

October 2013

Volume 14, Issue 6

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**ASCE Sun-Coast Branch President****Dear Members and Friends of ASCE**

Greetings, Can you believe it has been a year since I was elected and served as your president of the SunCoast ASCE Branch. I would like to thank you for the opportunity to serve and now look forward to another year of involvement as your past president. Some of the events that were highlights were the "Hope food banks donations"( please verify name of charity) last thanksgiving, Giving Christmas to the Manatee Association of Retarded Citizens House in Palmetto, Our winter social in February during Engineer's week, Charity Golf tournament for scholarships in May, Hosting the Chapter meeting in July, followed by free PE review classes as part of our outreach for the

community. Yes it was quite a year and these are only a few of the named events. We have also sponsored math counts, tooth pick bridge, West Coast Bridge, high school and college scholarships, science fairs and the list continues to grow each and every year.

Now the election results are in and I will pass the gavel to the new board which is Kim Clayback, President; Kwamena Sankah, Vice President; Salvatore DePoulis, Secretary; and Steve Topovski, Treasurer. Don't miss our next meeting October 17, 2013 when the new board will be installed. It's a great opportunity to show our support and your participation is what helps to keep our branch active and vibrant. I'll see you there.

**Gary Downing, P.E., M.ASCE**

## October Luncheon Meeting Details

**This months luncheon meeting is on October 17**

**TOPIC: Goal 2020: Eliminating Surface Water Discharge  
in Northwest Hillsborough County**

**The meeting starts at 12noon with registration starting at 11:30 am.**

**When: Thursday August 15, 2013**

**Check in begins at 11:30 am**

**Where: Derr Dutchman (fka Troyers Dutch Heritage)**

**Please RSVP: <http://ascesuncoast.weebly.com/monthly-meetings.html>**

## Biography of Speaker

Kristiana Dragash, P.E., graduated from the University of South Florida in 2008 with a bachelor of science in civil engineering with a concentration in water resources and environmental engineering. She worked with Greeley and Hansen for 4 years primarily designing large potable transmission mains, sanitary force mains, and building hydraulic models of distribution systems. Kristiana has been with Carollo Engineers since July of 2012 and has continued to gain experience with calibration of hydraulic and water quality models in WaterGEMS and InfoWater software, and project management. Kristiana founded the Manasota chapter of the Florida Water Environment Association in 2010 and received her PE in April of 2013.

# Presentation Abstract

## Goal 2020: Eliminating Surface Water Discharge in Northwest Hillsborough County

Kristiana S. Dragash, P.E.<sup>1\*</sup>, Roderick D. Reardon, P.E.<sup>2</sup>, Erica Stone, Ph.D., P.E.<sup>2</sup>, George B. Cassady, P.E.<sup>3</sup>, Luke A. Mulford, Ph.D., P.E.<sup>3</sup>, Mark B. McNeal, P.G.<sup>4</sup>

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### ABSTRACT

During periods when reclaimed water flow exceeds irrigation demand, the Hillsborough County Northwest Regional Water Reclamation Facility (NWRWRF) discharges water to a surface water outfall that ultimately flows to Old Tampa Bay. Surface water discharge currently requires high levels of treatment for nutrient removal, 5 mg/L cBOD<sub>5</sub>, 5 mg/L total suspended solids (TSS), 3 mg/L total nitrogen (TN), 1 mg/L total phosphorus (TP). The Florida Department of Environmental Protection (FDEP) has approved allocations, which limit the TN and TP loads to surface water and reuse systems. Allocations are set for Old Tampa Bay (TN = 486 tons/year, TP = 104 tons/year) and for the other drainage basins of the bay segments including Hillsborough Bay, Middle Tampa Bay, and Lower Tampa Bay (TBNMC, 2010). Four major facilities in the Hillsborough County Northwest Service Area (NWSA) contribute to Old Tampa Bay. These include the River Oaks and Dale Mabry Advanced Wastewater Treatment Facilities (AWWTFs), and the Van Dyke Wastewater Treatment Facility (WWTF) in addition to the NWRWRF. Water quality requirements in the future for continuing the surface discharge are uncertain and even greater levels of treatment may be required. Eliminating the surface discharge at the NWRWRF, and from the Northwest Service Area overall presents an opportunity to reduce treatment requirements, thereby decreasing operating and maintenance costs and potentially increasing treatment capacity within existing process basins, while enhancing resource conservation and still protecting the aquatic environment. Therefore, Hillsborough County is investigating the feasibility of eliminating the surface water discharges in the NWSA.

The River Oaks and Dale Mabry AWWTFs are located in densely populated urban areas, and are the source of frequent aesthetic-related nuisance complaints. In addition, the age of these facilities results in high operating and maintenance costs. As such, decommissioning these facilities, directing flow to the NWRWRF and consolidating treatment at that location offers the potential to reduce operating and maintenance costs while benefiting the community and Old Tampa Bay.

To manage reclaimed water in excess of the demands for public access reuse (PAR), alternative groundwater recharge concepts were evaluated, including Aquifer Storage and Recovery (ASR). Implementing groundwater recharge and ASR wells has the potential to substantially decrease the nitrogen load to the Bay by eliminating the need for surface water discharge in periods of excess reclaimed water supply. The aquifer recharge system will inject reclaimed water to develop a saltwater intrusion barrier in the Upper Floridan aquifer (UFA) between Upper Tampa Bay and regional groundwater well fields.

## Announcements

October ASCE Meeting

October 17

There will be an installation ceremony for the new officers of the association. Please plan on attending to show your support.

November ASCE Meeting

November 15

## **PE Test Review Classes**

### **Free for all (members/non-members)**

The annual free PE Review classes was held this past August and September.

The executive board expresses its gratitude to all professionals who volunteered to teach the classes. The branch depends on you.

Members planning on taking the PE in October 2014 and April 2015 should remember to take advantage of the free review classes. The courses are taught by highly regarded local professionals with practical knowledge of the subject.

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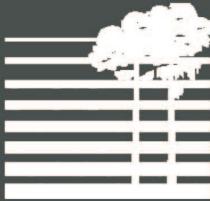


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