

December 2013

The Droplet

Florida Water Environment Association **Integrated Water Resources Committee**

Volume 5 Issue 4

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FWEA Integrated Water Resources Seminar "Sustainable Solutions Utilities are Implementing for Integrated Water Resources" January 30, 2014

Register: http://www.fwea.org/integrated water resources sem.php

Speakers and Presentation Topics

Topic: Regulatory/Numeric Nutrient Criteria Presentation Title: Nutrient Numeric Criteria in Florida Presenter: Thomas Frick, Director - Division of Environmental Assessment and Restoration, Florida Department of Environmental Protection

Thomas Frick is currently Director of the Division of Environmental Assessment and Restoration of the Florida DEP. That Division is responsible for implementing the Florida Watershed Restoration Act and the Clean Water Act for the State of Florida including setting water guality standards, monitoring and assessing surface water quality, establishing TMDLs and restoration of goals, and developing and implementing Basin Management Action Plans, the blueprint for restoration. Mr. Frick holds a BS in Chemistry. Prior to his current position, Mr. Frick was Bureau Chief of DEP's Bureau of Watershed Restoration.

Topic: City of Apopka Reclaimed Water Treatment Facility/Alternative Water Supply

Presentation Title: City of Apopka's Reclaimed Water Utility History Presenters: Robert Elmquist, City of Apopka and C. Scott Lee, AECOM

A detailed description of the City of Apopka's most recent alternative water supply (AWS) project; the North Shore Reclaimed Water Treatment Facility (NSRWTF). The NSRWTF will be constructed along the SJRWMD Lake Apopka North Shore Restoration Area. The District is an important partner to this project.

C. Scott Lee, P.E.

BS Engineering (Environmental), University of Florida, 1981 MBA, University of North Florida, 1998 - Licensed by the State of Florida to practice engineering in 1986 Project Manager for the North Shore Reclaimed Water Treatment Facility Operations Manger for the Orlando office of AECOM Technical Services Third generation Florida native

Robert J. Elmquist, AA, Valencia Community College 1983, Chief Operator of the City's Water Reclamation Facility 1989 when we first began our reclaimed water treatment and distribution. Over 20 years project coordination experience with the City of Apopka's water, wastewater and reclaimed water

Chair:

Vice Chair: Vacant

Secretary/Website: Jason Christopherson

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Newsletter: Ricky Ly

Seminar Chair: **Leslie Gowdish** construction projects. City's Project Coordinator for the North Shore Reclaimed Water Treatment Facility.Public Services Department's City Development Review Committee Representative. US Air Force Veteran (1975-1979).

Topic: Cranes Roost Treatment Facility Presentation Title: An Integrated Approach to Reuse and Nutrient Reduction.

Presenter: Chris Radar, PE, Director of Engineering - City of Altamonte Springs Public Works

Chris Rader, PE: Chris is the Director of Engineering for the City of Altamonte Springs Public Works and Utilities Department. His 16 years of experience includes private sector design and project management, as well as public sector experience at both local and federal levels. Since relocating to Central Florida in 2008, he has been active player in numerous regional water resources initiatives and is currently part of the leadership team responsible for delivery of the Altamonte Springs – FDOT Integrated Reuse and Stormwater Treatment project (A-FIRST) in conjunction with the I-4 Ultimate corridor reconstruction.

Topic: Utility Management Presentation Title: Funding Advanced Wastewater Treatment While Reducing O&M Costs Presenter: Flip Mellinger, Director, Marion County Utilities

Flip Mellinger has over 32 years of Utilities related experience and is a retired US Navy Seabee. He has served Marion County Utilities since December 2005 and was named Utilities Director in September 2009. He holds a Masters of Business Administration and a Masters of Environmental Management from the University of Maryland.

Flip has overseen the construction or renovation of Marion County's six wastewater treatment facilities, all to Advanced Wastewater Treatment standards and removed 6 wastewater plants from service through the expenditure of some \$53 million. Even with this capital load, he has lowered his Utility rates by reducing the Operations and Maintenance budget from \$15.3 million in 2008 to \$11.4 million this year. Marion County Utilities was selected for the 2013 National Environmental Achievement Award and Florida's Best Tasting Water by the Florida Rural Water Association

Topic: Aquifer Storage Recovery Presentation Title: Can ASR play a role in Florida's stormwater management? Presenter: Mark McNeal, Chief Executive Officer, ASRus, LLC

Mark McNeal holds a B.S. degree in Engineering Geology from Brigham Young University. In 2006, he founded ASRus, where he has served as Chief Executive Officer for the past seven years. Before founding ASRus, he worked for CH2M HILL for 21 years and served as Groundwater Practice Leader and Reuse Practice Leader for the Southeast Region. His project experience includes project management and senior review of aquifer storage recovery (ASR), reclaimed water, water supply planning, and deep injection well projects. He has played an active role in the development of Florida's rules related to water reuse (including the ASR provisions), underground injection control, wellhead protection, and concentrate disposal. Mr. McNeal has been actively involved in numerous ASR projects, including storage of fully treated, partially treated, and untreated surface water, as well as reclaimed water. Mr. McNeal has considerable experience with the power industry providing design, permitting, construction, and operation and maintenance services on deep injection well projects for electric utilities in southeast Florida, central Florida, and the panhandle of Florida. He assisted with design and permitting services for an injection well in Polk County, Florida to pilot test carbon capture and sequestration in a Class V Experimental Injection Well completed to 8,000 feet in depth, and is currently overseeing the construction of a 3,000-foot ASR well in northwest Polk County, believed to be the deepest ASR well worldwide.

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Topic: Lessons Learned from Three Decades of Integrated Water Resource Management

Presentation Title: Lessons Learned from Three Decades of Integrated Water Resource Management Presenter: Kirk Martin, Water Science Associates

Kirk Martin has over 30 years experience as a practicing hydrogeologist specializing in water supply planning and development, water resource characterization, and the application of a wide range of analytical methods in developing innovative solutions to complex water resource challenges. Mr. Martin's experience includes development of large capacity water supply and aquifer recharge projects for state and municipal governments, agricultural enterprises, and industrial applications. He commonly serves in a technical advisory capacity to state, regional, and local governing councils and legislative bodies on water resource issues. Mr. Martin was the Lead Hydrogeologist and Vice President with Missimer and Associates and CDM Smith. He currently serves as President and Principal Scientist for Water Science Associates.

Topic: Asset Management for Master Planning

Presentation Title: Analytical Master Planner: A new tool for bringing cloud and crowd sourcing to traditional water utility master planning. Presenter: Stephen Bourne, Atkins

Stephen Bourne, P.E., is senior project manager at Atkins North America (formerly PBS&J). He develops a wide variety of software tools and novel analytical methods focused on water and natural resources planning and management. His recent projects have focused on:

 \cdot Stakeholder-based equitable and environmentally friendly ice road construction in Alaska.

· Providing Lake Tahoe residents a tool for Storm water BMP design

 \cdot Efficient use of power transmission capacity in the Western Interconnect power grid system,

- · Long-range storm forecasting under climate change, and
- · Natural language interpretation of dark data for the life sciences.

His work on Asset Master Planning involves leveraging cloud computing concepts to provide communities across the country with an ability to forecast the decay of their assets and plan efficiently to maintain them.

Topic: Inclusion of Sea Level Rise for Master Planning Presentation Title: Integrated Stormwater Management to Support Climate Change Resiliency Presenter: Mike Schmidt, CDM Smith

Michael F. Schmidt, P.E. BCEE is a Senior Vice President with CDM Smith, has more than 29 years experience in watershed and stormwater master planning, modeling and code support-development, research, facilities design, permitting, data management, project and model implementation, floodplains and floodways, training, and public information.

He has managed or directed more than 160 stormwater and watershed management programs in 28 States, Puerto Rico, and 5 countries. He has guided the implementation of over \$500 million of multi-benefit capital improvements, saving clients more than \$240 million.

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Topic: Joint Recharge Project between City of Orlando and Orange County Presentation Title: Water Conserv II – Reclaimed Water as Part of a Sustainable Water Resources Plan Presenter: David MacIntyre, Parsons Brinkerhoff

David MacIntyre holds the following degrees:

- B.A., Civil Engineering, 1979, University of Cambridge (England)
- M.A., Civil Engineering, 1983, University of Cambridge (England)
 - M.E., Environmental Engineering, 1986, University of Florida

He is a Professional Engineer registered in Florida, and a Diplomate, Water Resources Engineer (D.WRE), a qualification conferred by the American Academy of Water Resources Engineers.

David MacIntyre is a water resources engineer with a broad-based background in hydrology, contaminant transport, hydrogeology and computer modeling of groundwater and surface water systems. He is a technical specialist in water supply, reuse of reclaimed water, and assessment of groundwater and surface water systems and the interactions between them. He has worked for 27 years on the Water Conserv II reclaimed water facilities. These facilities distribute up to 35 mgd of reclaimed water on an annual average basis to agricultural and urban irrigation reuse, and to rapid infiltration basins that help to maintain regional potentiometric elevations in the Floridan Aquifer.

Topic: Utility Regulations/Numeric Nutrient Criteria Presentation Title: The ABCs of NNC Implementation Presenter: David Childs, Hopping Green & Sams

Since joining the firm in 2005, David has represented and counseled various industry and local government clients on environmental permitting, enforcement, rulemaking, and legislative issues, with a particular focus on water and wastewater regulation and marine industry issues.

David serves as primary legal counsel for the Florida Water Environment Association (FWEA) Utility Council. David's work has included executive and legislative branch representation concerning the reuse of reclaimed water, land application of biosolids, and numeric nutrient criteria development.

David previously worked as a staff engineer for CH2M Hill in the Water Business Group.

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Committee News & Information

FWEA IWRC 2014 Bi-Annual Seminar: "Sustainable Solutions Utilities are Implementing for Integrated Water Resources"

IWRC announces our 1-day bi-annual seminar in January 30, 2014 at the Second Harvest Food Bank of Central Florida on "Sustainable Solutions Utilities are Implementing for Integrated Water Resources," where experts in the field will discuss the application of state-of-the-art sustainable practices. Speakers and other details will be announced in an upcoming edition of this newsletter. CEU's & PDH's will be available. Lunch and snacks will be provided. **Register here:** http://www.fwea.org/integrated_water_resources_sem.php

For more information contact: Seminar Chair Leslie Gowdish (<u>Leslie.Gowdish@atkinsglobal.com</u>) or Saurabh Srivastava (<u>srivastava@pbworld.com</u>)

Welcome to Our Newest Members

- Elizabeth Thomas
- Shanin Speas-Frost

IWRC Calendar of Events

Date

Description

January 7, February 4, March 4, and April 1, 2014 – **IWRC Monthly Teleconference** Meeting

January 30, 2014 - FWEA IWRC 2014 Bi-Annual Seminar: "Sustainable Solutions Utilities are Implementing for Integrated Water Resources" (http://www.fwea.org/integrated_water_resources_sem.php)

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IWRC Goals and Focus

The goals of the IWRC are:

- To further the dialogue between water professionals throughout Florida to meet our growing needs in all areas of water resources.
- To provide timely, high-quality information and education on water as a valuable resource that can be used to meet current and future water resources and water supply challenges throughout Florida.
- To provide rewarding leadership opportunities to water professionals at all levels of experience.

The focus of the IWRC encompasses the following areas of water resources practice:

- water quality
- watershed and stormwater management
- water supply
- water conservation and reuse
- ecological and hydrologic restoration
- groundwater recharge
- hydrologic and hydraulic modeling
- funding and grant opportunities
- regulations and policies

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