

# WRAC Update

## Aquifer Storage and Recovery



[sfwmd.gov](http://sfwmd.gov)

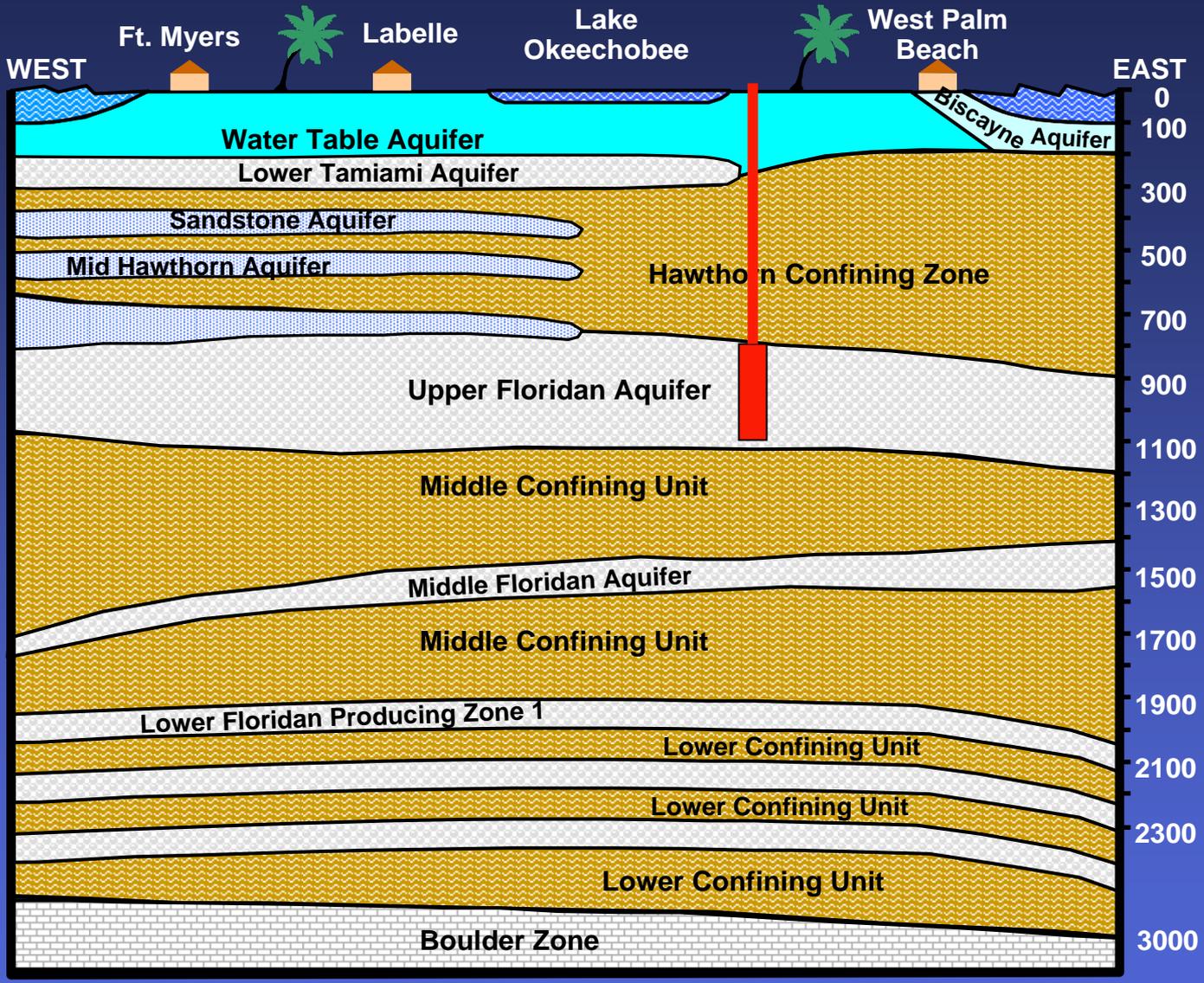
# Presentation Objectives

- Provide an introduction to Aquifer Storage and Recovery (ASR) at 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?

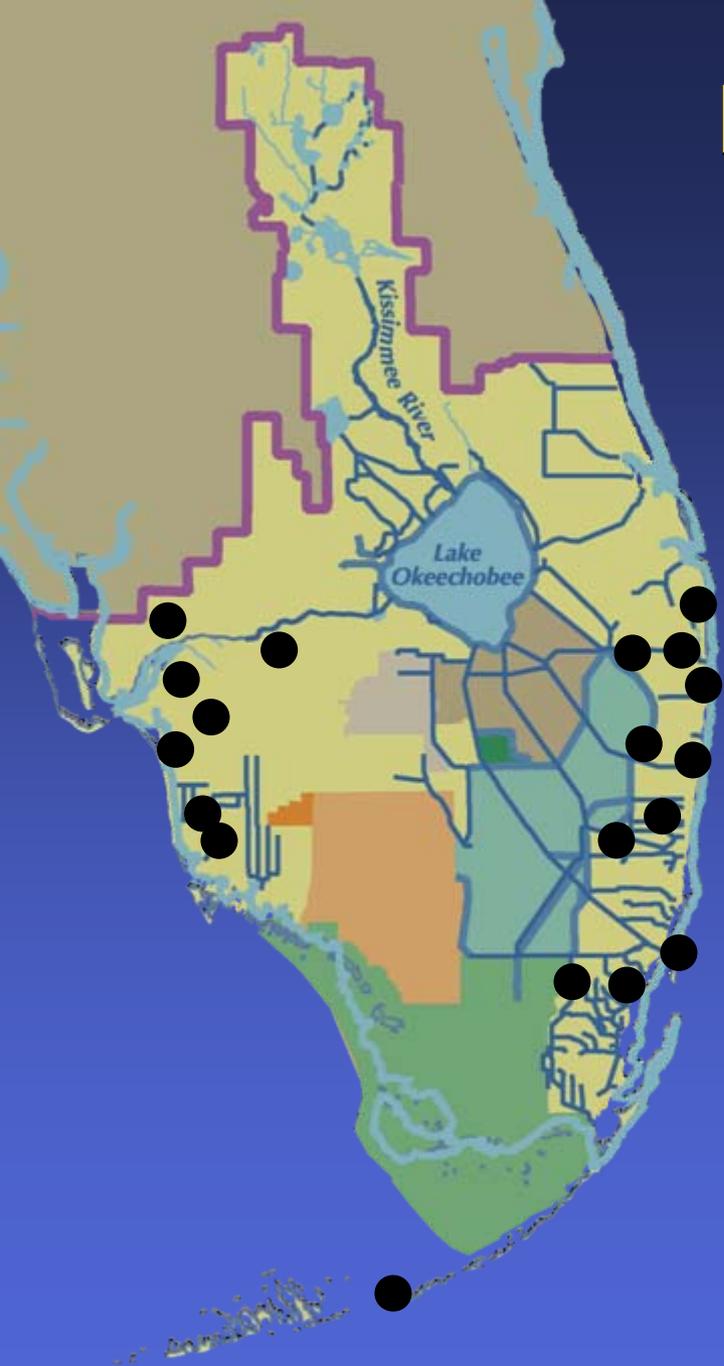
- Water storage option
- Provide longer-term storage of water than reservoirs
- Long experience in Florida
- Flexibility in locating and minimal real estate required





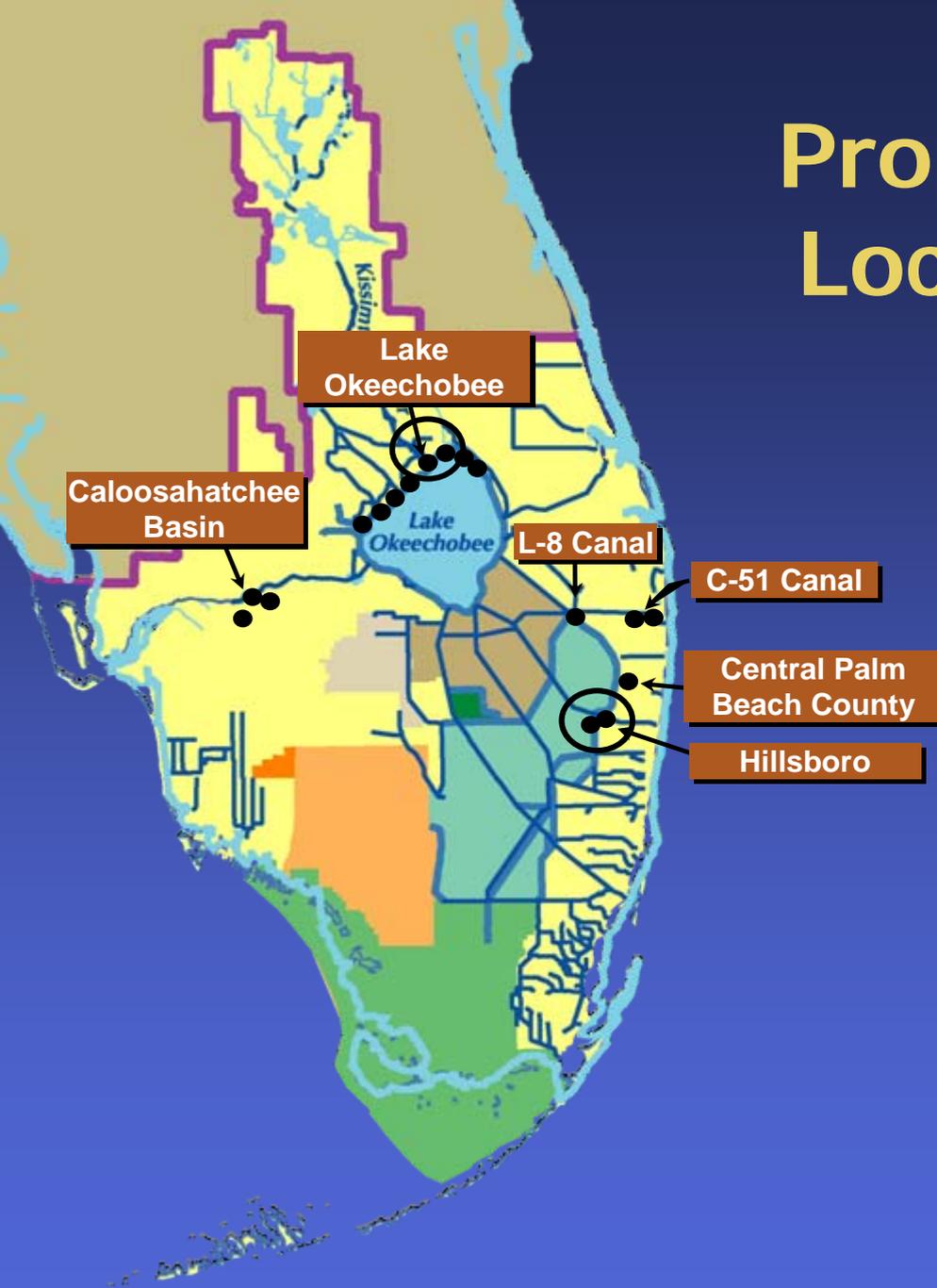
# Targeting the Upper Floridan Aquifer

# 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

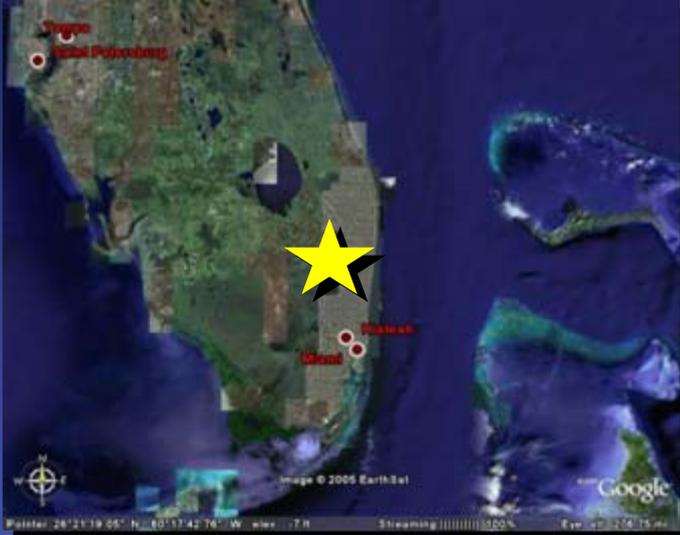
# Proposed CERP ASR Locations and Pilot Projects



<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
<b>TOTAL</b>	<b>1,665</b>

*Note MGD = million gallons per day*

# The Hillsboro ASR Pilot Project

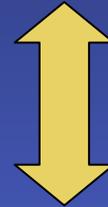


# Kissimmee River ASR Pilot Project

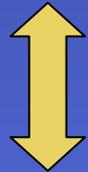




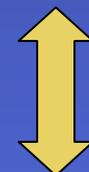
# Implementation Strategy



**CERP ASR PROGRAM**



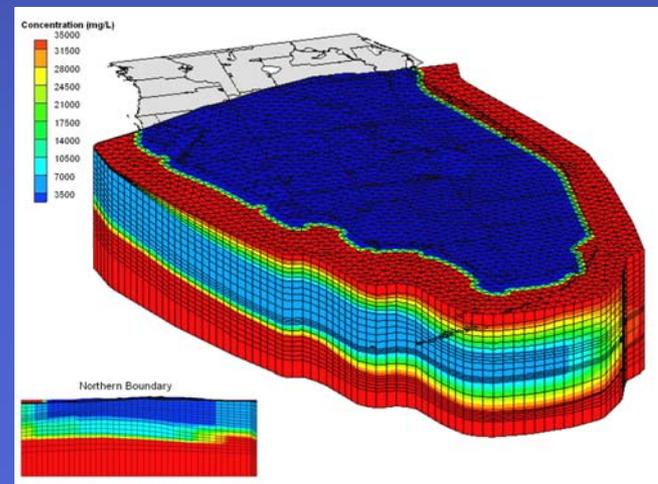
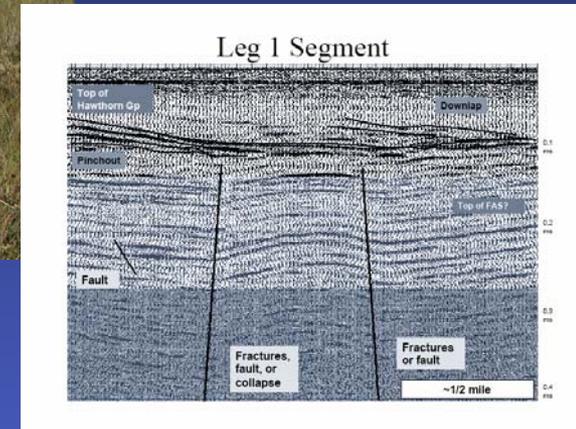
**Proposed  
Regional  
Study**



**ASR Pilot  
Projects**

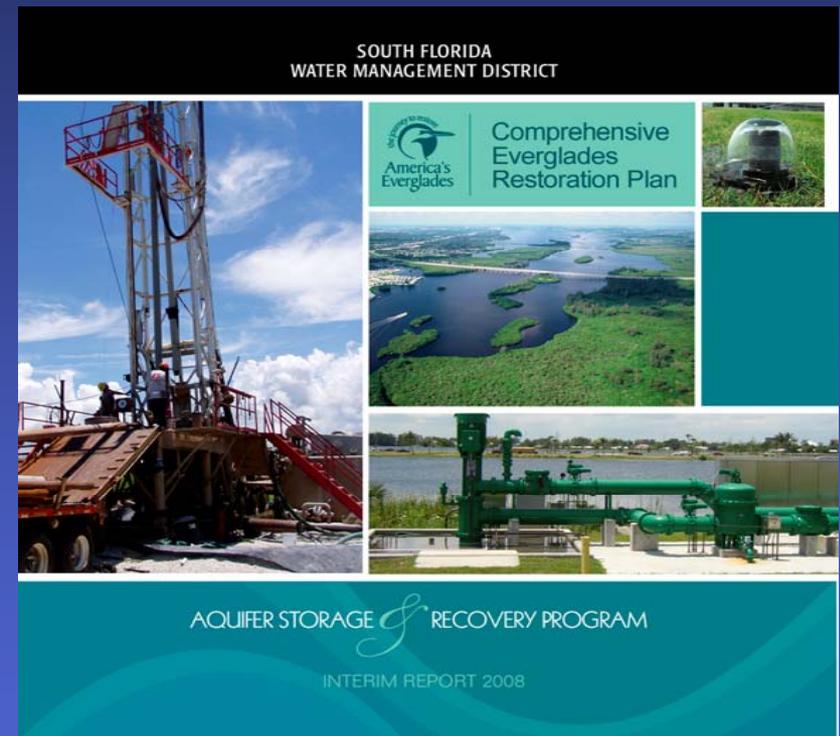
# ASR Regional Study

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



# 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

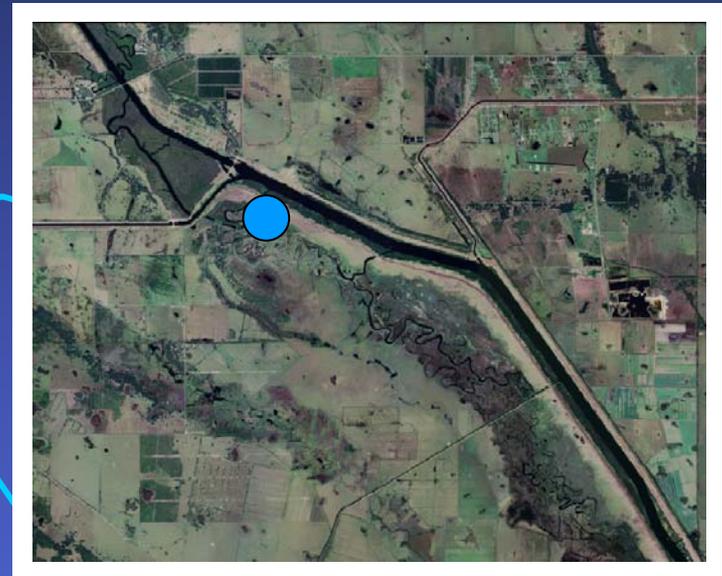


# LOER ASR

Seminole\Brighton



Paradise Run



# Taylor Creek (L-63N Canal) ASR



- Existing system, operated during late 1980's
- Pilot treatment testing underway
- UIC permit application pending
- Operational by 2009

# 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 and EPA at impasse - may require consent orders for facilities to find a solution
- Bradenton De-gas pilot - ongoing
- Surrogate model - ongoing
- FDEP - SFWMD – SWFMD – SJRWMD working group

# Questions?

