2017 Workshop Presentations

Sunday, April 23

Strategic Overview for Disaster Management for Water and Wastewater Facilities

Coordinator- Dr. Stanley States, Taxes A&M Engineering-TEEX • 1:00 to 5:00 P.M. • Room 1B • LIMITED TO 40

This workshop was designed to provide a strategic overview of disaster management for water and wastewater professionals. It will present information regarding preparing for and responding to natural or man-made disasters that threaten water and wastewater facilities and systems. This course introduces the various natural and man-made accidental or intentional disasters to which water and wastewater systems may be vulnerable and the potential effects of disasters.

Monday, April 24

LIFT: Tools and Resources for Moving Innovation into Practice

Coordinator –Jeff Moeller, P.E., WE&RF • 8:00 A.M. • Room 2F

This workshop highlights tools and resources as well as opportunities to engage in the Leaders Innovation Forum for Technology (LIFT). LIFT is a WEF/WE&RF initiative to accelerate innovation and new technology into practice. The workshop provides an overview of LIFT, discusses the national test bed network, Technology Scans, and other LIFT tools and activities, identifies priority technology topics of interest, and outlines ways to benefit from the program. The workshop includes a demonstration of LIFT Link. LIFT Link is a new online innovation and collaboration platform that allows users to discover new technologies, post research and technology needs, and connect with others on technologies of mutual interest for information sharing and collaboration. The workshop also features presentations on innovative technologies to help water resource recovery facilities and allows opportunities to engage with the innovators to advance them into practice.

- Tools and Resources for Moving Innovation into Practice - Jeff Moeller
- Overview of Northwest Regional Water Reclamation Test Bed Facility - Hillsborough County
- LIFT Link Demonstration - Fidan Karimova (WE&RF)
- Innovative Technology Pitch Sessions - Rod Reardon, Carollo Engineers; Curtis Kunihiro, Hazen and Sawyer
- Working Collaboratively to Advance Innovation: Roundtable Technology Discussions

Resiliency, What Is It and What Are We Getting Ready for Anyway?

Coordinator- Hillary Weber, Hillsborough County Utilities • 8:00 A.M. • Room 1D

This workshop will define resiliency, show what tools are out there to help become resilient and provide examples of how the some utilities have become resilient.

- Planning Resiliency at the City of Tampa - Chuck Weber, City of Tampa
- Water Quality Modeling Produces Beneficial Results for Pinellas County - Steve Soltau, Pinellas County Utilities & Chris Baggett, Jones Edmunds
- Reuse Water – A Tool for Resiliency - Maria Loucraft & Randy Brown, City of Pompano Beach
- SHARE and SHARP- Jeffry Greenwell, Hillsborough County

Future of Water Recycling Part I: Direct Potable Reuse

Coordinator- Barton Weiss , Hillsborough County • 8:00 A.M. • Room 1E

This workshop will include presentations on direct potable reuse (DPR) projects from Daytona Beach, JEA, and Altamonte Springs as well as presentations on indirect potable reuse (IPR) projects from Clearwater and Hillsborough County. Find out how you can turn 10 mgd of reclaimed water into 20 mgd of drinking water through DPR! Florida has historically led the nation with water reuse, traditionally through "purple pipe." We have also led the country in recharge, now termed IPR. Learn what several progressive Florida utilities are doing to advance both DPR and IPR to meet their future water supply needs.

Utility Rates 101

Coordinator- Tony Hairston, Raftelis Financial Consultants • 1:30 P.M. • Room 1D

How do you develop water/wastewater/reuse/stormwater rates and get them approved? What is the process for impact fees and why is it essential that they are developed properly? How do you price reclaimed water service? How should you price your miscellaneous services? How do you communicate this information to elected officials, boards, and the public? Learn how the rate making process is a vital element in achieving your utility's mission.

- Rates 101 Overview- Tony Hairston, Raftelis Financial Consultants
- Understanding Billing Data- Joe Williams, Raftelis Financial Consultants
- Capital Funding- Robert Ryall
- Rate Structures- Thierry Boveri, Public Resources Management Group Inc.

Future of Water Recycling Part II: Florida's First Direct Potable Reuse Project

Coordinator- Barton Weiss , Hillsborough County

Monday, April 24, 2017 - 1:30 P.M. • Room 1E

The future of water recycling is here, come have a taste and find out from a panel of experts what's going on in the state to incentivize potable reuse. Then, see how the WateReuse Association teamed up with Hillsborough County; TetraTech, Xylem and GE to turn water into liquid gold (New Water Brew). You are invited to a New Water Brew tasting after the workshop.

Tuesday, April 25

Perspectives in Design-Build Delivery

Coordinator- Kathleen Gierok, P.E., Wright-Pierce • 8:00 A.M. • Room 2E

Design-build projects include roles which are similar to and differ from design-bid-build and construction managment at risk (CMAR) projects. This seminar explores considerations from the perspective of these different roles, explores the similarities and differences of the various roles from other project delivery methods and provides insight on performance-based

Microscopic Examination of Activated Sludge Part I

Coordinator –Ron Trygar, CET, TREEO • 8:00 A.M. • Room 2F

Part 1and 2: The microscopic examination of mixed liquor suspended solids (MLSS) is a significant aid in the evaluation of the activated sludge process by helping to assess the condition of the biomass in an aeration basin and the settleability of the sludge. Protozoa play an important role in clarifying wastewater and are indicators of the degree of treatment. A predominance of protozoa, such as ciliates, and rotifers in the MLSS is a sign of good sludge quality. A predominance of filamentous organisms and a limited numbers of ciliates, however, is characteristic of a poor-quality sludge the settles poorly. This workshop will provide participants with an understanding of the relationships between the populations of various microorganisms, the settleability of sludge, and the overall quality of the wastewater treatment process.

WERF Nutrient Removal Challenge – Summary of Six Years of Key Research Findings and Its Relevance to Florida

Coordinator- Dr. Julian Sandino, CH2M HILL • 8:00 A.M. • Room 1D

From 2007 to 2016, investigators of the WERF Nutrient Removal Challenge (NRC) conducted research to provide credible and scientifically defensible information for regulators, designers and operators facing increasingly stringent nutrient effluent discharge limits. The NRC documented the practices associated with a wide range of issues, such as nutrient characterization and bioavailability in aquatic environments; the selection of sustainable, cost-effective processes to meet nutrient limits in wastewater treatment facilities; and the demonstration of new nutrient removal technologies and operational practices, as well as improvements to existing ones. This session brings together NRC summary and key "so what's" resulting from this six-year program and features the challenges (from discharge permitting, to technical, to optimization) for achieving low nutrient limits. A very important topic to Florida: How to engage in reclaimed water reuse in nutrient impaired waters will be discussed as data from more than 30 projects completed to date, including in-depth science/ engineering studies, workshops, and compendiums on selected topics to connect the water quality objectives for nutrient pollution control to the abilities of technologies, reasonable permitting approaches, and design and operational structures and strategies. We'll wrap with a panel discussion to identify and discuss how the findings of the Challenge affect Florida.

- WERF Addresses Challenges of Minimizing Effluent Nutrient Concentrations – Dr. JB Neethling
- Developing Attainable and Protective Permits for Nutrients - Dr. David Clark
- Predicting Treatment Performance and Surface Water Impacts Based on Nutrient Species - Dr. David Stensel
- Considerations in the State of the Practice for the Design of Nutrient Removal Facilities - Dr. Julian Sandino
- Key Issues and Approaches for the Operation of Nutrient Removal Facilities - Dr. Roy Tsuchihashi
- Addressing the Florida Challenge of Demonstrating that Water Reuse Practices Do Not Result in Nutrient-Impaired Waters – Dr. Joan Oppenheimer
- Panel Discussion: How Do the WERF Nutrient Challenge Research Findings Apply to Florida? - Amit Pramanik , Ph.D., (WE&RF), Rod Reardon, P.E., BCEE (Carollo) , Alonso Griborio, Ph.D., PE (Hazen and Sawyer).

CLOGs and FROGs in Collection Systems–Challenges, Tools and Counter Measures

Coordinator- Jamison Tondreault, Kimley-Horn • 8:00 A.M. • Room 1E

The purpose of this workshop is to present different operation and maintenance (O&M) perspectives pertaining to the proper management of non dispersibles and FROG (fats, roots, oils, and grease) in wastewater collection and treatment systems in an interactive format. Participants will hear from the experience of utility operators, equipment manufacturers, regulators and those working with the disposable wipes industry to examine the problem and potential solutions. The goal is to increase awareness of problems associated with nondispersibles and FROG, demonstrate how the industry is responding to these growing problems, and to propose a plan of action that can be promoted by utilities and FWEA.

- Introduction - Brad Hayes
- The State of the Flush: Wastewater Initiatives on Flushable Wipes - Brianne Nakamura (WEF)
- Public Outreach – The Dirty Dozen: What not to Flush - Adriana Lamar (Miami-Dade Water and Sewer Department)
- F.R.O.G- Problems and Solutions - Dr. Gabby Everett (NCH Corporation)
- Wipes Industry Perspective on Flush-ability - Dave Rousse(INDA)
- Roundtable Discussion – Jamison Tondreault and Nick Wagner (Kimley-Horn).

Emerging and Reemerging Pathogens

Coordinators - Michelle Viale-Bick and Dr. Bina Nayak • 2:30 P.M. • Room 1D

Emerging and reemerging pathogens have been a challenge that scientists, operators, and maintenance personnel alike have to face in order to maintain control of their distribution systems. Whether they are novel pathogens that have only recently been identified or known agents that just haven't been encountered in awhile, organisms like Legionella, Mycobacterium, Pseudomonas, and Norovirus pose a public health risk in distribution systems and premise plumbing. As traditional water sources become increasingly scarce, potable reuse emerges as a solution that comes with its own potential pathogens. An overview of some of these pathogens is presented along with preventative strategies and treatment methods to help water professionals deal with these issues.

- Control of Norovirus by Selected Disinfectants - Joseph G. Jacangelo, MWH - now part of Stantec
- Control of Opportunistic Premise Plumbing Pathogens: A Growing Challenge for Public Water Systems- Christine Owen, Tampa Bay Water
- Regulatory Implications of Emerging Pathogens- J. Alan Roberson, Association of State Drinking Water Administrators
- Emerging & Reemerging Threats of Antibiotic Resistant Pathogens in Water - Valerie J Harwood, University of South Florida.

Microscopic Examination of Activated Sludge Part II

Coordinator –Ron Trygar, CET, TREEO • 2:30 P.M. • Room 2F

See description morning session, Part I.

Employee Safety – Protecting a Utility's Most Valuable Assets

Coordinator – William Scott Holowasko, GRU • 2:30 P.M. • Room 1E

The process of developing a new water/wastewater operator can take years until they are fully trained and proficient in all the different operating conditions of a water or wastewater system; a process that can be longer than the one to build the actual facility they are running. A piece of damaged equipment can be rebuilt, renovated or replaced, but what about an injured employee? The process can be much longer and can affect every other operator in the organization. The FWEA Safety Committee will present a technical workshop on hazard areas within water & wastewater systems and the methods owners, managers and operators can take to protect their workers. Individual topics being presented include ergonomics & aging