

**UF Water Institute Symposium: Sustainable Water Resources: Florida Challenges, Global Solutions**  
**Hilton University of Florida Conference Center, Gainesville Florida**  
**Agenda**

Tuesday, February 26, 2008	
4:00pm-8:00pm	Symposium Check-in
Wednesday, February 27, 2008	
7:30am-7:30pm	Symposium Check-in
8:30am-10:00am	<p><b>Plenary Session: Welcome and Keynote Address</b> <span style="float:right"><b>BALLROOM A</b></span>  <i>(moderator: Wendy Graham, Director, University of Florida Water Institute)</i></p> <ul style="list-style-type: none"> <li>• Wendy Graham, Director, University of Florida Water Institute</li> <li>• J. Bernard Machen, President, University of Florida</li> <li>• Jeffrey Lyash, President and Chief Executive Officer, Progress Energy Florida</li> <li>• Keynote Speaker: Peter Gleick, President and Co-founder, Pacific Institute, <a href="#">Water in the 21st Century: Real Problems; Real Solutions</a></li> </ul> <p align="right"><b>Sponsored by: Progress Energy</b></p>
10:00am-10:30am	<p>Break</p> <p align="right"><b>Sponsored by: Carollo Engineers</b></p>
10:30am-12:30pm	<p><b>Plenary Session: Complex Challenges to Sustainable Water Resources</b> <span style="float:right"><b>BALLROOM A</b></span>  <i>(moderator: Wendy Graham, Director, University of Florida Water Institute)</i></p> <ul style="list-style-type: none"> <li>• Matthew C. Larsen, Chief Scientist for Hydrology, US Geological Survey <a href="#">Water Resources, Population Growth, and Land Use Change</a></li> <li>• Neil Ward, Director, Decision Systems Research, International Research Institute for Climate and Society, The Earth Institute at Columbia University, <a href="#">Climate Variability and Climate: Seeking the Meaning for Water Resources Management</a></li> <li>• Lora Fleming Co-Director of the NSF NIEHS Oceans and Human Health Center, University of Miami, <a href="#">Water and Public Health in Florida</a></li> <li>• Bron Taylor, Associate Professor, Department of Religion, University of Florida <a href="#">Thinking like a Watershed: Spirituality, Ethics &amp; Watershed Organizing</a></li> </ul> <p align="right"><b>Speakers Sponsored by:</b>  <b>Tampa Bay Water,</b>  <b>South East Climate Consortium</b>  <b>The Frances C. and William P. Smallwood Foundation</b></p>
12:30pm-1:30pm	Lunch (included)
1:30pm-3:00pm	<p><b>Concurrent Oral Presentations: Challenge - Population Growth and Land Use Impacts to Water Resource Sustainability</b> <span style="float:right"><b>BALLROOM B</b></span>  <i>(moderator: Ramesh Reddy, Graduate Research Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Margaret (Peggy) Carr, Professor, Associate Dean for Students and Academic Affairs, University of Florida College of Design, Construction and Planning, <a href="#">Florida's Other Limited Resource: Land</a></li> <li>• Roger Sims, Holland &amp; Knight LLP, <a href="#">The Interface of Water Use and Growth Management</a></li> <li>• David York, York Water Circle, Tallahassee, Florida, <a href="#">Water Reuse: The Florida Model</a></li> </ul>

1:30pm-3:00pm	<p><b>Concurrent Oral Presentations: Challenge - Climate Variability and Climate Change Factors Impacting Water Resource Sustainability</b> <b>DOGWOOD</b>  <i>(moderator: James Jones, Distinguished Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• David Zierden, State Climatologist, Center for Ocean – Atmospheric Prediction Studies, Florida State University, <a href="#">Florida's Climate: From El Nino to Climate Change</a></li> <li>• Alison Adams, Sr. Manager, Source Rotation &amp; Evaluation Protection, Tampa Bay Water, <a href="#">Dealing with Climate Uncertainty in Operating a Reliable Water Supply System</a></li> <li>• Jayantha Obeysekera, Director, Hydrologic &amp; Environmental Systems Modeling, South Florida Water Management District, <a href="#">Incorporation of Climatic Variability for Management of Water Resources in South Florida</a></li> </ul>
1:30pm-3:00pm	<p><b>Concurrent Oral Presentations: Challenge - Public, Wildlife and Ecosystem Health and Water Resource Sustainability</b> <b>BALLROOM C</b>  <i>(moderator: Natalie Freeman, Associate Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Glenn Morris, Director, Emerging Pathogens Institute, University of Florida <a href="#">...And is the Water Safe?</a></li> <li>• Marilyn Spalding, Research Associate Professor, Department of Infectious Diseases and Pathology, College of Veterinary Medicine, University of Florida, <a href="#">Florida's Wetlands and Wildlife Health</a></li> <li>• Louis Guillette, Professor, Department of Zoology, University of Florida, <a href="#">Aquatic Contaminants and Reproductive Health: Lessons Learned from Wildlife</a></li> <li>•</li> </ul>
3:00pm-3:15pm	<p>Break</p> <p style="text-align: right;"><b>Sponsored by: PBS&amp;J</b></p>
3:15pm-5:00pm	<p><b>Concurrent Oral Presentations: Population Growth and Land Use Impacts to Water Resource Sustainability</b> <b>BALLROOM B</b>  <i>(moderator: Ramesh Reddy, Graduate Research Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Mark Clark, Associate Professor, Soil and Water Science Department, University of Florida, <a href="#">Identifying and Overcoming Barriers to Implementation of Low Impact Development Practices in Florida</a></li> <li>• Thomas Ruppert, Assistant in Environmental Law, UF IFAS and Levin College of Law, <a href="#">From Rooftop to River: The Legal and Administrative Basis for Managing Stormwater through Low-Impact Development</a></li> <li>• Charles Fletcher, Attorney, de la Parte &amp; Gilbert, P.A., <a href="#">Water Rights in Florida: Public Perception v. Legal Reality</a></li> <li>• Matthew Cohen, Assistant Professor, School of Forest Resources and Conservation, University of Florida, <a href="#">The Hydrologic Implications of Large Scale Biofuel Production</a></li> <li>• James Jawitz, Associate Professor, University of Florida Soil and Water Science Department, <a href="#">The Hydraulic Cycle in Florida's Metropolitan Areas</a></li> <li>• Larry Parsons, Professor, UF Soil and Water Science Department, <a href="#">Reclaimed Water – A Sustainable Source for Florida's Growing Water Demands</a></li> <li>•</li> </ul>
3:15pm-5:00pm	<p><b>Concurrent Oral Presentations: Climate Variability &amp; Climate Change</b> <b>DOGWOOD</b>  <i>(moderator: James Jones, Distinguished Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Guillermo Baigorria, Post-Doctoral Research Associate, Agricultural and Biological Engineering, University of Florida, <a href="#">Changes in rainfall patterns in the Southeast USA</a></li> <li>• Jennifer Jacobs, Associate Professor, Department of Civil Engineering, University of New Hampshire, <a href="#">Evapotranspiration and Florida Water Sustainability: Insights from a</a></li> </ul>

	<p><a href="#">Decade of Research</a></p> <ul style="list-style-type: none"> <li>• Jack Kiefer, Senior Associate, Hazen and Sawyer, P.C. , <a href="#">A Risk Management Framework for Evaluating Climate Change Impacts on Water Supply Reliability</a></li> <li>• Kathleen O’Neil, Senior Project Manager, PBS&amp;J, Inc. <a href="#">Dynamic Decision Support System (D2S2) for Regional Water Resource Management</a></li> <li>• Kelly Stevens, Meteorologist, Division of Air Resource Management, Florida Department of Environmental Protection, <a href="#">Drought and its Relationship to Long-term Climatological Indicators in the Apalachicola-Chattahoochee-Flint River Basin</a></li> <li>• Jessica Bolson, Research Assistant, Rosenstiel School of Marine and Atmospheric Science, University of Miami, <a href="#">Integrated Water Resources Planning for South Florida -</a></li> </ul>
3:15pm-5:00pm	<p><b>Concurrent Oral Presentations: Public, Wildlife &amp; Ecosystem Health and Water Resource Sustainability</b> <span style="float: right;"><b>BALLROOM C</b></span></p> <p><i>(moderator: Natalie Freeman, Associate Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Elizabeth Anderson, Deputy Director, Global Water for Sustainability Program, <a href="#">Addressing the Intertwined Issues that Affect Water Resource Sustainability Worldwide: Lessons from South America and East Africa</a></li> <li>• Sarah Lynch, Director Agriculture Markets, World Wildlife Fund, <a href="#">Valuing Ecosystem Services on Florida Ranchlands: Lessons Learned</a></li> <li>• Susan Gray, Deputy Director, Watershed Management Department, South Florida Water Management District, <a href="#">Can One Lake Be Everything to Everyone? The Challenge of Managing Lake Okeechobee for Multiple Users.</a></li> <li>• Vimala Nair, Research Associate Professor, Soil and Water Science Department, University of Florida <a href="#">Phosphorus Issues and Protocol Development for Risk Assessment in Florida Watersheds</a></li> <li>• Tom Frazer, Associate Professor, Department of Fisheries and Aquatic Sciences, University of Florida, <a href="#">Is Increased Nutrient Delivery Compromising the Ecological Integrity of Florida’s Spring-fed Coastal Rivers?</a></li> <li>• Ann Shortelle, Chief Scientist, MACTEC Engineering and Consulting, Inc., <a href="#">Scorecard for Chemical Treatments to Control Nutrients in Surface Water Restorations in Florida</a></li> </ul>
3:15pm-5:00pm	<p><b>Concurrent Oral Presentations: Water Quality Impacts and Implications</b> <span style="float: right;"><b>LIVEOAK</b></span></p> <p><i>(moderator: Joseph Delfino, Professor, University of Florida)</i></p> <ul style="list-style-type: none"> <li>• Rick Copeland, Geologist, Florida Geological Survey, <a href="#">Potential for Statewide Saline Encroachment of Florida Spring Water</a></li> <li>• Jim Heffernan, Post-Doctoral Research Associate, School of Forest Resources and Conservation, University of Florida, <a href="#">Re-evaluating the Relationship between Nitrogen and Algae Blooms in Florida Springs</a></li> <li>• Chance Lauderdale, Professional Engineer, Carollo Engineers, <a href="#">Monitoring for Microcontaminants in an Advanced Wastewater Treatment Facility</a></li> <li>• Dale Griffin, Environmental and Public Health Microbiologist, US Geological Survey, <a href="#">Microbiological perspectives – The impact of wastewater disposal systems on Florida’s coastal waters</a></li> <li>• Erich Marzolf, Technical Program Manager, St. Johns River Water Management District, <a href="#">Will Increased Reliance On Reuse Further Impair Our Waterways?</a></li> <li>• Peter Sheng, Professor, Coastal and Civil Engineering, University of Florida, <a href="#">Hypoxia In Estuarine &amp; Coastal Waters</a></li> </ul>

5:00pm -7:30pm	<b>Poster Presentations and Reception</b> (included) <b>BALLROOM A and HAWTHORNE</b> <b>Poster Map</b> <a href="#">Alphabetic listing of Poster Authors</a> <ul style="list-style-type: none"> <li>• Session 1 - 5:30 to 6:30 (includes Best Graduate Student Poster Competition)</li> <li>• Session 2 - 6:30 to 7:30</li> </ul> <i>(moderator: Kathleen McKee, Research Coordinator, UF Water Institute)</i>  6 Poster Sections: <ul style="list-style-type: none"> <li>• <b>Population Growth and Land Use Change</b></li> <li>• <b>Climate Variability and Climate Change Factors</b></li> <li>• <b>Public Health, Wildlife Health and Ecosystem Health</b></li> <li>• <b>Nutrient Enrichment and Emerging Contaminants</b></li> <li>• <b>Public Perceptions, Values, Attitudes and Socioeconomic Factors</b></li> <li>• <b>Water Availability and Allocation</b></li> </ul> <p style="text-align: right;"><b>Sponsored by: Progress Energy</b></p>			
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Thursday, February 28, 2008	
7:30am-3:00pm	Symposium Check-in <span style="float: right;"><b>PRE-FUNCTION AREA</b></span>
8:30am-10:00am	<p><b>Concurrent Panel: Florida Water Availability And Water Needs In 2020, 2060</b> <span style="float: right;"><b>BALLROOM B</b></span>  <i>(moderator: Steve Seibert, Executive Director, The Century Commission for a Sustainable Florida)</i></p> <p><b>Summary description of panel:</b> Florida’s economic and social development over the past several decades has been fueled by its climate and abundant water resources. Increased population, rapid urban development, large agricultural water demands, and the need to protect natural resources, however, have led to water availability problems in many parts of the State. Each panelist will be asked to discuss barriers and bridges to understanding statewide water availability in 2020 and 2060; the water needs of various users (agriculture, urban, industrial, ecosystems) in 2020 and 2060; and the successes/failures of programs and policies that promote water resource sustainability (MFLs, water conservation, demand management, alternative water supplies, reuse, etc). Targeted questions and discussion will follow.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Janet Llewellyn, Director, Division of Water Resource Management, Florida Department of Environmental Protection</li> <li>• Chuck Aller, Director, Office of Water Policy, Florida Department of Agriculture and Consumer Services</li> <li>• Don Polmann, Director, Science &amp; Engineering, Tampa Bay Water</li> <li>• Bill Pine: Assistant Professor, Department of Fisheries and Aquatic Sciences, University of Florida</li> <li>• Steve Kurcan, Grady Pridgen, Inc.</li> </ul> <p style="text-align: right;"><b>Sponsored by: Tampa Bay Water</b></p>
8:30am-10:00am	<p><b>Concurrent Panel: Sources and Impacts of Emerging Contaminants</b> <span style="float: right;"><b>DOGWOOD</b></span>  <i>(moderator: Joseph Delfino, Professor, University of Florida)</i></p> <p><b>Summary description of panel:</b> Emerging contaminants are impacting human and ecological health. Wastewater and drinking water treatment is becoming increasingly challenged. What is</p>

	<p>truly meant by emerging contaminants and how seriously are they taken? What makes contaminants ‘emerging’? Are “emerging” contaminants new or just newly recognized? Are “emerging contaminants always emerging? How should we be positioning ourselves through science, policy and public awareness to understand and address emerging contaminants? How can we ensure that the best available scientific information is used to establish priorities and make management decisions regarding water resources? What role do experiments, observations, lab work etc play in this? Other approaches? Key Question for panelists - “What are the major threats and current responses to emerging contaminants in water and how much does it matter?”</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Andy Kane, Associate Director, Emerging Pathogens Institute, University of Florida</li> <li>• Nancy Denslow, Scientist, Department of Biochemistry and Molecular Biology, University of Florida</li> <li>• Brian Katz: Hydrologist, US Geological Survey</li> <li>• Timothy Fitzpatrick, Administrator, Chemistry Section, Florida Department of Environmental Protection</li> </ul> <p style="text-align: right;"><b>Sponsored by: Soil and Water Engineering Technology, Inc.</b></p>
8:30am-10:00am	<p><b>Concurrent Panel: “Water Transfers:” Who Decides? BALLROOM C</b>  <b>People, Policy And Politics</b>  <i>(moderator: Katrina Schwartz, Assistant Professor, University of Florida)</i></p> <p><b>Summary description of panel:</b> “Water wars” have long been a fact of life in the American Southwest, and now they may be in the offing for Florida. With population and water consumption continuing to grow rapidly, officials across the state are looking at the costs and benefits of water transfers in Florida. How and by whom are such critical decisions about water transfers made in Florida? This panel discussion will examine the role of various stakeholders in the decision-making process, and assess the possible social and economic impacts of water transfers on different communities and demographic groups.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Christine Klein, Professor of Law University of Florida Levin College of Law</li> <li>• Melissa Meeker, South Florida Water Management District Governing Board Member</li> <li>• Tom Swihart, Administrator, Office of Water Policy Florida Department of Environmental Protection</li> <li>• Hal Wilkening, Director, Department of Resource Management St. Johns River Water Management District</li> <li>• Woody Wodraska, National Director of Water Resources, PBS&amp;J, Inc.</li> </ul>
10:00am-10:30am	<p>Break</p> <p style="text-align: right;"><b>Sponsored by: CH2M Hill</b></p>
10:30am-12:00pm	<p><b>Concurrent Panel: Water Conservation as an Alternative Water Supply BALLROOM B</b>  <i>(moderator: David Bracciano, Demand Management Coordinator, Tampa Bay Water)</i></p> <p><b>Summary description of panel:</b> Competition and cost to develop limited conventional and other alternative supplies continue to rise. The use and implementation of cost effective quantifiable conservation methods, programs and measures can significantly reduce the need for these conventional supplies and increase available resources for its best use. What role should water conservation and increased efficiency play in the development and use of water supplies? What strategies and evaluations are necessary to identify the availability and cost of conserved water and in what major sectors of demand? How does future water use efficiency potential fit</p>

	<p>in supply scenarios? What role does the private sector play in increasing efficiency of use? This panel will identify the methodologies that can and have been used to successfully lower existing and future average and peak demands, what potential existing in various sectors, applicable research that can quantifiably affect future and existing demands and how both public and private entities can play a significant role in increased efficiency and conservation of water resources.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Bruce Adams, Director of Water Management, EMC Engineers, Inc.</li> <li>• Jane Bucca, Program Manager-Alternative Water Supply and Conservation, South Florida Water Management District</li> <li>• Michael Dukes, Associate Professor, Department of Agricultural and Biological Engineering, University of Florida</li> <li>• Pierce Jones, Professor, Department of Agricultural and Biological Engineering, University of Florida, Program for Resource Efficient Communities</li> <li>• Jack Kiefer, Senior Associate, Hazen and Sawyer, P.C.</li> </ul> <p style="text-align: right;"><b>Sponsored by: Conserve Florida Water Conservation Clearinghouse</b></p>
10:30am-12:00pm	<p style="text-align: right;"><b>DOGWOOD</b></p> <p><b>Concurrent Panel: Nutrient Enrichment of Surface, Ground and Coastal Waters</b>  <i>(moderator: Peter Frederick, Research Professor, University of Florida)</i></p> <p><b>Summary description of panel:</b> Nutrient enrichment of Florida’s waters has enormous potential to affect ecosystems and humans by altering water quality characteristics, radically simplifying plant and animal community composition, and fomenting a number of important wildlife and human disease agents. In addition, there is very significant potential for nutrient enrichment to affect the state’s economy through effects on agriculture, human health, commercial fish and shellfish harvest, outdoor recreation and tourism, to name a few. This panel is composed of experts who have grappled directly with effects of nutrients in surface, ground and nearshore waters, often at large spatial scales. They will address the current certainties and uncertainties in predicting effects of nutrient enrichment in Florida, and discuss alternative methods to significantly reduce nutrient enrichment, with a goal of envisioning likely nutrient effects in 2030. The panel will also take questions directly from the audience as time allows.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Jerry Brooks, Deputy Director, Div. of Water Resource Management, Florida Dept of Environmental Protection</li> <li>• Peter Doering, Chief Environmental Scientist, Coastal Systems Division, South Florida Water Management District</li> <li>• Karl Havens, Professor and Chair, Department of Fisheries and Aquatic Sciences, University of Florida</li> <li>• Fred Sklar, Chief Environmental Scientist, Everglades Division, South Florida Water Mgmt. District</li> </ul> <p style="text-align: right;"><b>Sponsored by: Taylor Engineering</b></p>
10:30am-12:00pm	<p style="text-align: right;"><b>BALLROOM C</b></p> <p><b>Concurrent Panel: Public Perceptions and Practice: A Key to Sustaining Water Resources</b>  <i>(moderator: Martha Monroe, Associate Professor, University of Florida)</i></p> <p><b>Summary description of panel:</b> Managing water quality and water quantity is a process that involves research, policy, and the public. Public support can enable the effective implementation of policies and regulations. In addition the solutions to water challenges often depend upon the decisions and actions by individuals who use, conserve, and manage local water resources.</p>

	<p>Designing programs that effectively inform, education, motivate, and empower the public is a critical complement to research and policy. Panelists will provide case studies that describe effective strategies for reaching and engaging the public, discuss the theories that drive their practices, and provide recommendations for others who wish to develop programs for the public.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Elaine Andrews, Director University of Wisconsin Environmental Resources Center</li> <li>• Linda Burnette, Director, Office of Communications &amp; Governmental Affairs, St. Johns River Water Management District</li> <li>• Darrell Smith, Coordinator, Suwannee River Partnership, Florida Dept of Agriculture and Consumer Services</li> <li>• Martha Strawn, Author/Artist University of North Carolina, Charlotte</li> </ul>
12:00pm-1:00pm	Lunch (included)
1:00 pm-1:15pm	<p><b>Plenary Presentation: Best Graduate Student Poster Awards</b> <b>BALLROOM A</b></p> <p style="text-align: right;"><b>Student poster award sponsored by: The Frances C. and William P. Smallwood Foundation</b></p>
1:15 pm-1:45pm	<p><b>Plenary Session: Symposium Synthesis, A Bird's Eye View</b> <b>BALLROOM A</b> (moderator: <i>T. Ankersen, Legal Skills Professor, University of Florida</i>)</p> <ul style="list-style-type: none"> <li>• Mark Brown, Associate Professor, University of Florida Dept of Environmental Engineering Sciences</li> <li>• Richard Hamann, Associate in Law, University of Florida Levin College of Law</li> <li>• Sanford Berg, Director of Water Studies, Public Utility Research Center, Warrington College of Business, University of Florida</li> </ul>
1:45pm-3:15pm	<p><b>Florida Policies and Programs: Challenges and Opportunities</b> <b>BALLROOM A</b> (moderator: <i>Les Thiele, Professor, University of Florida</i>)</p> <p><b>Summary Description:</b> This panel consists of three Executive Directors and one Deputy Executive Director of four Florida Water Management Districts, as well as the Deputy Secretary of Florida Department of Environmental Protection (FDEP). Panel discussants will be addressing the most significant challenges to managing Florida's water resources today and in the foreseeable future. They will also identify those policies and programs that are currently working well, and those policies and programs that need to be developed to ensure successful water management for the coming decades.</p> <ul style="list-style-type: none"> <li>• Mimi Drew, Deputy Secretary for Regulatory Programs and Energy, Florida Department of Environmental Protection</li> <li>• Kirby Green, Executive Director, St. Johns River Water Management District</li> <li>• Chip Merriam, Deputy Executive Director for Water Resources, South Florida Water Management District</li> <li>• David Moore, Executive Director, South West Florida Water Management District</li> <li>• David Still, Executive Director, Suwannee River Water Management District</li> </ul> <p style="text-align: right;"><b>Sponsored by: Poseidon Resources</b></p>
3:15pm-3:45pm	Break
3:45pm-4:45pm	<p><b>Plenary Session: Town Hall:</b> <b>BALLROOM A</b> <b>Implications for Florida's Research and Education Agenda - Information, Technology</b></p>

	<p><b>and Policy Needs for Sustainable Water Resources</b>  <i>(moderator: Wendy Graham, Director, University of Florida Water Institute)</i></p> <p>Open questions/dialogue with the audience, Symposium Synthesis team and the Policies and Programs panelists.</p>
4:45pm-5:00pm	<p><b>Wrap up and Future Action</b>  <i>(moderator: Wendy Graham, Director, University of Florida Water Institute)</i></p>
6:00pm-9:00pm	<p>Opening Reception of the 14th Annual University of Florida Levin College of Law <a href="#">Public Interest Environmental Conference, UNIVERSITY OF FLORIDA President's House.</a></p>