

Working Group Update Aquifer Storage and Recovery

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sfwmd.gov

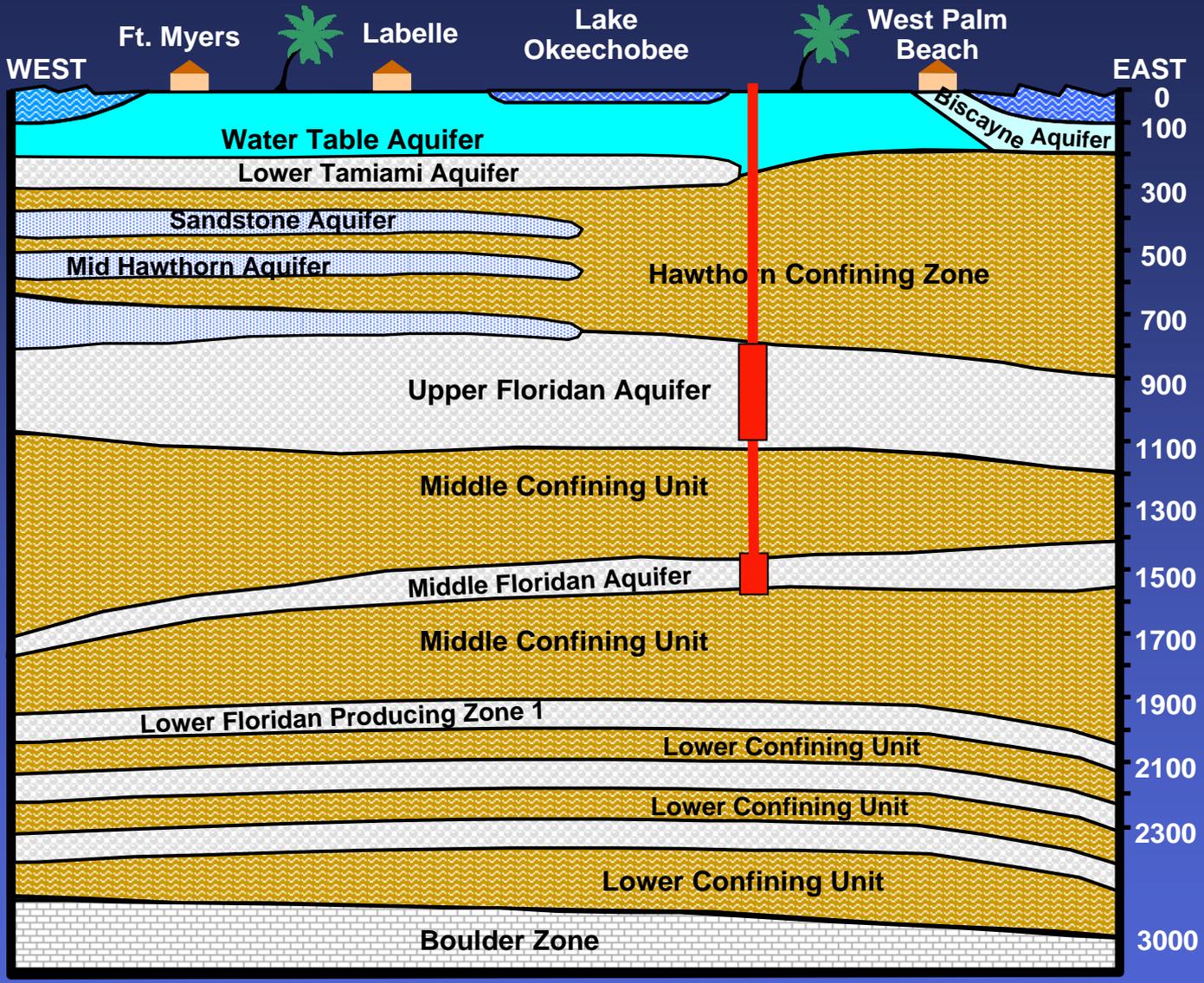
Presentation Objectives

- Provide an update on ASR throughout the SFWMD
- Provide an update on the CERP Pilot Projects and Regional Study
- Present an update on the Lake Okeechobee and Estuary Recovery (LOER) ASR projects

Why ASR?

- Water storage option
- Long experience in Florida
- Flexibility in locating and minimal real estate required
- Makes reservoirs and STAs work better
- TMDL reduction north of Lake Okeechobee





Targeting the Upper and Middle Floridan Aquifer

ASR at SFWMD



Alternative Water Supply Grants Program

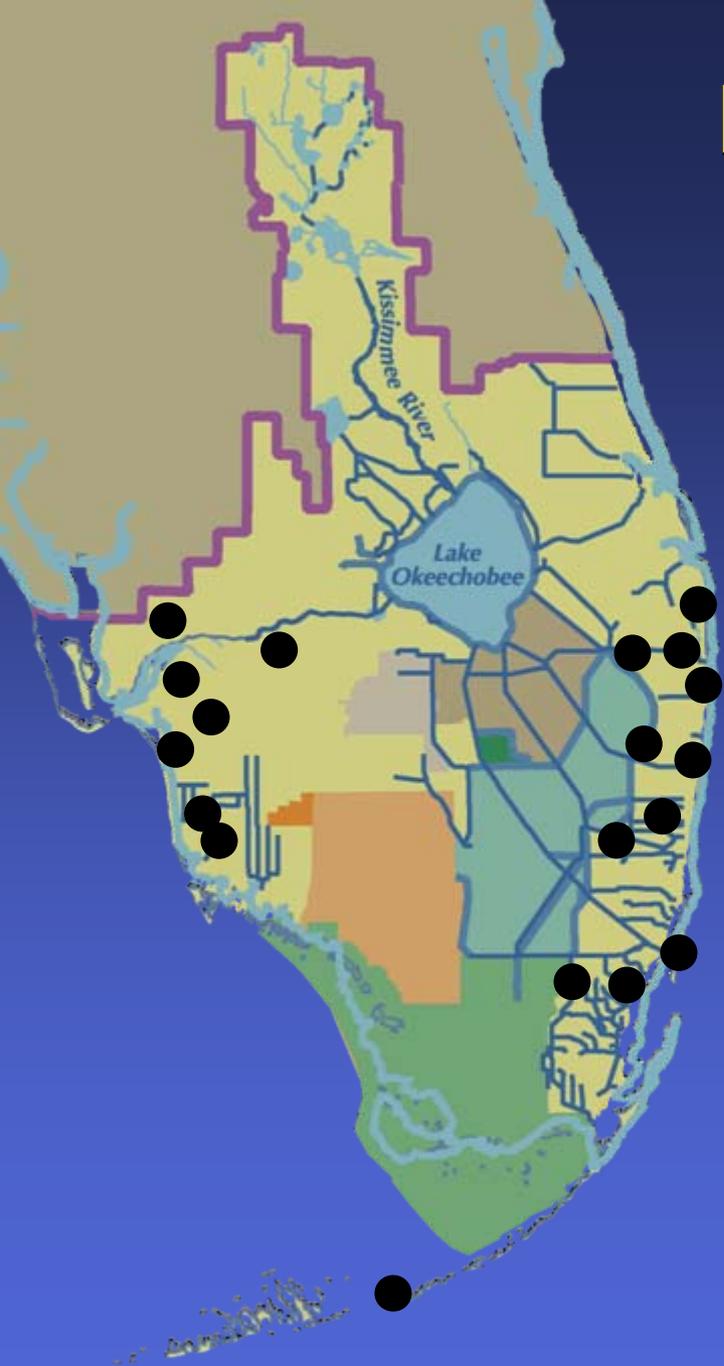
CERP

Pilots

Regional Study

LOER

Existing ASR Systems within the SFWMD



- 20 utility systems in 5 counties
- Potable, raw groundwater, treated surface water and reclaimed water systems
- 30 ASR wells installed
- Approximately 40 MGD of installed capacity

Utility Systems

■ Commonalities

- Most wells pumping at 1 or 2 MGD
- Most systems operated for less than 4 years, fewer than 6 cycles

■ Oldest

- Boynton Beach – Since 1992
19 cycles, 2 wells, 80% recovery efficiency

■ Largest installed capacity

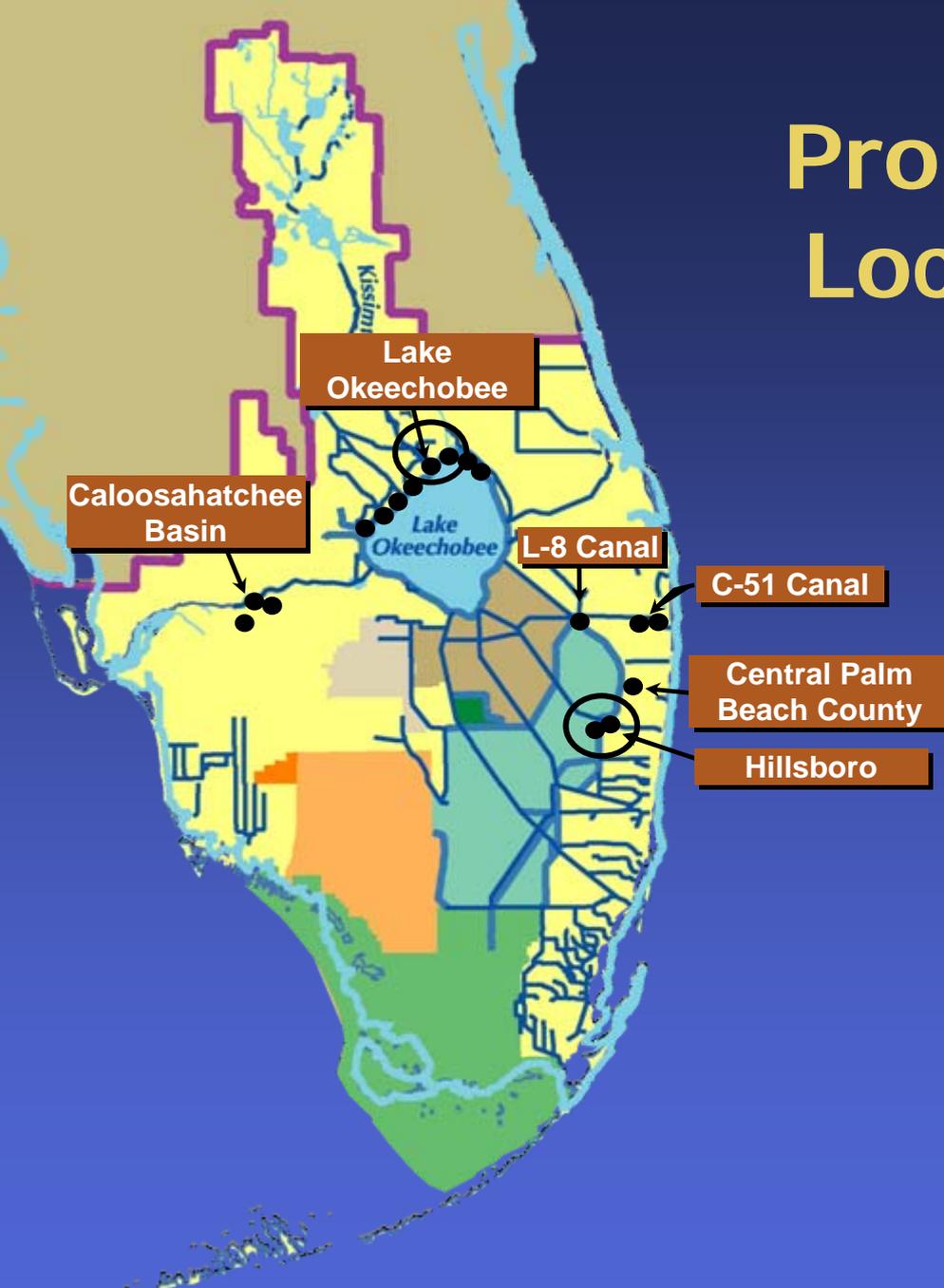
- MDWASD West Wellfield
3 wells, raw groundwater - 15 MGD

■ Most water stored

- Marco Island
6 wells, 1 billion gallons stored, partially treated surface water



Proposed CERP ASR Locations and Pilot Projects



<u>Site</u>	<u>Capacity (MGD)</u>
Lake Okeechobee	1,000
Caloosahatchee	220
L-8 Basin	50
C-51 Basin	170
Central PBC	75
Hillsboro	150
TOTAL	1,665

Note MGD = million gallons per day



The Hillsboro ASR Pilot Project



Hillsboro



The Kissimmee River ASR Pilot Project



Wellhead



Kissimmee

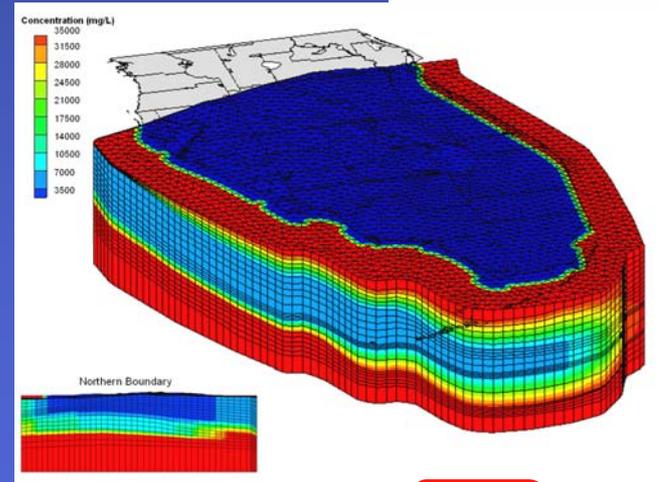
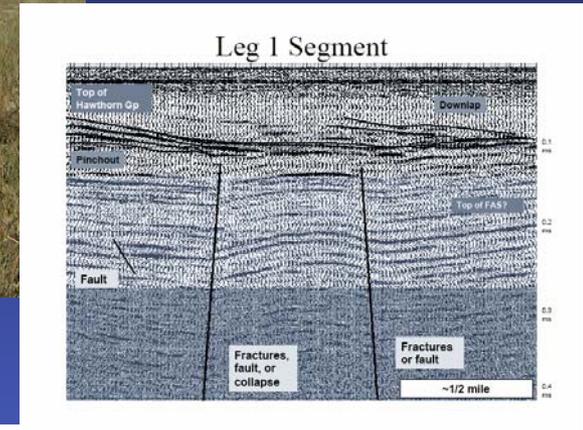


Intake pump



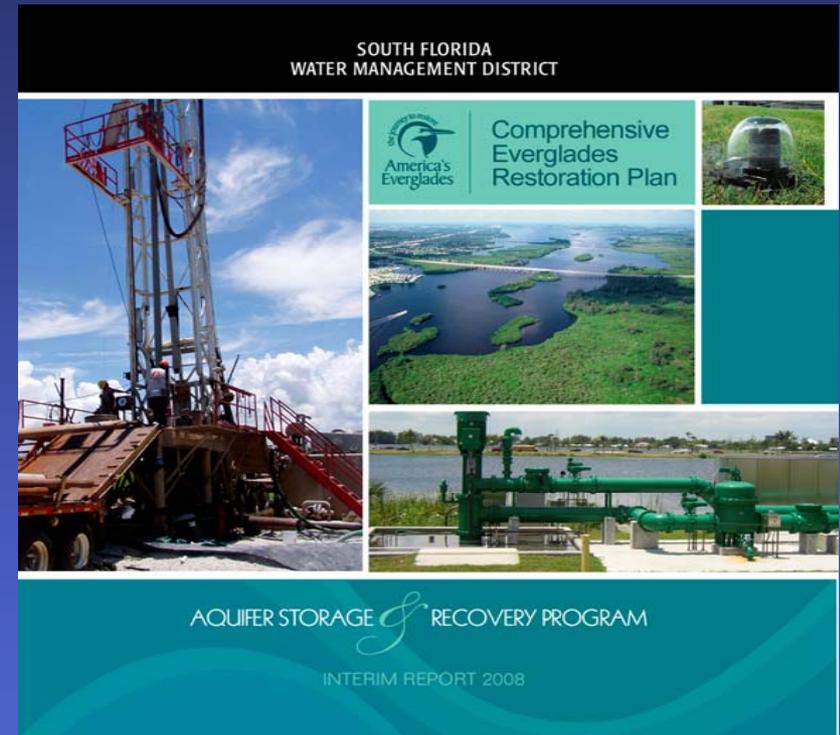
ASR Regional Study

- Regional Hydrogeologic Framework
- Groundwater modeling
- Evaluation of “hydro-fracturing”
- Geochemical evaluations
- Water Quality studies
- Ecological studies
- Complete in 2012



ASR Interim Report

- ASR will work almost anywhere in South Florida with some degree of efficiency
- Geology is conducive in 4 out of 5 places
- Fracture potential is low
- Mercury risk is low
- Arsenic has emerged as a constituent of concern
- Modeling, cycle tests and ecological assessments are next

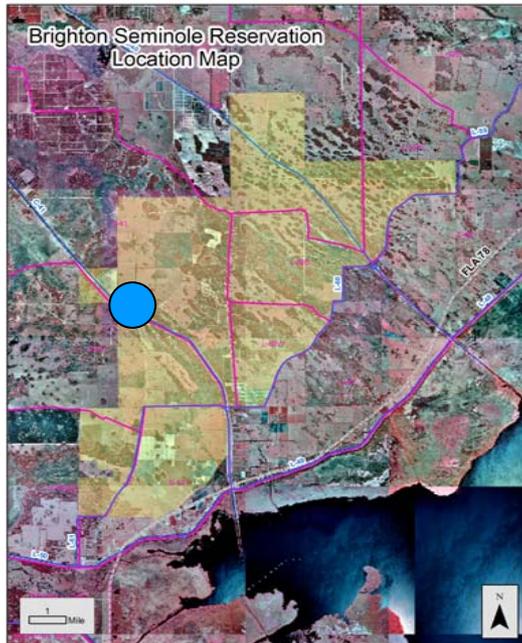


SFWMD Projects LOER ASR

Paradise Run



Seminole\Brighton



Taylor Creek



Arsenic

- Drinking water standard now 10 ppb
- Many operational systems currently exceeding the standard
- Appears to be caused by dissolution of minerals in limestone
- FDEP may require consent/administrative orders for facilities to find a solution
- Bradenton De-gas pilot - ongoing
- Surrogate model - ongoing
- FDEP - SFWMD – SWFMD – SJRWMD working group

The Path Forward

- Initial Groundwater Model results by 2010
- Pilot projects (2) – cycle testing through 2011
- L-36N active by 2010
- Regional study complete (Technical Data Report) by 2012
- CERP ASR Project Implementation Report by 2015

Questions?

