



FWEA

West Coast Chapter

4th Quarter 2013

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UPCOMING EVENTS

°Manasota Chapter Luncheon
December 5, 2013
FCCI Insurance Group - Catering Facility
6300 University Parkway
Sarasota, FL 34240

CONFERENCES

2014 FWRC Conference
April 6-10, 2014
Walt Disney World Coronado Springs Resort & Convention Center
1000 West Buena Vista Dr.
Lake Buena Vista, FL

USF Teams Win at WEFTEC 2013

Congratulations to the USF Florida Water Environment Association Student Design Competition teams on their terrific win at the competition at the WEFTEC 2013! The Wastewater team took first prize and the Environmental team took second prize in their respective categories.

A total of 7 teams from around the country and one team from Canada participated in the wastewater design competition and 3 teams from around the country and one team from Canada participated on the environmental competition.

The WEF Student Design Competition was developed by WEF to provide a forum to showcase the capabilities of the top, young future water quality professionals with an interest in the water environment. The competition provides university students with an opportunity to be involved in “real world” design project.

The USF wastewater team consisted of Nicole Smith (PM), Melissa Butcher, George Dick, Matthew Woodham, and Margaret Cone. They investigated potential uses for biogas produced from anaerobic digestion of biosolids at City of St. Petersburg’s Southwest Water Reclamation Facility.



**Wastewater Team
First Prize Winners**



**Environmental Team
Second Prize Winners**

The USF environmental team consisted of Erin Morrison (PM), Caitlin Hoch, Josh Becker, Miki Skinner, and Brett French. They investigated stormwater improvements to alleviate nitrogen over-enrichment in the Booker Creek Watershed in St. Petersburg.

The teams worked long and hard for 6 months on their projects. Through reaching out to vendors, literature, and professionals from all over the country, the teams were able to complete their designs and present their design in front of panel of experts representing the major water/wastewater engineering consultants. Many of the professionals in the FWEA West Coast Chapter provided help and guidance, for which both teams are very thankful.



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Fourth Quarter Luncheon Guest Speaker

Denitrifying Bioretention Systems for Non-Point Source Nitrogen Removal

Sarina Ergas, Department of Civil & Environmental Engineering

University of South Florida

Nitrogen loads to Tampa Bay have decreased from approximately 10,000 to 5,000 ton/year since the 1970's. However, most of this decrease has been associated with point sources of N, such as wastewater treatment plants. Contributions from non-point sources, such as urban runoff, have grown over the same period from 16% to 62% of the total. Reductions in non-point source discharges of nitrogen are therefore crucial to reducing eutrophication in Tampa Bay. Bioretention systems (a.k.a. "rain gardens" or "bioswales") manage runoff by using an engineered planting bed and plant materials within a shallow depression to filter and retain stormwater (Fig. 1). Water infiltrates through vegetation, soil, mulch and sand layers to the natural groundwater. Conventional bioretention systems have can reduce solids, organics, indicator microorganisms, phosphorus and TKN concentrations, but have been shown to reduce nitrate loadings by less than 20%. An alternative denitrifying bioretention system has been investigated in our laboratory for total nitrogen removal from stormwater runoff. In this system, runoff infiltrates a sand layer, where nitrification occurs. The nitrified stormwater is conveyed through a submerged internal water storage zone, which is supplied with an electron donor to promote denitrification. This talk will provide a background on low impact development (LID) technologies for stormwater management and show the results of field and laboratory studies of denitrifying bioretention systems for removal of nitrogen from urban and agricultural runoff. We will also describe current work to promote LID implementation in East Tampa, including outreach activities to Young Magnet Middle School for Science and Technology.

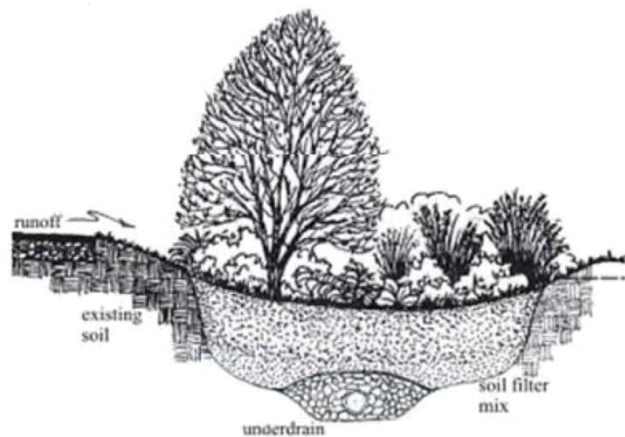


Fig. 1: Bioretention schematic (from www.lid-stormwater.net)





Luncheon Meeting

Luncheon Information

Columbia Restaurant

2117 East 7th Avenue
Tampa, Florida 33605-3903
Thursday, November 14, 2013

- Registration - 11:30 AM
- Lunch - 12:00 PM

Menu

1905 Salad - Crisp iceberg lettuce with julienne of baked ham, natural Swiss cheese, fresh tomato, olives, grated Romano cheese and garlic dressing.

Option 1 - Pollo Salteado

Boneless pieces of tender chicken sautéed in a hot skillet with extra virgin olive oil, garlic, green peppers, Spanish onions, fresh mushrooms, potatoes, chorizo and red wine. Served with yellow rice.

Option 2 - Roast Pork "A La Cubana"

Generous slices of roast pork with a delicious marinade. Served like back home in Cuba with black beans, white rice and platanos.

Option 3- Merluza "Russian Style"

Premium Atlantic Merluza, a tropical white flaky fish, breaded with Cuban bread crumbs and grilled. Garnished with a Russian sauce of lemon butter, parsley and hard boiled eggs. Served with yellow rice.

Option 4 - Vegetarian

Dessert - Flan

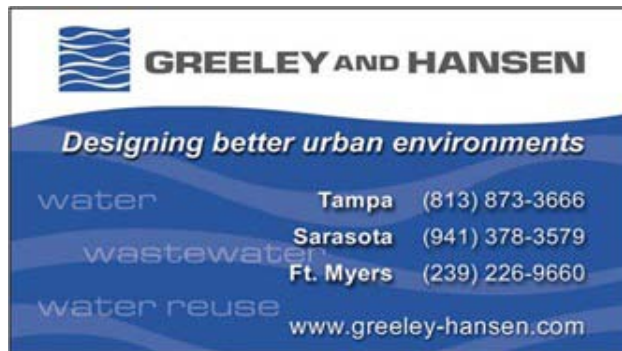
About the Speaker:

Dr. Ergas is a professor and graduate program coordinator in the Department of Civil & Environmental Engineering at the University of South Florida. She received a BS in Environmental Engineering from Humboldt State University and MS and PhD degrees from the University of California, Davis. She was a 2007 Fulbright Fellow at the Technion Israel Institute of Technology and a 1995 ASCE Excellence in Civil Engineering Education (ExCEED) Fellow. She teaches classes in Biological Principles, Air Pollution Control and Environmental/Water Resources Capstone Design. Dr. Ergas is a registered professional engineer in the Commonwealth of Massachusetts.



Education

Ph.D. Civil & Environmental Engineering, University of California, Davis
M.S. Civil Engineering, University of California, Davis
B.S. Environmental Engineering, Humboldt State University



Full Members: \$22 for those pre-registered, \$25 at the door * Student Members: \$22 for those pre-registered.

Registration Form

Pre-Registration Deadline: Friday, November 8th (Also Register through FWEA.org)

Please make checks payable to **FWEA**

Name: _____

Company/Affiliation: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Choice of Meal: _____

Send Check and Registration to:

Ricardo Borromeo
Atkins
4030 West Boy Scout Blvd., Suite 700,
Tampa, Florida 33607
Tel: (813) 282 7275 Ext. 8388
Fax: (813) 636 8583
E-mail:
Ricardo.borromeo@atkinsglobal.com

Register Online http://mms.fwea.org/members/evr/reg_event.php?orgcode=FWEA&evid=7379337



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The **FWEA Wastewater Process Committee** Presents
the Regional Seminar Series



WASTEWATER TREATMENT FROM STEM TO STERN – RIGHTING THE PROCESS SHIP

You are invited to attend this one-day seminar to be held at three locations:

Central Florida
NOVEMBER 5,
2013

South Florida
MARCH 2014
(more information to come)

Northeast Florida
FALL 2014
(more information to come)

The program will feature several professionals and process experts presenting on the following topics:

- **Regulation Affecting Utilities in Florida**
Paul Steinbrecher, P.E.
- **Preliminary Treatment (Screening and Grit Removal)**
Joshua Boltz, Ph.D., P.E.
- **Primary Clarification for Energy Efficiency**
Jose Jimenez, Ph.D., P.E.
- **5-Stage Bardenpho – Basics and Control**
Marie Pellegrin, Ph.D., P.E.
- **Clarifiers – Enhancements to Performance**
John Elser, P.E.
- **Optimizing Clarifier and Mixer Designs Using CFD Modeling**
Randal Samstag, P.E., BCEE
- **Enhancing BNR**
Ron Trygar, P.E.
- **Disinfection to Reduce DBPs**
Dave Hagan, P.E.
- **Wastewater Treatment Energy Optimization**
Jane Zhang, Ph.D.

CENTRAL FLORIDA EVENT DETAILS:

*Register now to reserve your seat!!
Limited spots available!*

DATE:
November 5, 2013

REGISTRATION TIME:
8:00 - 8:30 AM

PROGRAM DURATION:
8:30 - 4:30 PM

LOCATION:
Polk County Utilities
1011 Jim Keene Blvd
Winter Haven, FL 33880

REGISTRATION COST:
Member (pre-registered): \$85
Member (register on-site): \$125
Non-member: \$180 (includes WEF/
FWEA membership)
Non-member Public Employee:
\$135 (includes FWEA membership)

SPONSORSHIP:
\$250 (includes company name in flyer
and all advertising of program)

Online registration is available for this CEU/PDH opportunity at www.fwea.org.



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Rays Game Update:

While the Tampa Bay Rays were in the hunt for the Wild Card spot in the American League, FWEA members were able to get together with friends and family to enjoy "Americans Favorite Pastime". The 3rd annual "Day with the Rays" event was held on Sunday September 22nd at Tropicana Field in St Petersburg. The West Coast Chapter of FWEA sponsored discounted tickets to the game and a pregame tailgate. In all, 40 people were able to join in on the fun which was capped off by a Rays victory over the Baltimore Orioles 3-1.

More importantly the game was a way to network and enjoy some of the perks of being an active FWEA member. Thanks again for all of those in attendance. We hope to see you at the next event!





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**PLANT TOUR & HAPPY HOUR
November 1, 2013**

FWEA West Coast Chapter will be hosting a plant tour at the Hillsborough County Northwest Regional Water Reclamation Facility on Friday, November 1, 2013 from 3:00 PM to 5:00 PM.

Following the plant tour, the FWEA West Coast Chapter will like to invite all in attendance for happy hour at Irish 31 (located a short driving distance away) from 5:00 PM to 6:30 PM.

Pre-Registration for this event is required. Please RSVP to Joe Zaccardelli at jzaccardelli@jacobsairwater.com
Special thanks to Hillsborough County for allowing this tour to take place.

The Northwest Regional Water Reclamation Facility is located at:
10890 South Mobley Road, Odessa,
Hillsborough County, Florida, 33626

Irish 31 is located at:
10102 Montague St.
Tampa, FL 33626

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2013 West Coast FWEA Chapter Committee Members

Chair – Nita Naik (Greeley and Hansen)

Vice Chair – Juan Oquendo (Gresham, Smith and Partners)

Treasurer – Taylor Norrell (Black & Veatch)

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Special Events and Public Relations – Karen Lowe (CDM Smith)

Communications – Jacob Porter (Hazen and Sawyer) and Freddy Betancourt (Greeley & Hansen) **New Member**

YP Chair – Joe Zaccardelli (Jacobs Air Water Systems)

Membership – Rachel Cantor (RC Associates, LLC)

Web Master – Matt Love (McKim & Creed)

USF Representatives – Dr. Sarina Ergas / Trista Brophy