



The Droplet

Florida Water Environment Association
Integrated Water Resources Committee

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From the IWRC Chairman

One of the goals of the IWRC is to further the dialogue between water professionals throughout Florida. Another goal is 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.

This month's newsletter focuses on water supply with information on the recent Legislation approval, various funding sources and a successful case study of ASR and associated decision support tools. These topics continue to support industry in meeting the growing need for water.

Call for Members/Open Board Position!

We currently have open positions on the board including Vice-Chair and Secretary. This is a great opportunity to collaborate with other professionals within our region who share a common interest in advancing the integrated water resources industry for the benefit of our clients, all water users and for the environment.

If you are interested in becoming a member of IWRC or nominating yourself for an open position, please contact me at Ricky.Ly@Stantec.com.

And keep an eye out for more details on the upcoming events organized by the IWRC in future issues of this newsletter.

Ricky Ly
FWEA IWRC Chair

FY 2014-2015

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Project Funding Opportunities

There have been two recent developments which should help with funding an integrated water resources project. Florida voters showed strong support for protecting water resources by overwhelmingly passing the Florida Land and Water Conservation Amendment. The amendment will help provide funding towards land acquisition and projects which protect water resources. This additional source of revenue will help ensure the continuation of cooperative funding programs at the State's water management districts. The time is now to submit projects to the water management districts. You can find out more information about the St. Johns River Water Management District cooperative funding programs at upcoming workshops being held in December at each service center. You can find out more and get contact info for the cooperative funding programs at each water management district on their respective websites. Search the websites for cooperative funding.

Water Resources Reform and Development Act (WRRDA)

This Act was signed into law on June 10, 2014. This Act included the authorization of the Water Infrastructure Finance and Innovation Act (WIFIA), which:

- Supports water and wastewater-related infrastructure projects, including pipe replacement or rehabilitation, construction or rehabilitation of treatment plants, desalination projects, groundwater replenishment projects, energy efficiency improvements, and others.
- Is aimed at larger projects, in which eligible projects must cost at least \$20 million (\$5 million for communities serving no more than 25,000 people).
- Provides loan guarantees and direct loans at long-term Treasury rates.

For additional information, you can contact EPA at WIFIA@epa.gov

Florida Department of Environmental Protection, Loans

WRRDA also contained federal requirements for the Florida Department of Environmental Protection's State Revolving Fund (SRF) program loans. As a result of the additional cost to meet these requirements, FDEP reduced its interest rate for loans by 1%. This means that for a typical project the loans are now as low as only 1 to 1 1/2%!

For more information you can call (850) 245-8358 or go to their website.
<http://www.dep.state.fl.us/water/wff/>

Presentations from a recent SRF workshop can be found on the FWEA website.
<http://www.fwea.org/>

These programs are just some of the funding opportunities available to integrated water resource projects. The key is to first develop a project idea and then start scouting for funding at various governmental entities. Never give up; never accept a "no" answer. There is always some funding somewhere for every project.

For more information you can contact, Elizabeth Thomas, P.E., BCEE at:
ethomaspe@gmail.com

Elizabeth Thomas, P.E.

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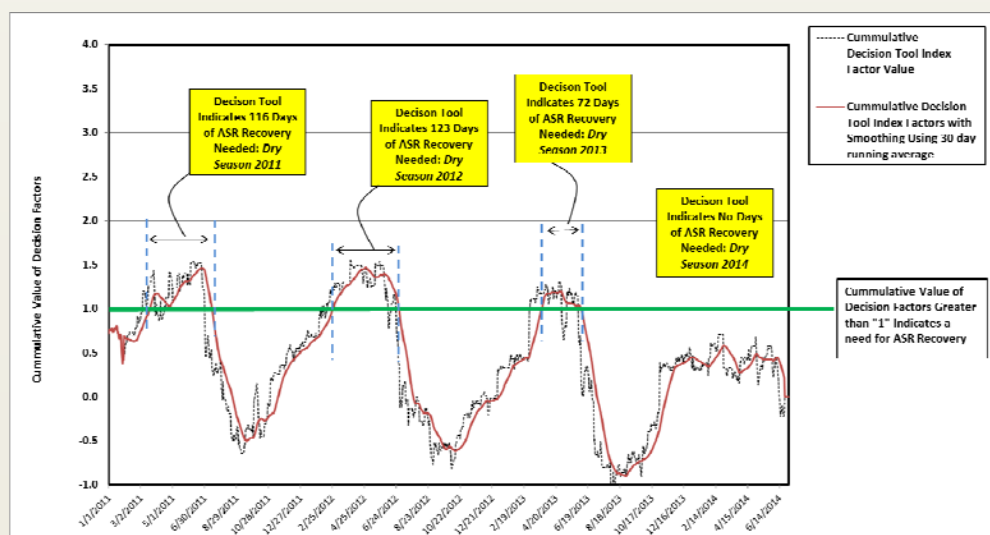
ASR Recovery Initiation Index Tool

The Peace River Manasota Regional Water Supply Authority (Authority) is a four county government entity in southwest Florida serving about 500,000 people with drinking water. The Authority relies solely upon surface water runoff via the Peace River for its water supply. Flow in the Peace River is heavily rainfall dependent with the major river flow period in summer driven by typical tropical rainfall conditions across the state of Florida. Seasonal dry periods typically happen in the spring and fall when there is often little water available for diversion and there have been periods without river water available for as long as 6 months. The key in developing a resilient water supply using this highly variable seasonal source is raw water diversion pumping and off-stream storage.

The Authority utilizes two water storage features: Two off-stream raw water storage reservoirs and 21 finished water Aquifer Storage and Recovery (ASR) wells. The raw water reservoirs can store nearly 7 billion gallons of water and are filled using a 120-mgd river diversion pump station. The ASR wells make use of a confined limestone aquifer unit between 500 and 1,100 feet below ground surface which can store 6 billion gallons of finished water. The ASR system is limited to a daily capacity of about 18 mgd, so while it can store nearly as much water as the off-stream raw water reservoirs, it cannot be filled or emptied nearly as quickly.

Decision making under uncertainty is common in the water industry where water managers often must make decisions knowing that the full ramifications of those decisions will not be realized for many months. Through its involvement with the Florida Water and Climate Alliance in association with a NOAA Sectoral Applications Research Program (SARP) grant project, the Authority developed an ASR Recovery Initiation Index to guide formulation of its decision on when to initiate ASR Recovery. The Index consists of ten daily variables including: current and trending operational data, current hydrologic conditions and 1 and 3 month climate forecast products. These data are variably weighted, synthesized and used to generate a daily index value that is then smoothed using a 30 day running average. If the resulting Index value rises above 1, then the index is calling for ASR Recovery to be initiated.

Today's decision makers are barraged with sources of data. A well formulated decision tool winnows extraneous data, puts the relevant data into the proper context and provides science-based guidance to decision makers in an environment free from emotion or personal bias. The Authority's ASR Recovery Initiation Index tool is a fine example of how utilities can apply decision science linked with climate prediction products to make defensible, accurate water resource management decisions.



ASR Recovery Initiation Index (2011 – 2014)

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Reservoirs No. 2 (foreground) and No. 1 (middle left) with the Peace River winding its way to Charlotte Harbor (top)



Mike Chell, Operations Supervisor, Checking Filter Effluent Turbidimeters

Kevin Morris, PE, BCEE
Science and Technology Officer
Peace River Manasota Regional Water Supply Authority

Get Involved Spotlight



Tampa Bay Watch

Tampa Bay is the largest estuary in the state of Florida, encompassing 400 square miles of open water and 2,300 square miles of highly developed watershed that supports industry, agriculture, and a diverse population in excess of 2.4 million people. Estuaries like Tampa Bay are among the diverse and productive ecosystems in the world. More than 70% of all fish, shellfish, and crustaceans spend some part of their lives in the protected waters of estuaries like Tampa Bay. Residents from the Manatee River to Clearwater Harbor and from Hillsborough Bay to the Gulf of Mexico depend on Tampa Bay for commercial and recreational activities.

Tampa Bay Watch is working to preserve the delicate ecological balance that exists in Tampa Bay. A nonprofit organization established in 1993, Tampa Bay Watch performs a variety of habitat restoration and protection activities throughout the year, utilizing thousands of volunteers to help the bay recover from its environmental problems. Individuals of all ages from community groups, scout troops, schools and others participate in salt marsh plantings, storm drain markings, oyster bar creation, coastal cleanups, and wildlife protection each year, demonstrating environmental stewardship in its purest form.

The efforts of Tampa Bay Watch to restore and protect the bay's habitat through stewardship and community awareness provide effective long term improvements to the bay, and empower our community with the knowledge to counteract our environmental problems. Learning how to achieve and maintain a healthy environment is a legacy that will touch our children and their children for years to come.

Numerous Volunteer opportunities are available to give back to your local community by restoring coastal and upland habitats which help improve the quality of our watershed and outstanding Tampa Bay resource. More information can be found on their website: <http://www.tampabaywatch.org/>

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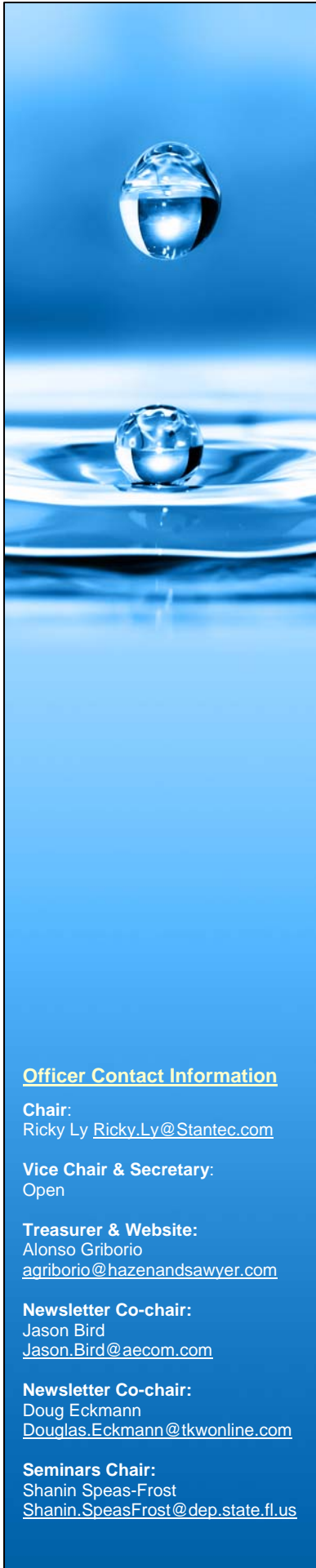
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Other Water News and Events

- **Sarasota Bay Estuary Program – Bay Partner Grant Program**
The SBEP Bay Partners Grant Program promotes environmental education, awareness, community involvement, and stewardship to improve the overall quality of Sarasota Bay and its tributaries. To support these goals, funding is available from SBEP for projects that focus on *Bay Education*, *Bay Restoration* or *Bay-Friendly Landscaping*. <http://sarasotabay.org/get-involved/bay-partners-grant-program/>
 - Applications due March 2, 2015
 - Grants will be awarded in the fall

- **Governor Scott's Budget Recommends \$1.4 Billion to Protect and Preserve Florida's Environment** <http://content.govdelivery.com/accounts/FLDEP/bulletins/a227ff>
The Governor's Budget will include support for restoration projects in the Everglades, springs protection improvements, and the purchase of conservation lands. The FY2014/2015 budget places a priority on protecting the health of Florida's natural resources. "By proposing more than a billion dollars, Governor Scott recognizes the Department's commitment to preserving the environment through sound science," said Florida Department of Environmental Protection Secretary Herschel T. Vinyard Jr. "This significant funding will ensure the Department's ability to continue to safeguard and protect the state's natural resources."

- **Florida Department of Environmental Protection – SB 536**
Senate Bill 536, which passed in the 2014 legislative session, requires DEP, in coordination with stakeholders to conduct a comprehensive study on the expansion of use of reclaimed water, stormwater, and excess surface water in this state. <http://www.dep.state.fl.us/water/reuse/study.htm>

- **Florida Ballot Measure** "Water and Land Conservation Amendment" (November 4th). [http://ballotpedia.org/Florida_Water_and_Land_Conservation_Initiative_Amendment_1_\(2014\)](http://ballotpedia.org/Florida_Water_and_Land_Conservation_Initiative_Amendment_1_(2014))
PASSED!!!

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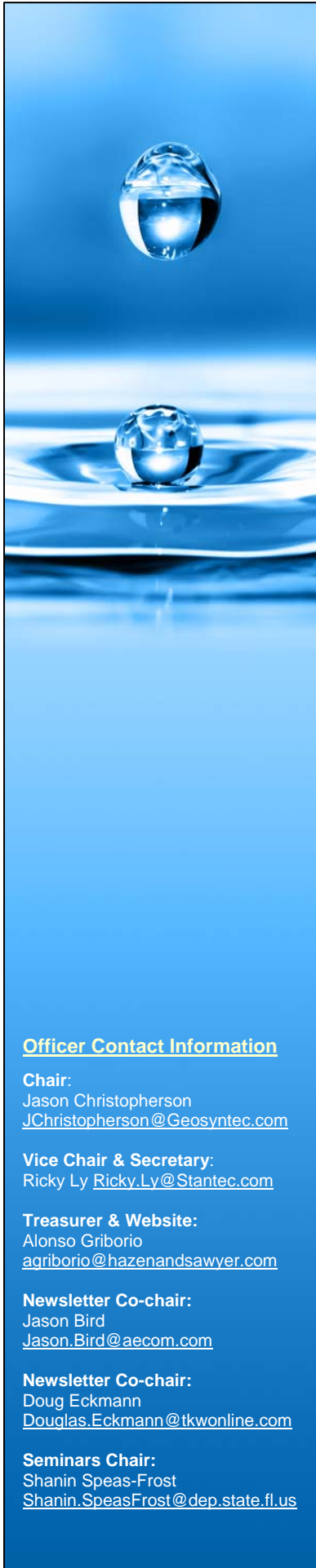
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IWRC Calendar of Events

<u>Date</u>	<u>Description</u>
Dec. 2, 2014	Monthly IWRC Teleconference
Jan. 6, 2015	Monthly IWRC Teleconference
Jan-Feb. 2015	Biennial Luncheon
March 7, 2015	Florida Water Festival (hosted by Big Bend chapter)

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:

- | | |
|---|--|
| <ul style="list-style-type: none"> • water quality • watershed and stormwater management • water supply • water conservation and reuse • ecological and hydrologic restoration | <ul style="list-style-type: none"> • groundwater recharge • hydrologic and hydraulic modeling • funding and grant opportunities • regulations and policies |
|---|--|

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