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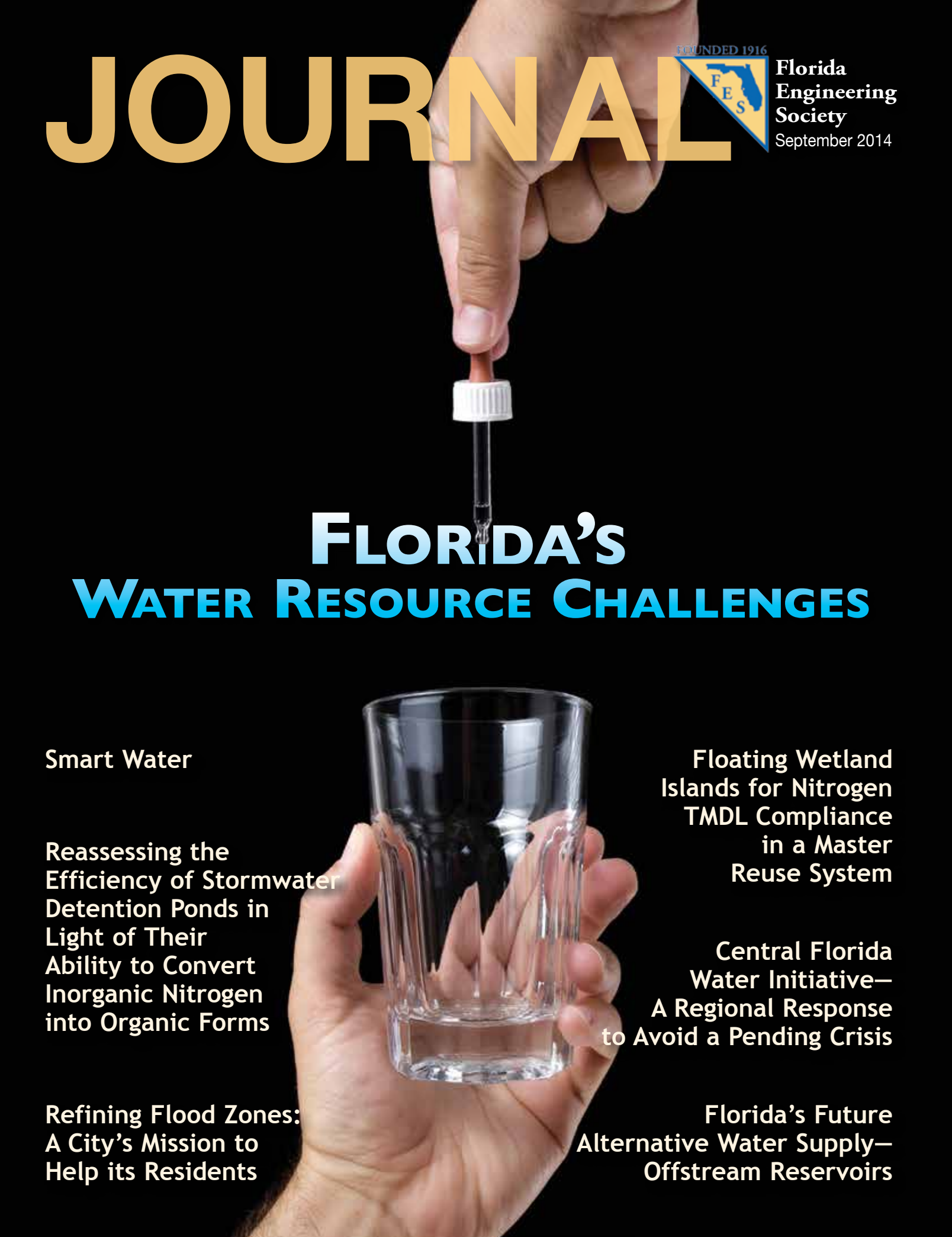
Florida's Water Resource Challenges



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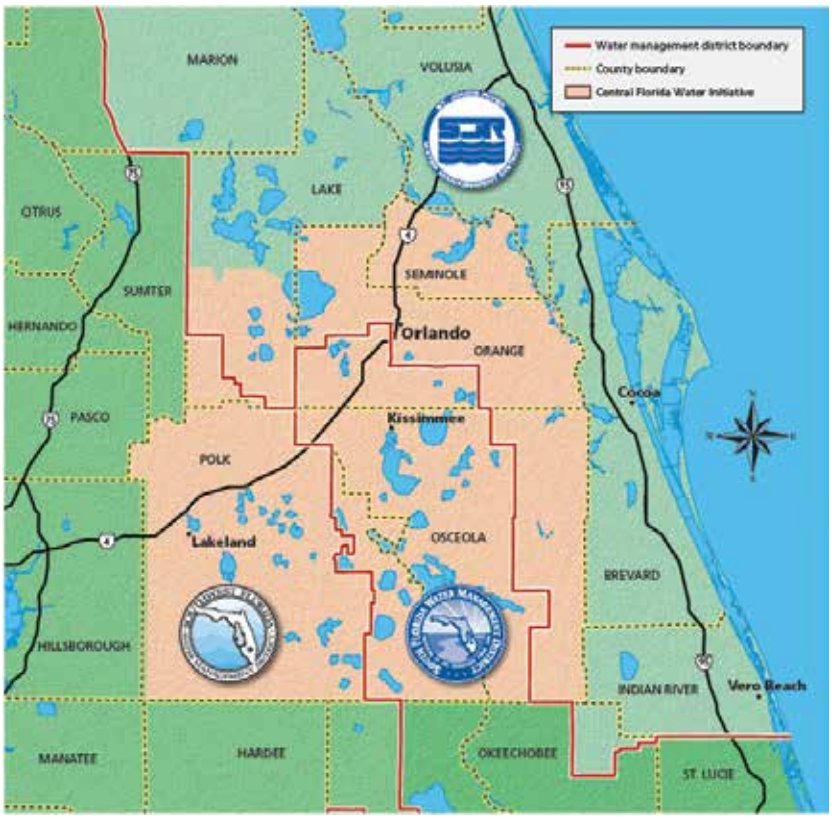

Central Florida Water Initiative— A Regional Response to Avoid a Pending Crisis

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Central Florida is projected to almost double in population over the next 40 years, with an increase of almost 3,000,000 new inhabitants bringing the total population to 6.6 million. Recognizing that the water supply for Central Florida relies almost exclusively upon groundwater, which is a diminishing supply incapable of recharging enough to provide a sustainable water source to meet the future needs of this growing population, community leaders initiated a process to develop a strategic plan for future water needs. This process began with a community dialogue undertaken in 2006-07 by myregion.org (one of the lines of business of the Central Florida Partnership) entitled "How Shall We Grow," designed to develop a shared regional vision for Central Florida.

Three water management districts govern water use in the region—St. Johns River Water Management District, Southwest Florida Water Management District and South Florida Water Management District (collectively, the Districts). From 2007-12, the Districts undertook to develop an assessment of available groundwater and propose new permitting rules in accordance with that assessment. No consensus on modeling or agreed-upon science for estimating the groundwater available had ever been achieved among the Districts before this effort. The area involved was referred to as the Central Florida Coordination Area (CFCA), which includes Seminole, Orange, Osceola, Lake and Polk counties. Through CFCA, the Districts issued a joint statement in 2008 that sustainable quantities of groundwater were insufficient to meet additional water demands beyond 2013 and that aggressive conservation, use of reclaimed water and development of alternative water supplies were essential.

The Congress of Regional Leaders, a regional organization consisting of sixteen elected officials representing city and county governments and the school boards of the seven Central Florida counties (Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia) took up this issue and listed the following two overarching goals it wanted this regional community effort to achieve:

1. Create a regional water strategy for Central Florida
2. Avoid the use of any public money to litigate over water

In early 2009, the Congress of Regional Leaders engaged myregion.org and Urban Land Institute Central Florida (ULI Central Florida) to address these goals. Through a consensus-building process, a white paper was issued in December 2010 entitled *Creating a Sustainable Water Supply for Central Florida; A Regional Strategy—Recommendations.* The following conclusions were reached during this process:

- Water is undervalued.
- Water users will not be able to use groundwater from the Floridan aquifer to supply all future needs without causing unacceptable environmental impacts.
- Conservation must be a central part of any regional water use strategy.
- Alternative water sources are available, but at much higher costs. Tapping them economically will require a substantial investment and a coordinated regional effort.

In Summer 2011, myregion.org and ULI Central Florida convened a Technical Assistance Panel of public and private sector, local, state and national subject matter experts to undertake the task of:

"Explore[ing] how the region can rise above political boundaries and find a way to approach future water use as a cohesive team. What kinds of political

infrastructure will have to be put in place to make this happen? Who would oversee the effort? How would every county municipality, water distributor and other stakeholders be brought into the project and have a voice?"

To ensure all stakeholders work as a region to address future water supply, the Steering Committee for Phase Two established the following problem statement at the outset:

"The challenge we face is how to facilitate the formation of the multi-jurisdictional entities needed to ensure the future planning, construction and operation of alternative water supply programs and projects to meet future water supply needs."

While this regional process was being undertaken by community leaders, the Districts concluded through CFCA that sustainable quantities of groundwater in Central Florida were insufficient. They declared that there was an immediate need to develop and implement supplemental or alternative water supply projects. The Districts individually implemented interim rules limiting withdrawals of groundwater to meet the 2013 demands. Water demands after 2013 would require alternative water supplies. The interim rules expired at the end of 2012.

The economic recession has had the effect of slowing growth, which has given the region a brief reprieve from the dire circumstances originally projected. This is only a temporary reprieve that has allowed time for the planning process being undertaken currently and described below.

Today, the CFCA effort has transitioned into the Central Florida Water Initiative (CFWI), a collaboration involving the three Districts, the Florida Department of Environmental Protection (DEP), the Florida Department of Agriculture and Consumer Services (DACS) and the major public water suppliers in Central Florida. A map of the planning area is shown on page 18.

As stated on the CFWI website (http://cfwiwater.com), the guiding principles of the CFWI are to:

- Identify the sustainable quantities of traditional groundwater sources available for water supplies that can be used without causing unacceptable harm to the water resources and associated natural systems.
- Develop strategies to meet water demands that are in excess of the sustainable yield of existing traditional groundwater sources.
- Establish consistent rules and regulations for the three water management districts that meet their collective goals, and implement the results of the Central Florida Water Initiative.

The CFWI created several teams and committees to achieve its goals.

The Steering Committee, comprised of representatives from public water utilities, the Districts, DEP and DACS, oversees the CFWI process and provides guidance to the technical teams and technical oversight/management committees that are developing and refining information on all aspects of Central Florida's water resources.

The Solutions Planning Team (SPT) is comprised of senior management staff from the three Districts, DEP, DACS, public water supply utilities, agricultural landowners, environmental groups, regional leaders and business representatives. The SPT, through its many sub-teams, will develop alternatives to meet the water demands by optimizing the use of the existing groundwater as well as alternative water sources, and by identifying viable conservation and other management strategies. The SPT's scope of work includes the following:

- Reviewing the regional alternative water supply options identified in the CFWI Regional Water Supply Plan or other project options developed by the sub-teams
- Identifying the largest water supply deficits
- Identifying potential partnerships to encourage regional interconnects and maximize economies of scale and efficiencies
- Identifying potential need for recovery and prevention in coordination with other conservation activities
- Developing a Comprehensive Water Resource Monitoring and Assessment Program
- Assisting in conducting workshops and public meetings for the CFWI 2035 Water Resources Protection and Water Supply Strategies Plan
- Identifying funding needs and potential sources for large, regional projects

The Groundwater Availability Team (GAT) is one of the technical teams established to assist the SPT with its scope of work. All three Districts have worked collaboratively and agreed on the method to model and estimate the available groundwater for this region for planning purposes. This

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method was documented in the GAT report, which includes the following significant points:

- Estimated available groundwater from traditional sources (upper and lower aquifer) for use as water supply without requiring mitigation or other operational controls is 850 million gallons per day (mgd)
- Current use from these traditional sources is about 800 mgd
- Current permitted use is about 1 billion gallons per day (bgd)
- Estimated demand by 2035 is 1.1 bgd

There may be an additional 75 mgd that can be extracted from traditional groundwater sources with operational controls and other mitigation efforts; however, the SPT was directed by the Steering Committee to assume, for planning purposes, that there is a deficit that needs to be filled of 250 mgd (1.1 bgd - 850 mgd).

One of the other truly groundbreaking efforts currently underway, the results of which will affect the SPT's findings, is the development of a regional water supply plan applicable throughout the region that is consistent with the three District's water supply plans that divide the region. This is an historic undertaking. The final draft plan, dated April 2014, is on the CFWI website (http://cfwiwater.com).

Another technical team is providing crucial input that will be of importance to the SPT's effort in analyzing the impact of withdrawals upon minimum flows and levels (MFL) for water bodies, wetlands and other natural resources, to develop a coordinated strategy for the region. This team will help focus the recommendations from the SPT upon those options that will not cause unacceptable impacts upon the environment. For more information, visit the CFWI website (http://cfwiwater.com) and navigate to "Minimum Flows and Levels and Water Reservations."

The SPT's report is scheduled to be made public in Fall 2014. Once the findings of the SPT are approved by the Steering Committee, it is anticipated that the findings will be made available to the Central Florida Legislative Delegation. The collection of uniquely talented individuals who have volunteered their time and effort to serve on this committee has yielded many novel and creative concepts. Some of these creative opportunities look beyond the CFWI geographic boundaries and contemplate transmission of surface water from regions with excess water supply, to the detriment of their environment, to Central Florida to supplement the existing supply. These creative and innovative options are the type of out-of-the-box thinking that long-term solutions to Florida's water strategy and policy will require. For a state that averages anywhere between 48-60 inches of rainfall statewide, the solution to Florida's water policy concerns will find their roots in better management of the existing water resource and using appropriate means to get the water to where it is needed. The greatest challenge will be finding the capital and the appropriate mechanisms necessary to underwrite these inter-regional resolutions of Florida's current water management challenges. ■

Sources

1. CFWI website [http://cfwiwater.com]
2. *Creating a Sustainable Water Supply for Central Florida; A regional Strategy—Recommendations*: published by myregion.org and ULI Central Florida, December, 2010
3. *Creating a Regional Water Strategy for Central Florida—Report*, published by myregion.org and ULI Central Florida, August 5, 2011
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