strategies

Room 2320

(Moderator: Martha Monroe, School of Forest Resources and Conservation, University of Florida)

- Ruth Hohl Borger, Assistant Vice President, UF/IFAS Communications, University of Florida
 - Florida's water storytellers: How the media communicate about Florida's water issues and what it means for scientists working on water issues
- Lara Milligan, Natural Resources Agent, UF/IFAS Extension Pinellas County The Florida Waters Stewardship Program: A New Extension Program Driving Social Change
- Michael C. Sukop, Professor, Florida International University
 Using Social Network Analysis to Identify and Understand Linkages Between Climaterelated Organizations in Southeast Florida
- Andrea R. Albertin, Northwest District Regional Water Resources Extension Agent, University of Florida

Meeting the resource needs of the private well owner community

Sponsored By: OUC-The *Reliable* One

1:30 PM - 3:00 PM

Estuarine Ecology and Water Quality

Room 2335

(Moderator: Matthew Cohen, School of Forest Resources and Conservation, University of Florida)

- Mike Wessel, Vice President, Janicki Environmental

 Developing an innovative nutrient management strategy for Southwest Florida Tidal Creeks by Linking Source Water Concentrations, Instream Processes, and Estuarine Dynamics
- John R. Cassani, Calusa Waterkeeper In Support of Re-instating the Florida Harmful Algal Bloom Task Force: Establishing New Strategies for Monitoring, Prediction and Public Notification
- Joshua Papacek, PhD Student, University of Florida Bottom-up Controls of Recent Harmful Algal Blooms in the northern Indian River Lagoon, FL



Agenda - Tuesday, February 6, 2018 Gisselle Guerra, PhD Student, Civil and Coastal Engineering Department, University of Florida Statistical assessment of saltwater intrusion in a subtropical estuary Peter Frederick, Research Professor, Department of Wildlife Ecology and Conservation, University of Florida Introducing resilience to estuaries through restoration of oyster habitat in Florida's Big Bend **Sponsored By:** Amec Foster Wheeler 1:30 PM - 3:00 PM Agricultural Water and Nutrient Management 2 (Moderator: Jim Laing, South Florida Water Management District) Eban Bean, Assistant Professor & Extension Specialist, Department of Agricultural and Biological Engineering, University of Florida Soil Moisture Time Series Analysis for Estimating Field Capacity: Person vs. Machine Andre Luiz Biscaia Ribeiro da Silva, PhD Canditate, Horticultural Sciences Department, University of Florida Soil water dynamics of shallow water table soils cultivated with potato crop Maria Vrachioli, PhD Candidate, University of Florida Impact Evaluation of New Irrigation Technology in Crete: Correcting for Selectivity Bias Ibukun Ayankojo, Research Assistant, Southwest Florida Research and Education Center, University of Florida The Use of Smartphone Application (SmartIrrigation Vegetable) for Irrigation Scheduling in Tomato (Solanum Lycopersicon) Production

1:30 PM - 3:00 PM

Challenges & Opportunities for Spring System Restoration 2

Sri Charan Kakarla, Engineer I, University of Florida - SWFREC Automated and Voice-Controlled Irrigation System for Specialty Crops

Auditorium

Sponsored By: Tampa Bay Water

Room 2365

(Moderator: Peter Sucsy, St. Johns River Water Management District)

· Robert Hensley, Postdoctoral Associate, University of Florida

- Flow declines and reversals as a driver of algal proliferation in springs David Kaplan, Assistant Professor, Environmental Engineering Sciences, ESSIE, University of Florida
 - Connecting Spring Run Hydraulics and Ecosystem Structure in the Silver River
- Mitra B. Khadka, Postdoctoral Researcher, University of Florida Nutrient and Trace Metal Dynamics at the Sediment-Water Interface in Silver River, Florida
- Todd Z. Osborne, Assistant Professor, Soil and Water Sciences Department, University of Florida

Relationships between submerged aquatic vegetation, increased nitrate, and the proliferation of algae in Florida springs: lessons learned from mesocosm experiments

Sponsored By: Gainesville Regional Utilities

3:00 PM - 3:30 PM

Refreshment Break

Grand Ballroom

3:30 PM - 5:00 PM

Water Quality Issues

Room 2315

(Moderator: Joseph Delfino, Environmental Engineering Sciences, ESSIE, University of Florida)

- Rick Copeland, Environmental Consultant, Florida Department of Environmental Protection Statewide Changes in Florida's Lake, Stream, and Aquifer Water Quality: 2000-2015
- John Hendrickson, Supervising Environmental Scientist, St. Johns River Water Management Distrct

Patterns in Surface Water Phosphorus Concentrations and Biosolids Utilization in the Upper St. John's River

- Sara Phelps, Graduate Research Fellow, The Whitney Laboratory for Marine Bioscience, University of Florida
 - A closer look at nutrient source identification: accelerated dissolution of geologic phosphate deposition in humic lakes
- Mary Lucy Szafraniec, Senior Scientist, Amec Foster Wheeler Sediment Nutrient Flux to Assess Nutrient Management Alternatives
- Gregg W. Jones, Water Resources Technical Director, Cardno
 Aquifer Recharge with Minimally Treated Stormwater to Augment Groundwater Supplies
 - Regulatory Framework, Research, and Pilot Projects

Sponsored By: Water & Air Research, Inc.

3:30 PM - 5:00 PM

Challenges & Opportunities for Everglades System Restoration

Room 2335

(Moderator: Peter Frederick, Department of Wildlife Ecology and Conservation, University of Florida)

- Del Bottcher, President and Senior Engineer, Soil and Water Engineering Technology, Inc. Load Estimation Tool for the Lake Okeechobee Watershed
- Masanori Fujimoto, Research Assistant Professor, Soil and Water Sciences Department, University of Florida
 - Microbe-mediated nutrient transformation in the Everglades Stormwater Treatment Areas (STAs)
- Younggu Her, Assistant Professor, Tropical Research and Education Center/Agricultural & Biological Engineering, University of Florida Lake Okeechobee inflow projection using an agricultural watershed model
- Yogesh Khare, Environmental Engineer, Everglades Foundation Heuristic assessment of restoration strategies to achieve phosphorus target in Lake Okeechobee
- Rajendra Paudel, Hydrologist, Everglades Foundation
 Water Quality and Ecological Responses to Hydrologic Restoration Options in the Everglades

Sponsored By: INTERA Incorporated

3:30 PM - 5:00 PM

Who Are They? Understanding Audiences to Design or Improve Programs Room 2320

(Moderator: Martha Monroe, School of Forest Resources and Conservation, University of Florida)

- Sadie Hundemer, PhD Student, University of Florida
 Into the minds of stakeholders: Using mental models to enhance communication and collaboration in water policy
- Jyothi Swaroop Bommidi, Graduate Student, University of Florida Exploring Rural and Urban Residents Perceptions on Agriculture Water Use
- Maria C. Morera, Postdoctoral Researcher, University of Florida

 Targeting audience segments for outdoor water conservation: A comparison of high and low irrigators in central and southwest Florida
- Chelsey Crandall, Postdoctoral Research Associate, University of Florida Community-involvement in watershed management: Surveying citizens along the Indian River Lagoon

Sponsored By: OUC-The *Reliable* One

3:30 PM - 5:00 PM

Use of Technology to Shape our Water Future

Room 2365

(Moderator: Kati Migliaccio, Department of Agricultural and Biological Engineering, University of Florida)

- Eric S. McLamore, Associate Professor, Department of Agricultural and Biological Engineering, University of Florida Mobile phone-based nanosensor diagnostics for planetary health
- William R. Eisenstadt, Professor, Department of Electrical and Computer Engineering, University of Florida Wireless Weather Stations and Maintenance Training for Haitian Agriculture



	 Kati Migliaccio, Professor, Department of Agricultural and Biolog University of Florida <i>Using smartphone apps to make water management decisions</i> Thiago Borba Onofre, Graduate Student, University of Florida <i>AgroClimate Wireless Sensor Networks to Improve Resource Use Effic</i> Alina Zare, Associate Professor, Machine Learning & Sensing Lal of Engineering, University of Florida <i>Synthetic Aperture SONAR Soft Segmentation using Possibilistic Func-Means</i> Spon 	ciency in Agriculture b, Herbert Wertheim College
3:30 PM - 5:00 PM	Challenges & Opportunities for Spring System Restoration 3 (Moderator: Todd Osborne, Soil and Water Sciences Department, Univers	Auditorium ity of Florida)
	 Matthew Cohen, Professor, School of Forest Resources and Conservation in Spring-Fed Rivers Thomas Frazer, Director and Professor, University of Florida, Schand Environment From Algae to Alligators: Exploring Trophic Structure in Florida's Sp Sean King, Professional Engineer, Southwest Florida Water Mana Salinity pulses and manatee herbivory as drivers of submerged aquatic community changes in coastal Florida spring systems Robert A. Mattson, Environmental Scientist V, St. Johns River Wa Synoptic Survey of Algal Communities in 14 Florida Spring-Run Streen 	nool of Natural Resources oring-Run Ecosystems agement District c vegetation ater Management District
	Sponsored By: (Gainesville Regional Utilities
5:15 PM - 5:30 PM	Poster Judges Briefing	Room 2320
5:00 PM - 7:30 PM	Reception with appetizers and cash bar	Grand Ballroom
5:30 PM - 7:30 PM	Poster Session (Moderator: Carol Lippincott, University of Florida Water Institute) Poster Themes (see page 23 for list of poster presenters)	Grand Ballroom
	 Agricultural/Silvicultural Water Climate Change/Hydrology Coastal Waters Human Water Needs/Use 	

- Human Water Needs/Use
- Stream/River Dynamics
- Water Quality Water Management
- Wetlands

Sponsored By: OUC-The *Reliable* One Tampa Bay Water Duke Energy Carl S. Swisher Foundation

8:30 AM - 10:00 AM **Urban Water and Nutrient Management 1** (Moderator: Rick Hutton, Gainesville Regional Utilities) Biological Engineering, University of Florida Mitigating Compaction in New Residential Developments: Effects on Urban Vadose Zone Hydrology and Soil Quality Chris Keller, President, Wetland Solutions, Inc. Kanapaha hybrid stormwater/reclaimed water recharge wetland of Florida of Florida Water Policy, Planning and Management 8:30 AM - 10:00 AM Stan Bronson, Executive Director, Florida Earth Foundation Eric Tyler Olsen, Attorney, Hopping Green & Sams Christine Prouty, Research Assistant, University of South Florida A Case Study from Southern Belize Roger William Sims, Partner, Holland & Knight Protecting and restoring Florida's water resources: a legal perspective agriculture sectors Coastal Flooding, Storm Surge and Sea Level Rise 8:30 AM - 10:00 AM (Moderator: Todd Crowl, Florida International University) Matlack Edward Gillin, Student, University of Florida Sangdon So, Postdoctoral Associate, University of Florida Storm surge from Hurricane Irma along the Florida Peninsula Florida

Room 2315

- Eban Bean, Assistant Professor & Extension Specialist, Department of Agricultural and
- Alexander J. Reisinger, Assistant Professor, Soil and Water Sciences Department, University

Development and validation of low-cost sensor platforms for monitoring urban water quality

Sanjay Shukla, Professor, Department of Agricultural and Biological Engineering, University

Hydraulically Circumventing Phosphorus Release from Aged Stormwater Detention Systems

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Room 2320

(Moderator: Spiro Stefanou, Food and Resource Economics Department, University of Florida)

- A Global Strategic Initiative: Actionable Solutions for International Water Management
- Water Supply Planning Road map to Florida's water supply and growth future
- Context-Sensitive Approaches to Water/Wastewater Management in a Coastal Environment:
- Robert D. Teegarden, Water Policy & Research Officer, OUC The Reliable One Carbon Utilization - Florida's potential pathway and processes for converting to the bioeconomy--Research and the prospects for collaborating across the energy, water and

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Room 2335

- Meteotsunami Occurrence and Propagation in the Northeastern Gulf of Mexico
- Matthew Conlin, Graduate School Fellow Research Assistant, University of Florida Investigating the drivers of coastal flooding hazards through observations of coastal landscape evolution: a case study at NASA-Kennedy Space Center, Cape Canaveral,
- Arnoldo Valle-Levinson, Professor, Civil and Coastal Engineering, ESSIE, University of Florida
 - Linkage between sea-level rise hot-spots in the Southeastern United States and the Gulf of Mexico
- Tom Gustafson, Director, Research Programs, Office of Finance and Administration, Florida International University *Islands of South Florida*

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Impacts of Dams and Socioecological Systems 1

Room 2365

(Moderator: James Jawitz, Soil and Water Sciences Department, University of Florida)

- Steve Leitman, , Waters Without Borders
 Performance Metrics: The link between hydrology, engineering and ecology in the Apalachicola/
 Chattahoochee/Flint Basin
- Tiffany Higgins, Environmental Journalist, Translator, Independent Researcher & Journalist Munduruku Responses to Sao Manoel and Teles Pires Hydroelectric Dams in Brazil's Amazon: Indigenous Observations of and Resistance to Hydrologic River Changes due to Dams, Mining, and Soy Production
- David Kaplan, Assistant Professor, Environmental Engineering Sciences, ESSIE, University of Florida
 - Quantifying the ecohydrological impact of dams in the Amazon
- Walterlina Brasil, Professor, UNIR UNIVERSIDADE FEDERAL DE RONDTNIA The Scientific Community in Projects of Dams in the Amazon

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Challenges & Opportunities for Spring System Restoration 4

Auditorium

(Moderator: Jodi Slater, St. Johns River Water Management District)

- Raymond Miller, Project Manager, Dewberry Topobathy Lidar Mapping in Kings Bay
- Michael Alfieri, Principal Hydrogeologist, Water Resource Associates, LLC Groundwater quality source evaluation for the Rainbow Springs group, Marion County, Florida: A pilot program
- Amanda Desormeaux, Graduate Fellow, School of Natural Resources and Environment/Soil and Water Sciences, University of Florida

 Balancing the Nitrogen Budget in Silver Springs: In Situ Measurements of Nitrate Fluxes and Attenuation
- Mary Lusk, Water Resources Specialist, UF/IFAS
 Onsite Wastewater Treatment and Disposal Systems in Florida's Springsheds: Managing the Interrelations between Spring Water Quality and Physical Infrastructure Needs
- Grant Gatson, Technical Professional II, Wood plc, formerly Amec Foster Wheeler Ichetucknee Springshed Water Quality Improvement Project Infiltration Treatment Wetland Creation and Denitrification Wall Implementation

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Refreshment Break

North Hallway

Urban Water and Nutrient Management 2

Room 2315

(Moderator: Rick Hutton, Gainesville Regional Utilities)

- Lynn Barber, Extension Faculty, Florida Friendly Landscaping, University of Florida Community Water Wise Award Program: Hillsborough, Pasco and Pinellas Counties
- Bernardo Cardenas, Research Associate, University of Florida Testing Smart Irrigation Controllers in the Real World
- Stacie Greco, Senior Planner, Alachua County Environmental Protection Department Reducing Residential Landscape Irrigation with Regulatory and Social Marketing Tools
- Georgina M. Sanchez, Graduate Research Assistant, Center for Geospatial Analytics, North Carolina State University
 - Water Use in Urbanized Areas: Effects of Urban Form and Socio-Ecological Drivers
- Nicholas Taylor, State Specialized Extension Agent, University of Florida H2OSAV: A Water Conservation Program Data Hub

Sponsored By: Amec Foster Wheeler

10:30 AM - 12:00 PM 10:30 AM - 12:00 PM

Hydrologic Modeling and Water Management

Room 2320

(Moderator: Sanjay Shukla, Department of Agricultural and Biological Engineering, University of Florida)

- Paul Decker, Student, University of Florida Challenges to Rainfall-Runoff and Transit Time Distribution Modeling Within the Southeastern Coastal Plain, USĂ
- Gary Feng, Research Soil Scientist, USDA-ARS Evaluating Surface Available Water as Alternative and Developing Sustainable Groundwater Management Practices Using Coupled SWAT-MODFLOW Modeling
- Ying Ouyang, Research Hydrologist, USDA Forest Service A Pond and Irrigation Model (PIM) for Simultaneously Predicting Crop Irrigation Demand and Pond Water Availability: A Case Study in Mississippi
- Mathews Jackson Wakhungu, PhD Student and Graduate Assistant, University of South Florida

Managing Interdependent Infrastructures: Water, Stormwater, and Transportation

Jiangxiao Qiu, Assistant Professor, University of Florida Nonlinear response of ecosystem services to groundwater availability under climate extremes

Sponsored By: INTERA Incorporated

10:30 AM - 12:00 PM

Coastal Ecosystems

Room 2335

(Moderator: Todd Crowl, Florida International University)

- Katie Glodzik, PhD Student, University of Florida Geographic drivers of coastal forest die-off and change since 1984 in the Lower Suwannee NWR
- Braulio Juarez, Graduate Student, Civil and Coastal Engineering Department, University of Florida

Tidal and residual circulation in a multiple-inlet deltaic system

- John F. Meeder, Research Professor, Florida International University Enhancing coastal wetland resilience to sea level rise; just add water?
- Beth A. Middleton, Research Ecologist, US Geological Survey Wind and salt: coastal wetland resilience to hurricanes
- Xugi Chen, PhD Student, University of Florida Public Preferences for Adaptation Strategies to Sea Level Rise: The Role of Perception, Knowledge, and Experience

Sponsored By: Peace River Manasota Regional Water Supply Authority

Impacts of Dams on Socioecological Systems 2: Case Study-Kirkpatrick (aka Rodman) Dam Room 2365

(Moderator: Carol Lippincott, University of Florida Water Institute)

- Steven Noll, Master Lecturer, Department of History, University of Florida It's About Dam Time: The Continuing Fight over Rodman Dam and Ocklawaha River Restoration
- Matt Keene, Filmmaker, Pallet House Pictures Lost Springs - A film about springs hidden under the impoundment behind Kirkpatrick (aka Rodman) Dam and revealed during brief water drawdowns
- Tatiana Borisova, Extension Specialist / Associate Professor, Food and Resource Economics Department, University of Florida Public Preferences for Water Resource Management of the Ocklawaha River

Sponsored By: Southern Regional Science Association



10:30 AM - 12:00 PM

Challenges & Opportunities for Spring System Restoration 5

Auditorium

(Moderator: Casey Fitzgerald, St. Johns River Water Management District)

This panel will initially provide an overview of the current water quality and quantity regulatory and management framework influencing Florida's springs. This will be followed by a summary of the major findings of the recently completed, three-year collaborative SJRWMD/UF science effort and identification of some strategic future research options. The panel will close with an open discussion of management implications of these and other recent scientific springs related findings and potential implementation paths forward.

Panel members include:

- Thomas Frick, Director, Division of Environmental Assessment and Restoration, Florida Department of Environmental Protection
- John C. Good, P.E., Chief Professional Engineer, Suwannee River Water Management District
- Dean Dobberfuhl, Bureau Chief, St. Johns River Water Management District
- Thomas K. Frazer, Professor and Director, School of Natural Resources and Environment, University of Florida

Sponsored By: Water & Air Research, Inc.

12:00 PM - 1:15 PM

Lunch (Pick up box lunch in North Hallway)

Grand Ballroom

1:15 PM - 1:30 PM

Presentation of Student Poster Awards

Grand Ballroom

Sponsored By: AWRA Florida Peace River Manasota Regional Water Supply Authority Gainesville Regional Utilities

1:30 PM - 3:00 PM

Telling Water's Story

Grand Ballroom

(Moderator: Cynthia Barnett, UF Graham Center and College of Journalism and Communications; author of Rain, Blue Revolution & Mirage.)

Panelists will explore the power of storytelling to shape a new water ethic, drawing on their experiences telling the story of water via narrative writing, painting, conservation photography, film, 360-degree video and other forms. Scientists and policymakers often talk about water in the language of supply and systems, efficiency and infrastructure, management and nutrients. Most people do not easily relate to these abstractions. But they can and do relate to stories, which can help build a public ethos for water.

- Jennifer Adler Owen, conservation photographer, University of Florida and National Geographic Society
- Sandra Postel, director, Global Water Policy Project; co-creator, Change the Course; author, Last Oasis, Pillar of Sand, Rivers for Life & Replenish
- Margaret Ross Tolbert, artist; author, AQUIFERious; co-producer, Lost Springs.

Sponsored By: Carl S. Swisher Foundation

3:00 PM - 3:30 PM

Refreshment Break

North Hallway



Shaping our Water Future: Recent Progress, New Challenges

Grand Ballroom

(Moderator: Wendy Graham, University of Florida Water Institute)

This panel consists of a leading group of scientists, engineers, managers and policy makers representing agriculture, environmental protection, water management, conservation and academic interests. Panel members will draw on a variety of personal and institutional perspectives to discuss major challenges to Florida's water security and new opportunities to shape Florida's water future. Policies and programs that are currently working well, as well as new initiatives necessary to ensure sustainable water resources will be discussed. The panel will conclude with questions and dialogue with the audience.

- Drew Bartlett, Deputy Secretary, Ecosystem Restoration, Florida Department of Environmental Protection
- Eric Draper, Division Director, Recreation and Parks, Florida Department of Environmental Protection
- Steve Dwinell, Director, Office of Agricultural Water Policy Florida Department of Agriculture and Consumer Services
- Clay Henderson, Executive Director, Stetson University Institute for Water and Environmental Resilience
- Beth Lewis, Freshwater Program Manager, The Nature Conservancy of Florida
- Ann Shortelle, Executive Director, St. Johns River Water Management District

Sponsored By: Duke Energy



Symposium At A Glance

Agenda - Tuesday, February 6, 2018

7:30 AM - 8:30 AM Registration					Posters (Salons AE & DH)	
Registration and che	eck-in				Poster set up	
8:30 AM - 10:00 AN	8:30 AM - 10:00 AM Plenary Session					
Plenary Session -	Grand Ballroom				Posters (Salons AE & DH)	
 Welcome and Introduction Dr. Wendy Graham, Director, University of Florida Water Institute Dr. Jack Payne, Senior Vice President for Agriculture and Natural Resources, University of Florida Harry Sideris, State President—Florida, Duke Energy Florida Keynote: Sandra Postel, Director, Global Water Policy Project Replenish: The Virtuous Cycle of Water and Prosperity 					Poster set up	
10:00 AM - 10:30 A	M Refreshment	Break and Book Sig	gning		North Hallway	
10:30 AM - 12:00 P	M Concurrent O	ral Sessions				
Room 2315	Room 2320	Room 2335	Room 2365	Auditorium	Grand Ballroom	
Forest Ecohydrology	Engaging Stakeholders in Developing Solutions to Water Issues	Water and Regional Science	Agricultural Water and Nutrient Management 1	Challenges & Opportunities for Spring System Restoration 1	Reception setup	
12:00 PM - 1:30 PM	1 Luncheon				Grand Ballroom	
1:30 PM - 3:00 PM	Concurrent Oral	Sessions				
Room 2315	Room 2320	Room 2335	Room 2365	Auditorium	Grand Ballroom	
Wetland Ecosystems	Sharing Information: Effective Communication Strategies	Estuarine Ecology and Water Quality	Agricultural Water and Nutrient Management 2	Challenges & Opportunities for Spring System Restoration 2	Posters available for viewing	
3:00 PM - 3:30 PM	Break				Grand Ballroom	
3:30 PM - 5:00 PM Concurrent Oral Sessions						
Room 2315	Room 2320	Room 2335	Room 2365	Auditorium	Grand Ballroom	
Water Quality Issues	Who Are They? Understanding Audiences to Design or Improve Programs	Challenges & Opportunities for Everglades System Restoration	Use of Technology to Shape our Water Future	Challenges & Opportunities for Spring System Restoration 3	Posters available for viewing	
5:30 PM - 7:30 PM	Poster Session ar	nd Reception			Grand Ballroom	



Symposium At A Glance

Agenda - Wednesday, February 7, 2018

8:30 AM - 10:00 AM Concurrent Oral Sessions				
Room 2315	Room 2320	Room 2335	Room 2365	Auditorium
Urban Water and Nutrient Management 1	Water Policy, Planning and Management	Coastal Flooding, Storm Surge and Sea Level Rise	Impacts of Dams and Socioecological Systems 1	Challenges & Opportunities for Spring System Restoration 4
10:00 AM - 10:30 AM	Break			North Hallway
10:30 AM - 12:00 PM	Concurrent Oral Ses	ssions		
Room 2315	Room 2320	Room 2335	Room 2365	Auditorium
Urban Water and Nutrient Management 2	Hydrologic Modeling and Water Management	Coastal Ecosystems	Impacts of Dams on Socioecological Systems 2: Case Study – Kirkpatrick (aka Rodman) Dam	Challenges & Opportunities for Spring System Restoration 5
12:00 PM - 1:15 PM Lunch (pick up box lunch in North Hallway) Grand Ballroom				

Presentation of Student Poster Awards

Telling Water's Story

(Moderator: Cynthia Barnett, UF Graham Center and College of Journalism and Communications; author of Rain, Blue Revolution & Mirage.)

Panelists will explore the power of storytelling to shape a new water ethic, drawing on their experiences telling the story of water via narrative writing, painting, conservation photography, film, 360-degree video and other forms. Scientists and policymakers often talk about water in the language of supply and systems, efficiency and infrastructure, management and nutrients. Most people do not easily relate to these abstractions. But they can and do relate to stories, which can help build a public ethos for water.

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- Margaret Ross Tolbert, artist; author, AQUIFERious; co-producer, Lost Springs.

1:15 PM - 3:00 PM Presentation of Student Poster Awards and Plenary Session

3:00 PM - 3:30 PM Break North Hallway

3:30 PM - 5:00 PM Plenary Session

Grand Ballroom

Grand Ballroom

Shaping Our Water Future: Recent Progress, New Challenges

(Moderator: Wendy Graham, University of Florida Water Institute)

This panel consists of a leading group of scientists, engineers, managers and policy makers representing agriculture, environmental protection, water management, conservation and academic interests. Panel members will draw on a variety of personal and institutional perspectives to discuss major challenges to Florida's water security and new opportunities to shape Florida's water future. Policies and programs that are currently working well, as well as new initiatives necessary to ensure sustainable water resources will be discussed. The panel will conclude with questions and dialogue with the audience.

- Drew Bartlett, Deputy Secretary, Ecosystem Restoration, FL Dept. of Environmental Protection
- Eric Draper, Division Director, Recreation and Parks, FL Dept. of Environmental Protection
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- Clay Henderson, Executive Director, Stetson University Institute for Water and Environmental Resilience
- Beth Lewis, Freshwater Program Manager, The Nature Conservancy of Florida
- Ann Shortelle, Executive Director, St. Johns River Water Management District



Agricultural/Silvicultural Water

Barrett, Charles

Poster No. 1

UF/IFAS Extension

Inter-Agency partnerships: What makes them work, what makes them challenging, and what is your role as an Extension professional

Biscaia Ribeiro Da Silva, Andre

Poster No. 2

Horticultural Sciences Department, University of Florida

Spatial and temporal distribution of soil N under four irrigation systems as function of N fertilizer rate and timing of application in potatoes

Fu, Xiangju

Poster No. 3

University of Florida

Using sprinkler irrigation to save water for Florida's potato production

Guzmán, Sandra

Poster No. 4

Auburn University - Water Resources Center

Modeling Nutrient Leaching at Farm Scale: A Comparison of Hydrological and Crop Models

Hansen, Kira

Poster No. 5

University of Florida

Compact Bed Geometries for Fresh Produce: Environmental Footprint, Disease, and Economics

He, Fei

Poster No. 6

University of Florida

Accounting for New Agricultural Crops in Water Resource Management: ACase Study from Suwannee River Basin

Osiecka, Anna

Poster No. 7

North Florida Research and Education Center, University of Florida Effects of fertilization and pine straw removal from slash pine plantations on the concentration of ammonium and nitrate-nitrite nitrogen in soil solution

Rath, Sagarika

Poster No. 8

University of Florida

Comparison of SWAT and DSSAT at Field scale evaluation of BMPs on reduction of N leaching as a tool to identify high N load critical areas in a watershed scale BMP evaluation at field scale to reduce nitrogen leachin without impact on yield

Shrestha, Maryada

Poster No. 9

University of Florida

Contrasting water use efficiency and export for two different pine management systems

Sishodia, Rajendra

Poster No. 10

University of Florida

Ranchland Water Retention Effects on Flows and Nutrient Loads in the Northern Everglades

Spellman, Patricia

Poster No. 11

University of Florida

Developing a new regional skew for the Suwannee River basin, northern Florida.

Spellman, Patricia

Poster No. 12

University of Florida

The efficacy of different gridded climate datasets in simulating hydrological output the Santa Fe River basin, northern Florida

Vazquez, Kathleen

Poster No. 13

University of Florida

A Mechanistic Bacterial Transport Model to Inform Food Safety Management of Agricultural Pond Water

Vrachioli, Maria

Poster No. 14

University of Florida

Water's Contribution to Agricultural Productivity under Spatial

Yang, Wei

Poster No. 15

China Agricultural University

Simulating longer-term performance of cover crops on water drainage and nitrogen cycling in corn and soybean rotation with RZWQM2

Climate Change/Hydrology

Barry, Savanna

Poster No. 16

UF/IFAS Nature Coast Biological Station

Evidence and Effects of Climate Change in Florida's Nature Coast

Barry, Savanna

Poster No. 17

UF IFAS Nature Coast Biological Station

Characterizing blue carbon stocks in Thalassia testudinum meadows subjected to different long-term phosphorus supplies: a lignin biomarker approach

Chang, Seungwoo

Poster No. 18

University of Florida Water Institute

Comparison of dynamic versus statistical downscaling of the CCSM4 General Circulation Model predictions for simulating hydrologic response in the Tampa Bay Region.

Crouch, Trey

Poster No. 19

University of Florida

Comparing Climate Change and Anthropogenic Activity effects on Madeira River Watershed Hydrosedimentology

Poster Presentations by Theme

See Poster Layout Map Pg. 22

Langston, Amy University of Florida Poster No. 20

Modeling the Effects of Climate Change and Predation on Northward Expansion of Black Mangroves (Avicennia germinans) into Temperate Salt Marsh

Sanchez, Felipe University of Florida Poster No. 21

Current Status and Health of Apalachicola Bay Oysters: Potential Impacts of Changing Environmental Conditions and Resource Management

Sharp, Misti

Poster No. 22

IFAS, University of Florida

Economic Damages Associated with Water Related Natural Disasters

Tootoonchi, Mohsen

Poster No. 23

University of Florida

Evaluating proxies for seawater in sea level rise and climate change research

Zhou, Jiahua

Poster No. 24

University of Florida

Watershed and estuary based study on climate change effects to ecosystems in Florida and related restoration projects

Coastal Waters

Johnson, Hailey University of Florida Poster No. 25

A Numerical Study to Quantify the Stability of Cuspate Features on Sandy Coastlines in Response to Evolving Wave and Storm Climates

Lee, Duhui Poster No. 26

The Department of Tourism, Recreation and Sports Management, University of Florida

Measuring the equity of beach access for people with disabilities: A case study of Duval county

Mora, Nesmar Poster No. 27

Royal Consulting Services, Inc.

Green Remediation Alternative

Prince, Kimberly Poster No. 28

University of Florida

Red drum ontogenetic shifts in prey network structure drives persistent organic pollutant accumulation.

Human Water Needs/Use

Court, Christa

Poster No. 29

Food and Resource Economics Department, University of Florida

Water-Energy Prototype Model for the NEMS Platform: Thermoelectric Water Demand and its Implications for Regional Electricity Markets

Erfanian, Elham

Poster No. 30

West Virginia University

Long-term debt in water utilities: Does ownership matters? Evidence of West Virginian's Utilities

Jackson, Jennifer

Poster No. 31

University of Florida

Coagulation of Proteins Using Chitosan for Drinking Water Treatment Applications

Jumani, Suman

Poster No. 32

Soil and Water Sciences Department, University of Florida

Reach and catchment-scale impacts of small hydropower projects in a tropical biodiversity hotspot

Konstantis, Tatiana

Poster No. 33

University of Florida

Characterization of waste water samples from Mexico Beach Florida

Ludgate, Nargiza

Poster No. 34

University of Florida

Gender roles in household water resource management in water-scarce countries: Does greywater treatment technology empower rural women in Jordan

Pitre, Vaidehi

Poster No. 35

University of Florida

Life cycle assessment of a pre-treatment process of coagulation using chitin and chitosan as coagulants to reverse osmosis

Stream/River Dynamics

DeVito, Lauren

Poster No. 36

University of Florida

Quantifying spatial and temporal variations in metabolism within and across stream order in a North Central Florida River network



Poster Presentations by Theme

See Poster Layout Map Pg. 22

Kirk, Lily Poster No. 37

University of Florida

Benthic Light Availability Improves Predictions of Riverine Primary Production

Orozco-Lopez, Enrique Poster No. 38

University of Florida

Concepts, Theories and Models of Macropore Flow Through Riparian Vadose Zone.

Reaver, Nathan Poster No. 39

University of Florida

Quantifying and Predicting Three-Dimensional Heterogeneity in Transient Storage Using Roving Profiling

Reaver, Nathan Poster No. 40

University of Florida

Swept Away: Interactions between hydrology and primary producers in Florida Springs

Sucsy, Peter Poster No. 41

St. Johns River Water Management District

Mechanistic Modeling for Water Resources Management of the St. Johns River, FL

Wu, Qianyan Poster No. 42 University of Florida

Valuing the Recreation Benefits of Springs in Florida

Water Quality - Water Management

Adams, Damian Poster No. 43

University of Florida

Water Resource Protection at the Ballot Box: Understanding Voter Preferences and Behavior

De Maria, Maite Poster No. 44

Center for Environmental and Human Toxicology, University of Florida

Nephrotoxic effects of glyphosate and Rodeo \circledR through water exposure on largemouth bass

Freitas, Andressa Poster No. 45

Soil and Water Sciences Department, University of Florida

Variable Consequences of Converting Biosolids to Biochar: Implications for Water Quality

Haluska, Alexander Poster No. 46

University of Florida

Quantification of contaminant mass flux based on colorimetric responses

Hoge, Victoria Poster No. 47

St. Johns River Water Management District

Developing a Biosolids Database for Watershed Modeling Efforts

Holian, Lauren Poster No. 48

University of Florida

Viruses Can't Take the Heat

Krimsky, Lisa Poster No. 49

UF/IFAS

Capitalizing on local capacity to develop a statewide volunteer water monitoring program.

Mohd Jani, Siti Jariani Poster No. 50

University of Florida

Rainy Season Nitrogen Transport in Urban Residential Stormwater Runoff

Qiu, Gary Poster No. 51

Department of Environmental Engineering Sciences

Reduction of Adverse Effects of Tritium in Water

Wetlands

Al-Quraishi, Ali
University of Florida

Poster No. 52

Reducing the Accumulated Salt Concentration by

Changing the Water Hydrodynamic of the Western Al-Hammar Marsh.

Epstein, Joshua Poster No. 53 School of Forest Resources and Conservation, University of Florida

Drivers of Community Composition and Water Quality in North Central Florida Freshwater Wetlands

Henson, Kevin Poster No. 54

University of Florida

The Effects Of Forest Management On The Hydrology Of Isolated Wetlands In North Central Florida Pine Flatwoods.

Li, Xinhu Poster No. 55

Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences

Comparison of characteristic salt crust soils and no crust soils: implications for the effect of flooding on salinization in hyper-arid

Poster Presentations by Theme

Medina, Miles

Poster No. 56

Department of Agricultural and Biological Engineering, University of Florida

Diagnosing drivers of environmental noncompliance in constructed treatment wetlands: A nonlinear dynamics approach

Pazmiño-Hernandez, Marco

Poster No. 57

Department of Agricultural and Biological Engineering, University of Florida

Design and evaluation of a link-node hydrological model to study the spatiotemporal impacts of an interbasin water transfer in the Tempisque-Bebedero watershed, Costa Rica

Quintero, Carlos

Poster No. 58

Soil and Water Sciences Department, University of Florida

Seasonal Carbon Fluxes in a Patterned Karst Wetland and Implications of Hydrology on Basin Expansion in Big Cypress National Preserve

Stahlhut, Katherine

Poster No. 59

US Geological Survey

The Desmids of the Arthur R. Marshall Loxahatchee National Wildlife Refuge

White Jr., Elliott

Poster No. 60

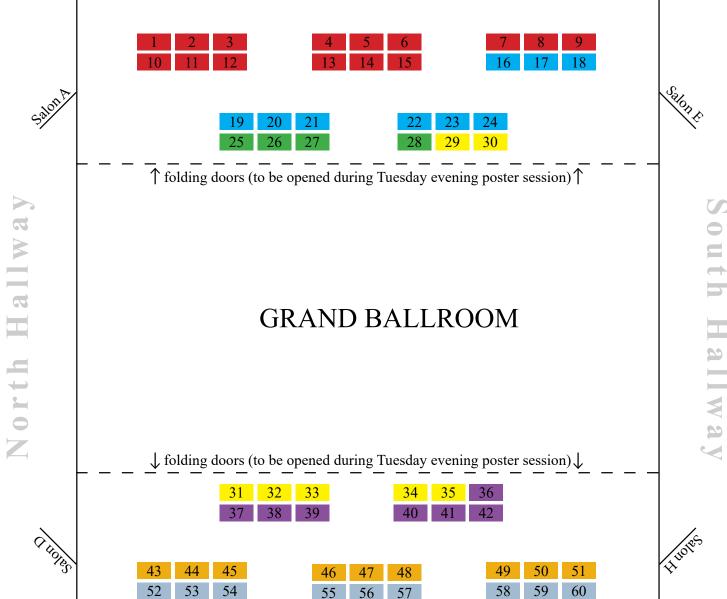
University of Florida

Hurricane Impacts on Coastal Baldcypress Swamps are Storm Dependent and Temporally and Spatially Variable

Notes:



Poster Session Layout - Ballrooms A, D, E, H



POSTER THEME	POSTER NUMBERS
Agricultural/Silvicultural Water	1 - 15
Climate Change/Hydrology	16 - 24
Coastal Waters	25 - 28
Human Water Needs/Use	29 - 35
Stream/River Dynamics	36 - 42
Water Quality - Water Management	43 - 51
Wetlands	52 - 60

Poster Presenters See Poster Layout Map Pg. 22

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Al-Quraishi, Ali	Reducing the Accumulated Salt Concentration by Changing the Water Hydrodynamic of the Western Al-Hammar Marsh.	52
Barrett, Charles	Inter-Agency partnerships: What makes them work, what makes them challenging, and what is your role as an Extension professional	1
Barry, Savanna	Characterizing blue carbon stocks in Thalassia testudinum meadows subjected to different long-term phosphorus supplies: a lignin biomarker approach	17
Barry, Savanna	Evidence and Effects of Climate Change in Florida's Nature Coast	16
Biscaia Ribeiro Da Silva, Andre Luiz	Spatial and temporal distribution of soil N under four irrigation systems as function of N fertilizer rate and timing of application in potatoes	2
Chang, Seungwoo	Comparison of dynamic versus statistical downscaling of the CCSM4 General Circulation Model predictions for simulating hydrologic response in the Tampa Bay Region.	18
Court, Christa	Water-Energy Prototype Model for the NEMS Platform: Thermoelectric Water Demand and its Implications for Regional Electricity Markets	29
Crouch, Trey	Comparing Climate Change and Anthropogenic Activity effects on Madeira River Watershed Hydrosedimentology	19
De Maria, Maite	Nephrotoxic effects of glyphosate and Rodeo ® through water exposure on largemouth bass	44
DeVito, Lauren	Quantifying spatial and temporal variations in metabolism within and across stream order in a North Central Florida River network	36
Epstein, Joshua	Drivers of Community Composition and Water Quality in North Central Florida Freshwater Wetlands	53
Erfanian, Elham	Long-term debt in water utilities: Does ownership matters? Evidence of West Virginian's Utilities	30
Freitas, Andressa	Variable Consequences of Converting Biosolids to Biochar: Implications for Water Quality	45
Fu, Xiangju	Using sprinkler irrigation to save water for Florida's potato production	3
Guzmán, Sandra	Modeling Nutrient Leaching at Farm Scale: A Comparison of Hydrological and Crop Models	4
Haluska, Alexander	Quantification of contaminant mass flux based on colorimetric responses	46
Hansen, Kira	Compact Bed Geometries for Fresh Produce: Environmental Footprint, Disease, and Economics	5
He, Fei	Accounting for New Agricultural Crops in Water Resource Management: A Case Study from Suwannee River Basin	6
Henson, Kevin	The Effects Of Forest Management On The Hydrology Of Isolated Wetlands In North Central Florida Pine Flatwoods.	54
Hoge, Victoria	Developing a Biosolids Database for Watershed Modeling Efforts	47
Holian, Lauren	Viruses Can't Take the Heat	48
Jackson, Jennifer	Coagulation of Proteins Using Chitosan for Drinking Water Treatment Applications	31
Johnson, Hailey	A Numerical Study to Quantify the Stability of Cuspate Features on Sandy Coastlines in Response to Evolving Wave and Storm Climates	25
Jumani, Suman	Reach and catchment-scale impacts of small hydropower projects in a tropical biodiversity hotspot	32
Kirk, Lily	Benthic Light Availability Improves Predictions of Riverine Primary Production	37



Poster Presenters See Poster Layout Map Pg. 22

Author	Poster Title	Poster #
Konstantis, Tatiana	Characterization of waste water samples from Mexico Beach Florida	33
Krimsky, Lisa	Capitalizing on local capacity to develop a statewide volunteer water monitoring program.	49
Langston, Amy	Modeling the Effects of Climate Change and Predation on Northward Expansion of Black Mangroves (Avicennia germinans) into Temperate Salt Marsh	20
Lee, Duhui	Measuring the equity of beach access for people with disabilities: A case study of Duval county	26
Li, Xinhu	Comparison of characteristic salt crust soils and no crust soils: implications for the effect of flooding on salinization in hyper-arid floodplains	55
Ludgate, Nargiza	Gender roles in household water resource management in water-scarce countries: Does greywater treatment technology empower rural women in Jordan	34
Medina, Miles	Diagnosing drivers of environmental noncompliance in constructed treatment wetlands: A nonlinear dynamics approach	56
Mohd Jani, Siti Jariani	Rainy Season Nitrogen Transport in Urban Residential Stormwater Runoff	50
Mora, Nesmar	Green Remediation Alternative	27
Orozco-Lopez, Enrique	Concepts, Theories and Models of Macropore Flow Through Riparian Vadose Zone.	38
Osiecka, Anna	Effects of fertilization and pine straw removal from slash pine plantations on the concentration of ammonium and nitrate-nitrite nitrogen in soil solution	7
Pazmiño-Hernandez, Marco	Design and evaluation of a link-node hydrological model to study the spatiotemporal impacts of an interbasin water transfer in the Tempisque-Bebedero watershed, Costa Rica	57
Pitre, Vaidehi	Life cycle assessment of a pre-treatment process of coagulation using chitin and chitosan as coagulants to reverse osmosis	35
Prince, Kimberly	Red drum ontogenetic shifts in prey network structure drives persistent organic pollutant accumulation.	28
Qiu, Gary	Reduction of Adverse Effects of Tritium in Water	51
Quintero, Carlos	Seasonal Carbon Fluxes in a Patterned Karst Wetland and Implications of Hydrology on Basin Expansion in Big Cypress National Preserve	58
Rath, Sagarika	Comparison of SWAT and DSSAT at Field scale evaluation of BMPs on reduction of N leaching as a tool to identify high N load critical areas in a watershed scale BMP evaluation at field scale to reduce nitrogen leaching without impact on yield	8
Reaver, Nathan	Swept Away: Interactions between hydrology and primary producers in Florida Springs	40
Reaver, Nathan	Quantifying and Predicting Three-Dimensional Heterogeneity in Transient Storage Using Roving Profiling	39
Sanchez, Felipe	Current Status and Health of Apalachicola Bay Oysters: Potential Impacts of Changing Environmental Conditions and Resource Management	21
Sharp, Misti	Economic Damages Associated with Water Related Natural Disasters	22
Shrestha, Maryada	Contrasting water use efficiency and export for two different pine management systems	9
Sishodia, Rajendra	Ranchland Water Retention Effects on Flows and Nutrient Loads in the Northern Everglades	10
Spellman, Patricia	The efficacy of different gridded climate datasets in simulating hydrological output the Santa Fe River basin, northern Florida	12
Spellman, Patricia	Developing a new regional skew for the Suwannee River basin, northern Florida.	11
Stahlhut, Katherine	The Desmids of the Arthur R. Marshall Loxahatchee National Wildlife Refuge	59
Sucsy, Peter	Mechanistic Modeling for Water Resources Management of the St. Johns River, FL	41
Tootoonchi, Mohsen	Evaluating proxies for seawater in sea level rise and climate change research	23

Poster Presenters See Poster Layout Map Pg. 22

Author	Poster Title	Poster #
Vazquez, Kathleen	A Mechanistic Bacterial Transport Model to Inform Food Safety Management of Agricultural Pond Water	13
Vrachioli, Maria	Water's Contribution to Agricultural Productivity under Spatial Adjustments	14
White Jr., Elliott	Hurricane Impacts on Coastal Baldcypress Swamps are Storm Dependent and Temporally and Spatially Variable	60
Wu, Qianyan	Valuing the Recreation Benefits of Springs in Florida	42
Yang, Wei	Simulating longer-term performance of cover crops on water drainage and nitrogen cycling in corn and soybean rotation with RZWQM2	15
Zhou, Jiahua	Watershed and estuary based study on climate change effects to ecosystems in Florida and related restoration projects	24

Notes:



Last Name, First Name	Affiliation	Day	Time	Location
Acharya, Subodh	School of Forest Resources and Conservation, University of Florida	2/6/2018	10:30 AM	Room 2315
Adams, Damian	University of Florida	2/6/2018	10:30 AM	Room 2315
Adler Owen, Jennifer	University of Florida	2/7/2018	1:30 PM	Ballroom
Albertin, Andrea	University of Florida	2/6/2018	1:30 PM	Room 2320
Alfieri, Michael	Water Resource Associates, LLC	2/7/2018	8:30 AM	Auditorium
Asefa, Tirusew	Tampa Bay Water	2/6/2018	10:30 AM	Room 2320
Athearn, Kevin	IFAS Extension, University of Florida	2/6/2018	10:30 AM	Room 2365
Ayankojo, Ibukun	Southwest Florida Research and Education Center, University of Florida	2/6/2018	1:30 PM	Room 2365
Barber, Lynn	Florida Friendly Landscaping, University of Florida	2/7/2018	10:30 AM	Room 2315
Barnett, Cynthia	UF Graham Center and College of Journalism and Communications	2/7/2018	1:30 PM	Ballroom
Barrett, Charles	UF/IFAS Extension	2/6/2018	10:30 AM	Room 2320
Bartlett, Drew	Florida Department of Environmental Protection	2/7/2018	3:30 PM	Ballroom
Bean, Eban	Department of Agricultural and Biological Engineering, University of Florida	2/6/2018	1:30 PM	Room 2365
Bean, Eban	Department of Agricultural and Biological Engineering, University of Florida	2/7/2018	8:30 AM	Room 2315
Bi, Xiang	University of Florida	2/6/2018	10:30 AM	Room 2335
Biscaia Ribeiro da Silva, Andre Luiz	Horticultural Sciences Department, University of Florida	2/6/2018	1:30 PM	Room 2365
Bolson, Jessica	Florida International University	2/6/2018	10:30 AM	Room 2320
Bommidi, Jyothi Swaroop	University of Florida	2/6/2018	3:30 PM	Room 2320
Borger, Ruth	UF/IFAS Communications, University of Florida	2/6/2018	1:30 PM	Room 2320
Borisova, Tatiana	Food and Resource Economics Department, University of Florida	2/7/2018	10:30 AM	Room 2365
Bottcher, Del	Soil and Water Engineering Technology, Inc.	2/6/2018	3:30 PM	Room 2335
Brasil, Walterlina	UNIR - UNIVERSIDADE FEDERAL DE RONDÔNIA	2/7/2018	8:30 AM	Room 2365
Bronson, Stan	Florida Earth Foundation	2/7/2018	8:30 AM	Room 2320
Canion, Andy	St. Johns River Water Management District	2/6/2018	10:30 AM	Auditorium
Cardenas, Bernardo	University of Florida	2/7/2018	10:30 AM	Room 2315
Cassani, John	Calusa Waterkeeper	2/6/2018	1:30 PM	Room 2335
Chen, Xuqi	University of Florida	2/7/2018	10:30 AM	Room 2335
Cohen, Matthew	School of Forest Resources and Conservation, University of Florida	2/6/2018	3:30 PM	Auditorium
Conlin, Matthew	University of Florida	2/7/2018	8:30 AM	Room 2335
Copeland, Rick	Florida Department of Environmental Protection	2/6/2018	3:30 PM	Room 2315
Court, Christa	Food and Resource Economics Department, University of Florida	2/6/2018	10:30 AM	Room 2335
Crandall, Chelsey	University of Florida	2/6/2018	3:30 PM	Room 2320

Last Name, First Name	Affiliation	Day	Time	Location
De Rooij, Rob	University of Florida Water Institute	2/6/2018	10:30 AM	Auditorium
Decker, Paul	University of Florida	2/7/2018	10:30 AM	Room 2320
Desormeaux, Amanda	School of Natural Resources and Environment/Soil and Water Sciences, University of Florida	2/7/2018	8:30 AM	Auditorium
Dobberfuhl, Dean	St. Johns River Water Management District	2/7/2018	10:30 AM	Auditorium
Donaghy, Kieran	Cornell University	2/6/2018	10:30 AM	Room 2335
Draper, Eric	Florida Department of Environmental Protection	2/7/2018	3:30 PM	Ballroom
Dwinell, Steven	Florida Department of Agriculture and Consumer Services	2/7/2018	3:30 PM	Ballroom
Eisenstadt, William	Department of Electrical and Computer Engineering, University of Florida	2/6/2018	3:30 PM	Room 2365
Feng, Gary	USDA-ARS	2/7/2018	10:30 AM	Room 2320
Fitzgerald, Casey	St. Johns River Water Management District	2/6/2018	10:30 AM	Auditorium
Frazer, Thomas	School of Natural Resources and Environment, University of Florida	2/6/2018	3:30 PM	Auditorium
Frazer, Thomas	School of Natural Resources and Environment, University of Florida	2/7/2018	10:30 AM	Auditorium
Frederick, Peter	Department of Wildlife Ecology and Conservation, University of Florida	2/6/2018	1:30 PM	Room 2335
Frick, Thomas	Florida Department of Environmental Protection	2/7/2018	10:30 AM	Auditorium
Fujimoto, Masanori	University of Florida	2/6/2018	3:30 PM	Room 2335
Gatson, Grant	Wood plc, formerly Amec Foster Wheeler	2/7/2018	8:30 AM	Auditorium
Gillin, Matlack	University of Florida	2/7/2018	8:30 AM	Room 2335
Glodzik, Katie	University of Florida	2/7/2018	10:30 AM	Room 2335
Good, P.E., John	Suwannee River Water Management District	2/7/2018	10:30 AM	Auditorium
Graham, Wendy	University of Florida Water Institute	2/6/2018	8:30 AM	Ballroom
Graham, Wendy	University of Florida Water Institute	2/7/2018	3:30 PM	Ballroom
Greco, Stacie	Alachua County Environmental Protection Department	2/7/2018	10:30 AM	Room 2315
Guerra, Gisselle	University of Florida	2/6/2018	1:30 PM	Room 2335
Gustafson, Tom	Florida International University	2/7/2018	8:30 AM	Room 2335
Hahus, lan	University of Florida	2/6/2018	1:30 PM	Room 2315
Henderson, Clay	Stetson University Institute for Water and Environmental Resilience	2/7/2018	3:30 PM	Ballroom
Hendrickson, John	St. Johns River Water Management District	2/6/2018	3:30 PM	Room 2315
Hensley, Robert	University of Florida	2/6/2018	1:30 PM	Auditorium
Her, Younggu	Tropical Research and Education Center/Agricultural & Biological Engineering, University of Florida	2/6/2018	3:30 PM	Room 2335
Higgins, Tiffany	Independent Researcher & Journalist	2/7/2018	8:30 AM	Room 2365
Hundemer, Sadie	University of Florida	2/6/2018	3:30 PM	Room 2320



Last Name, First Name	Affiliation	Day	Time	Location
Inglett, Patrick	University of Florida	2/6/2018	10:30 AM	Auditorium
Jawitz, James	Soil and Water Sciences Department, University of Florida	2/6/2018	10:30 AM	Auditorium
Jones, Gregg	Cardno	2/6/2018	3:30 PM	Room 2315
Juarez, Braulio	Civil and Coastal Engineering Department, University of Florida	2/7/2018	10:30 AM	Room 2335
Kakarla, Sri Charan	University of Florida - SWFREC	2/6/2018	1:30 PM	Room 2365
Kaplan, David	Environmental Engineering Sciences, ESSIE, University of Florida	2/6/2018	1:30 PM	Auditorium
Kaplan, David	Environmental Engineering Sciences, ESSIE, University of Florida	2/7/2018	8:30 AM	Room 2365
Keene, Matt	Pallet House Pictures	2/7/2018	10:30 AM	Room 2365
Keller, Chris	Wetland Solutions, Inc.	2/7/2018	8:30 AM	Room 2315
Khadka, Mitra	University of Florida	2/6/2018	1:30 PM	Auditorium
Khare, Yogesh	Everglades Foundation	2/6/2018	3:30 PM	Room 2335
King, Sean	Southwest Florida Water Management District	2/6/2018	3:30 PM	Auditorium
Koirala, Unmesh	School of Forest Resources and Conservation, University of Florida	2/6/2018	10:30 AM	Room 2365
Leitman, Steve	Waters Without Borders	2/7/2018	8:30 AM	Room 2365
Lewis, Beth	The Nature Conservancy of Florida	2/7/2018	3:30 PM	Ballroom
Lippincott, Carol	University of Florida Water Institute	2/7/2018	10:30 AM	Room 2365
Lotero, Laura	University of South Florida	2/6/2018	1:30 PM	Room 2315
Lusk, Mary	UF/IFAS	2/7/2018	8:30 AM	Auditorium
Mattson, Robert	St. Johns River Water Management District	2/6/2018	3:30 PM	Auditorium
McCurley, Kathryn	University of Florida	2/6/2018	10:30 AM	Room 2315
McLamore, Eric	Department of Agricultural and Biological Engineering, University of Florida	2/6/2018	3:30 PM	Room 2365
Meeder, John	Florida International University	2/7/2018	10:30 AM	Room 2335
Middleton, Beth	US Geological Survey	2/7/2018	10:30 AM	Room 2335
Migliaccio, Kati	Department of Agricultural and Biological Engineering, University of Florida	2/6/2018	3:30 PM	Room 2365
Miller, Raymond	Dewberry	2/7/2018	8:30 AM	Auditorium
Milligan, Lara	UF/IFAS Extension Pinellas County	2/6/2018	1:30 PM	Room 2320
Mills, Brenda	South Florida Water Management District	2/6/2018	10:30 AM	Room 2320
Minogue, Patrick	University of Florida	2/6/2018	10:30 AM	Room 2315
Morera, Maria	University of Florida	2/6/2018	3:30 PM	Room 2320
Mossa, Joann	Geography, University of Florida	2/6/2018	1:30 PM	Room 2315
Noll, Steven	Department of History, University of Florida	2/7/2018	10:30 AM	Room 2365
Oliveira Fiorini, Ana Carolina	University of Florida	2/6/2018	10:30 AM	Room 2315
Olsen, Eric	Hopping Green & Sams	2/7/2018	8:30 AM	Room 2320
Onofre, Thiago	University of Florida	2/6/2018	3:30 PM	Room 2365

Last Name, First Name	Affiliation	Day	Time	Location
Osborne, Todd	Soil and Water Sciences Department, University of Florida	2/6/2018	1:30 PM	Auditorium
Ouyang, Ying	USDA Forest Service	2/7/2018	10:30 AM	Room 2320
Papacek, Joshua	University of Florida	2/6/2018	1:30 PM	Room 2335
Paudel, Rajendra	Everglades Foundation	2/6/2018	3:30 PM	Room 2335
Payne, Jack	UF/IFAS	2/6/2018	8:30 AM	Ballroom
Phelps, Sara	The Whitney Laboratory for Marine Bioscience, University of Florida	2/6/2018	3:30 PM	Room 2315
Postel, Sandra	Global Water Policy Project	2/6/2018	8:30 AM	Ballroom
Postel, Sandra	Global Water Policy Project	2/7/2018	1:30 PM	Ballroom
Prouty, Christine	University of South Florida	2/7/2018	8:30 AM	Room 2320
Qiu, Jiangxiao	University of Florida	2/7/2018	10:30 AM	Room 2320
Reisinger, Alexander	Soil and Water Sciences Department, University of Florida	2/7/2018	8:30 AM	Room 2315
Sanchez, Georgina	Center for Geospatial Analytics, North Carolina State University	2/7/2018	10:30 AM	Room 2315
Searcy, Jennison	UF/IFAS Program for Resource Efficient Communities	2/6/2018	10:30 AM	Room 2320
Shortelle, Ann	St. Johns River Water Management District	2/7/2018	3:30 PM	Ballroom
Shukla, Sanjay	Department of Agricultural and Biological Engineering, University of Florida	2/7/2018	8:30 AM	Room 2315
Sideris, Harry	Duke Energy Florida	2/6/2018	8:30 AM	Ballroom
Sims, Roger	Holland & Knight	2/7/2018	8:30 AM	Room 2320
So, Sangdon	University of Florida	2/7/2018	8:30 AM	Room 2335
Sobczak, Robert	Big Cypress National Preserve	2/6/2018	1:30 PM	Room 2315
Sukop, Michael	Florida International University	2/6/2018	1:30 PM	Room 2320
Szafraniec, Mary	Amec Foster Wheeler	2/6/2018	3:30 PM	Room 2315
Taylor, Nicholas	University of Florida	2/7/2018	10:30 AM	Room 2315
Teegarden, Robert D.	OUC - The Reliable One	2/7/2018	8:30 AM	Room 2320
Tolbert, Margaret	AQUIFERious	2/7/2018	1:30 PM	Ballroom
Valle-Levinson, Ar- noldo	Civil and Coastal Engineering, ESSIE, University of Florida	2/7/2018	8:30 AM	Room 2335
Vrachioli, Maria	University of Florida	2/6/2018	1:30 PM	Room 2365
Wakhungu, Mathews	University of South Florida	2/7/2018	10:30 AM	Room 2320
Wessel, Mike	Janicki Environmental	2/6/2018	1:30 PM	Room 2335
Zamora Re, Maria	University of Florida	2/6/2018	10:30 AM	Room 2365
Zare, Alina	University of Florida	2/6/2018	3:30 PM	Room 2365
Ziolkowska, Jad	University of Oklahoma	2/6/2018	10:30 AM	Room 2335
Zotarelli, Lincoln	University of Florida	2/6/2018	10:30 AM	Room 2365



Notes:





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