



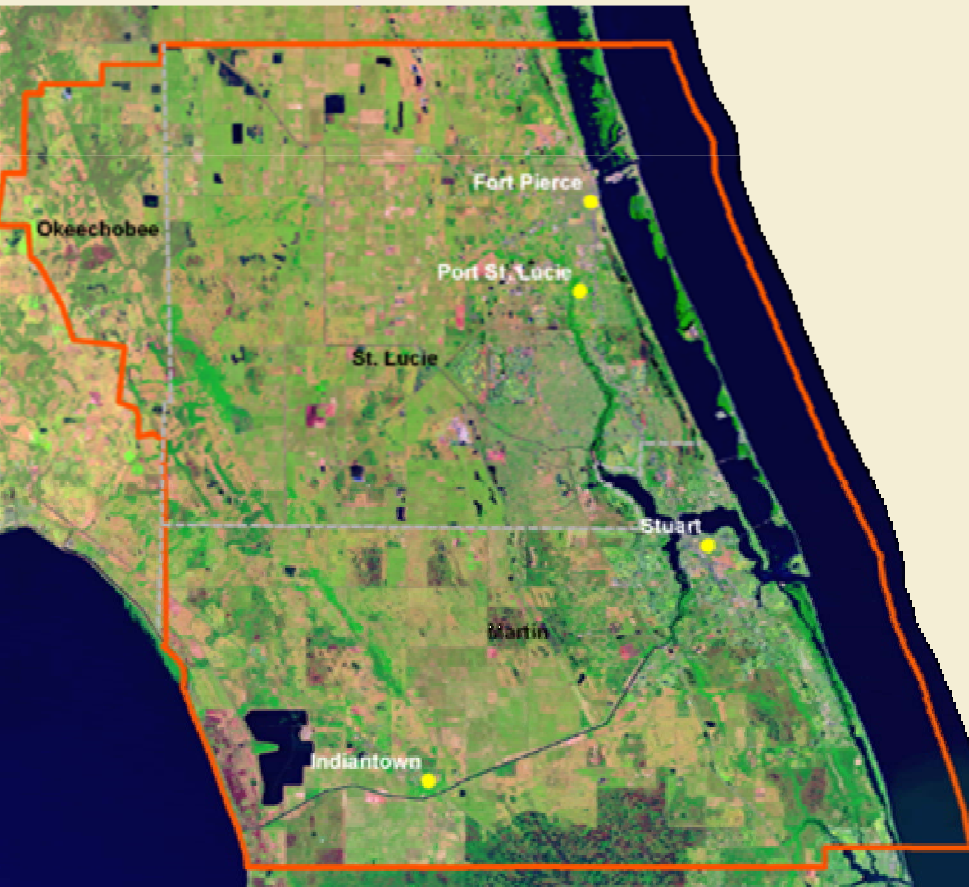
2004/2006 Upper East Coast Water Supply Plan Overview (cont)

Mark Elsner, P.E. Director, Water Supply Development
Linda Hoppes, AICP, Lead Planner

WRAC UEC Water Supply Plan
Kick-off Workshop
Ft. Pierce, FL
December 16, 2009

UEC 2004 Plan

26 Recommendations



8 Categories

- Aquifer Storage & Recovery
- Conservation
- Floridan Aquifer
- Reclaimed Water
- Reservoirs
- Seawater
- Surface Water
- Surficial Aquifer

Conservation

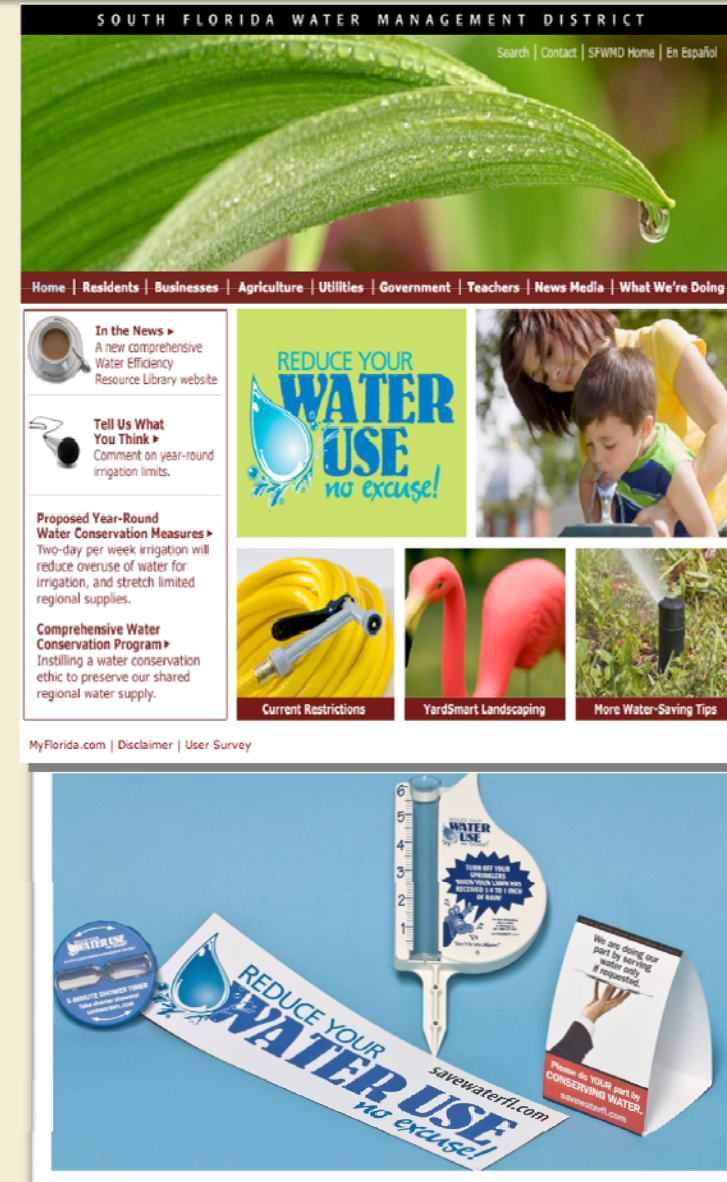


- **Conservation**
 - Most cost-effective method to increase water supplies
- **Comprehensive Water Conservation Plan**
- **Water Savings Incentive Program**
- **Water Conservation Outreach and Education**

Water Conservation

Comprehensive Water Conservation Program for South Florida

- GB Approved September 2008
- Year-round conservation ethic
- Three Program Initiatives
 - Regulatory
 - Voluntary and Incentive-based
 - Education and Marketing



Water Savings Incentive Program (WaterSIP)

■ WaterSIP Program

- Established in 2003
- Provides cost-share funding for implementation of water savings projects that reduce urban water usage

■ Districtwide

- 101 projects funded
- \$2.8M Funded
- 1,792 MGY water savings

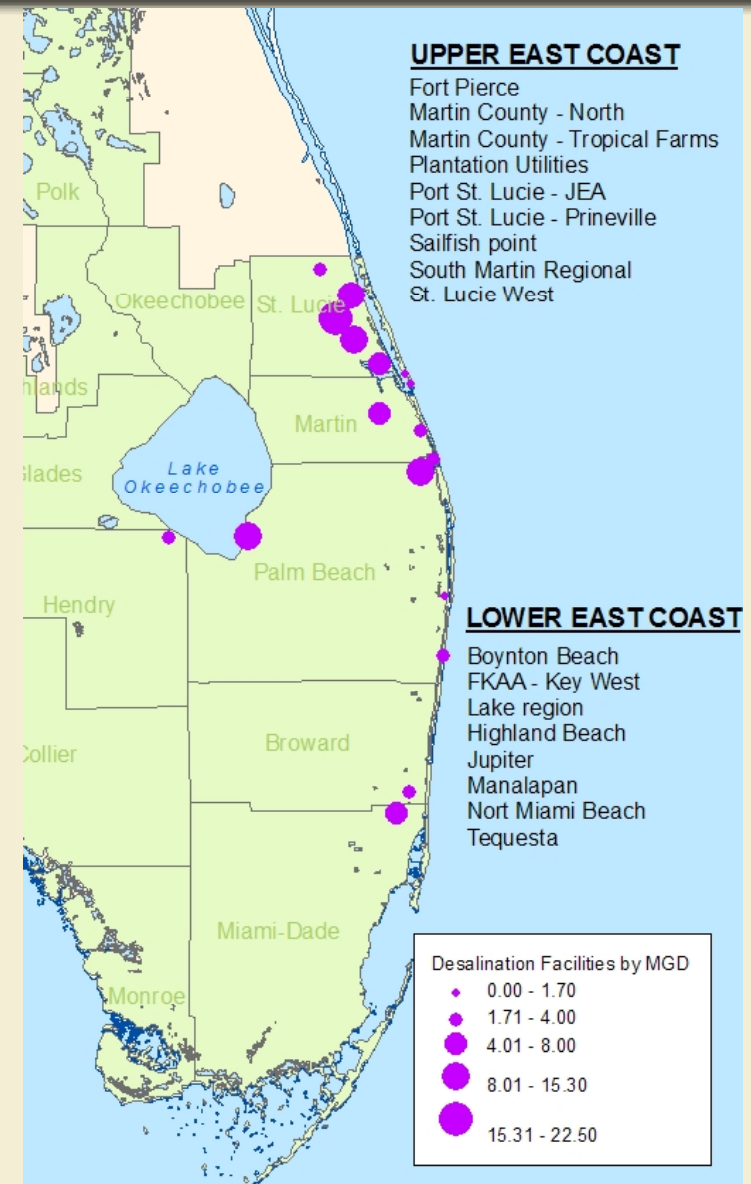
■ Upper East Coast

- 607,048 GD additional water saved from 2005-2009
- Cost to the District of \$248,512
- 50/50 cost shared



Facilities Using Brackish Water in UEC

- 9 PWS facilities using Florida Aquifer & reverse osmosis
- Total capacity: 70 MGD



Floridan Aquifer

- Comprehensive Regional Floridan Aquifer Monitoring Well Network
- Floridan Aquifer Density-Dependent Model
- Floridan Aquifer Exploratory Well Program
- Floridan Aquifer Well Inventory



Floridan Aquifer Exploratory Well Program

- **Drilled three new wells at C-23 Site**
 - Located in north central Martin County
 - Outfitted with recorders to evaluate water level trends in Floridan Aquifer System
 - Hydrogeologic testing
 - Findings Report for C-23 Canal Site on website



Floridan Aquifer Monitoring Well Network

■ Local Network

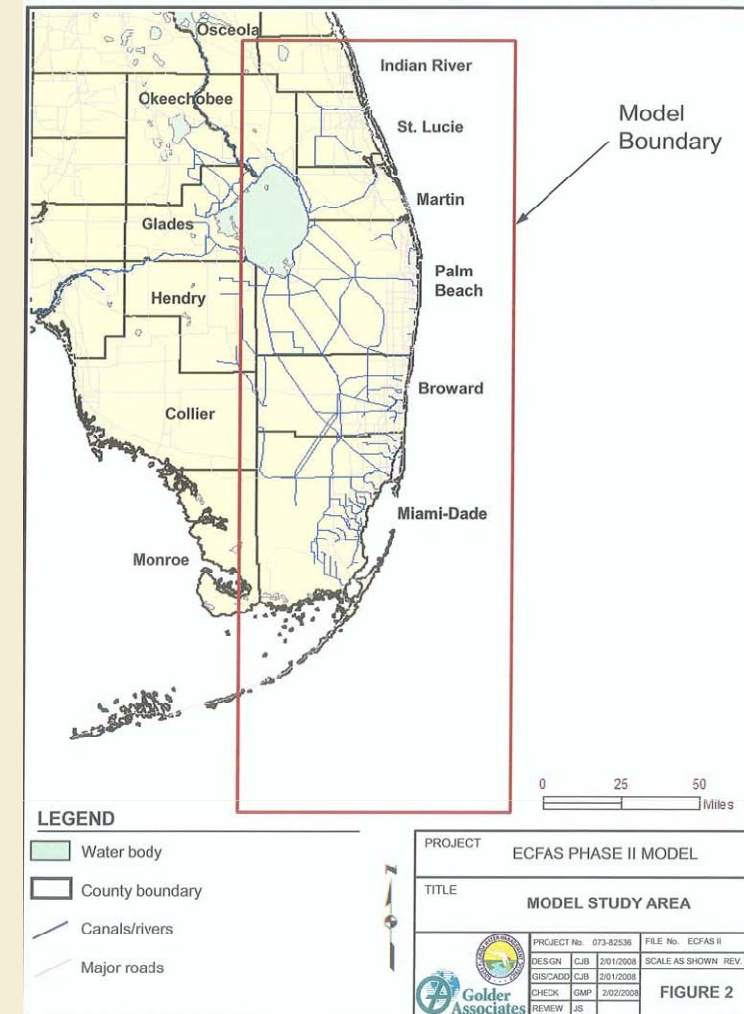
- Established 1996 - 2007
- Expanded to include approximately 60 agricultural sites

■ Regional Network

- Local network fed into regional network
- Expanded to include 4 new sites from 2007-2009
 - 3 sites co-located with utilities (Ft. Pierce, Port St. Lucie and Martin County) existing wells put recorders on
 - District C-23 well site – key area regional and locally
- Continuous water-level recorders have been installed at these sites, and periodic water quality assessments are available.

Floridan Aquifer Density Dependent Model

- **FAS Model developed**
- **Calibrated to existing data**
 - **Model study area encompassed Martin, St. Lucie and Okeechobee counties located in the UEC region; Indian River County which is located within SJRWMD; and for the most part Palm Beach, Broward and Miami-Dade counties for the LEC region.**
- **Report of model development on District website**
- **Awaiting Peer Review**



Desalination

- **Water Desalination Concentrate Management Study completed in 2009**
- **Florida RO Concentrate Management Summit 2009**
 - **Encourage utilities to implement new desalination technologies at their facilities**
 - **Facilitated by District**
- **Seawater desalination co-location feasibility study completed in 2006**



Use of Reclaimed Water

- Reusing 41% of wastewater treated or 21.2 MGD
- 22 of 23 wastewater facilities are providing reclaimed water



Surface Water

- **Northern Palm Beach County Comprehensive Water Management Plan**
- **CERP North Palm Beach County Project Part 1**
- **Loxahatchee River Restoration Plan**
- **Northwest Fork of the Loxahatchee River & Tributaries**
 - **Reservation, MFLs**
- **Ten Mile Creek**
- **CERP Indian River Lagoon-South Project**
- **C-25 Reconnection Study**

Alternative Water Supply Funding District-wide

Alternative Water Supply Funding Program

Since 2005

- 282 Alternative Water Supply Projects Funded
- \$162.8M in total funding
- 484 million gallons per day of new water capacity



UEC AWS Funded Projects



**67 million gallons per day
of new water capacity**

- **\$22.8M Upper East Coast Alternative Water Supply Funding from 2005 -2009**
- **23 Reclaimed projects**
- **10 Brackish projects**

