

C51 Reservoir Update

Broward County Water Resources
Task Force

April 1, 2011

Why the Reservoir?

- **Mounting Pressures on Traditional Water Resources**
- **Population Growth**
 - Extended time frame
 - Improved conservation
- **Competing Demands for “Cheap” water**
 - Environmental Restoration
 - Irrigation (Agricultural, Residential, Commercial)
 - Electrical generation
 - Municipal utilities

Current Alternative Water Supplies



High energy use, high carbon footprint and high cost

- Reclaim Water for irrigation

- Limited area

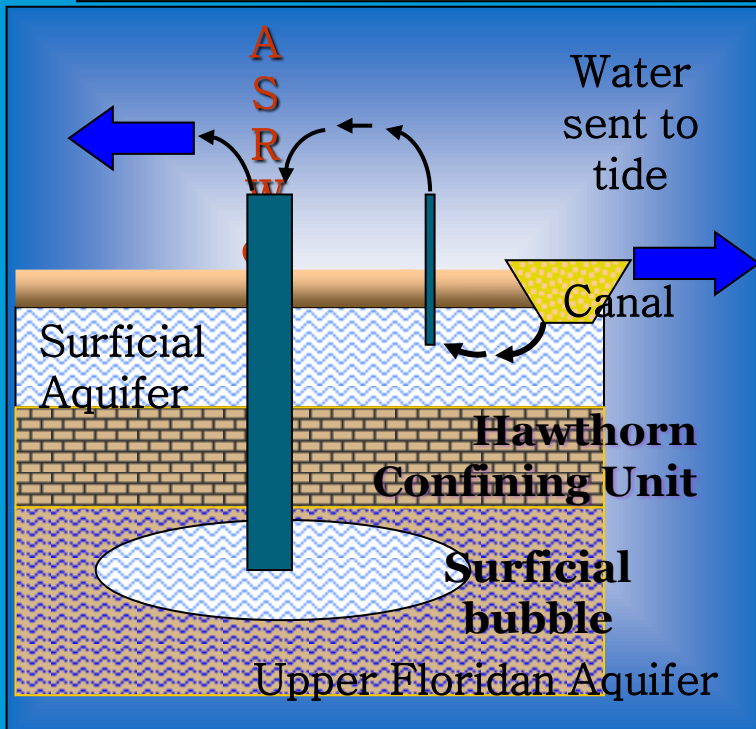
- Dry season use

- ASR wells

- Low recovery %

- Arsenic concerns

- Reverse Osmosis Plant

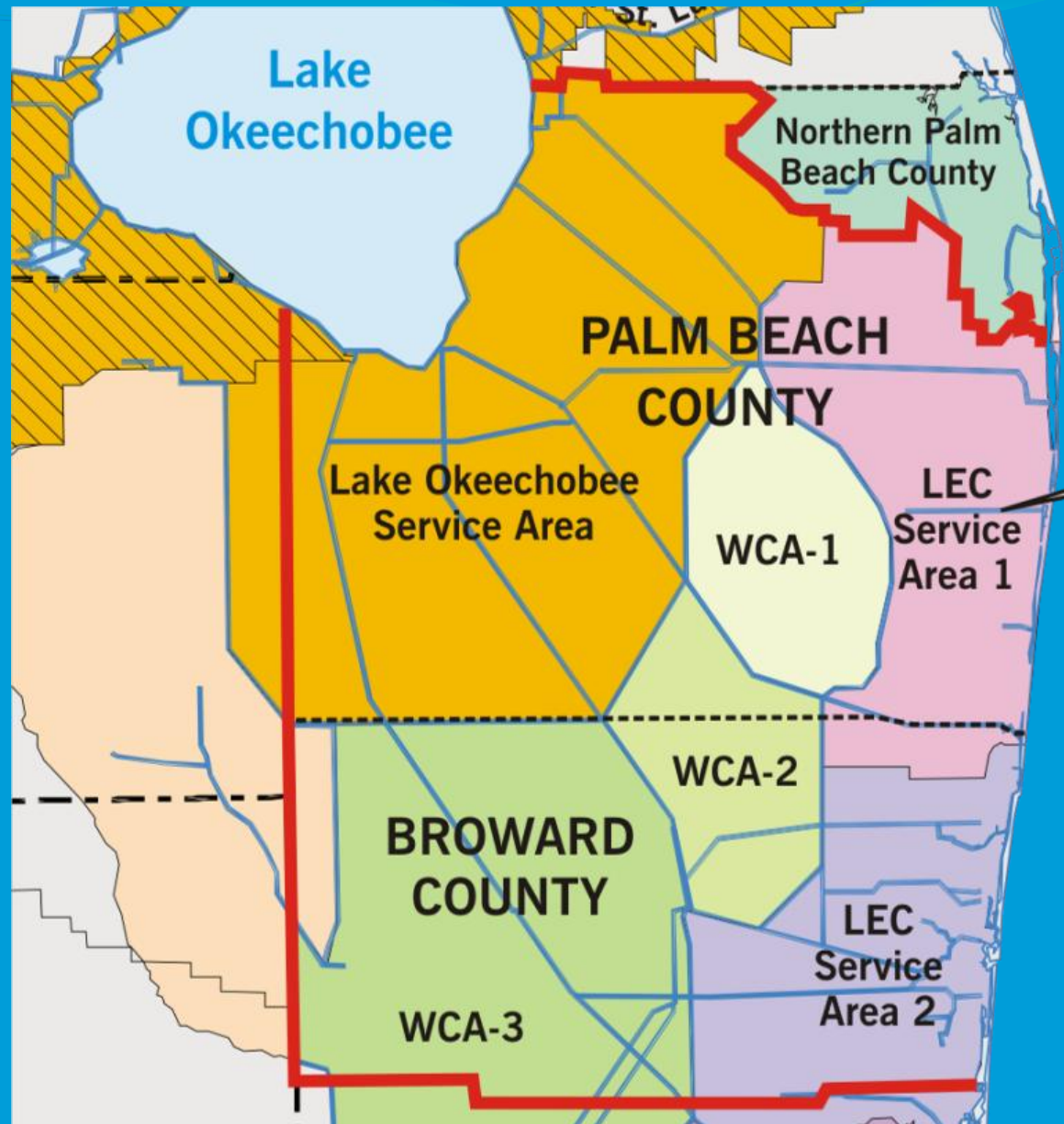


Storage is the Solution

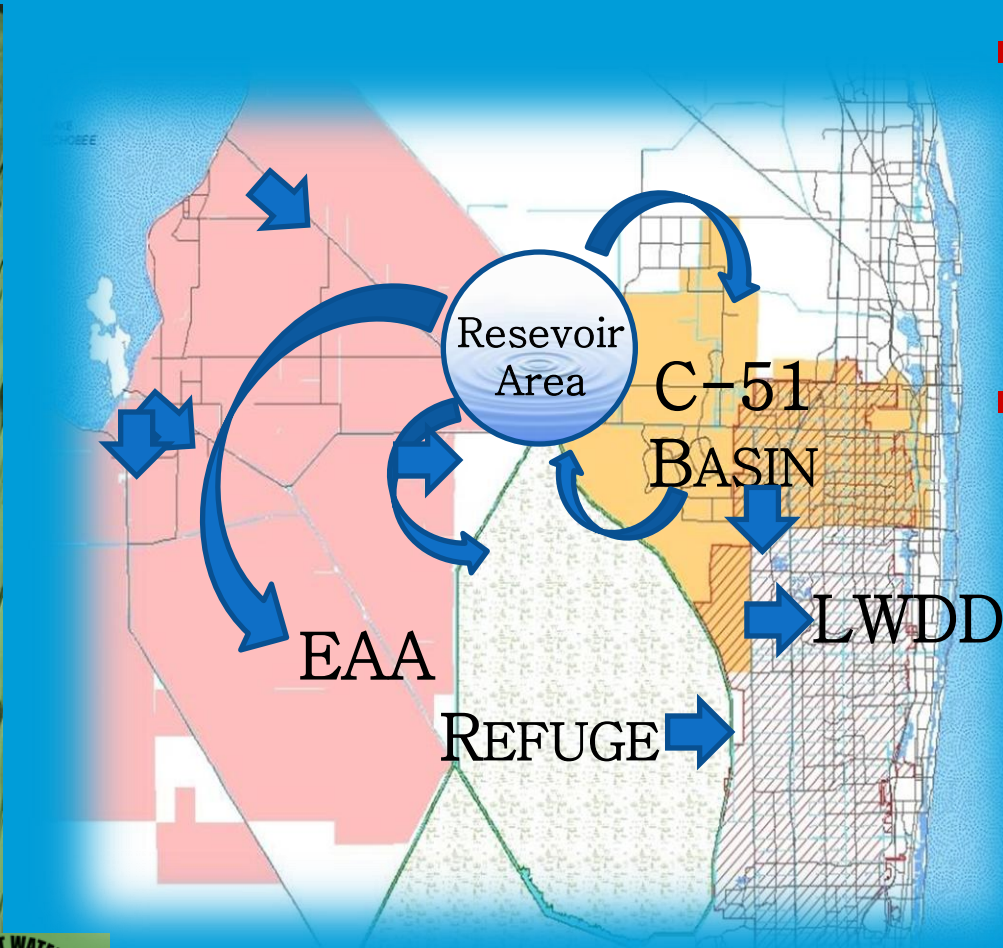


- CERP recognized need for additional water storage
- In Florida: DIFFICULT
 - Flat
 - Expensive
 - Pervious
- One area is suited!
 - Tight geology
 - Location near STA, WCA
 - Room for 75,000 acre-feet

C-51 Reservoir Overview

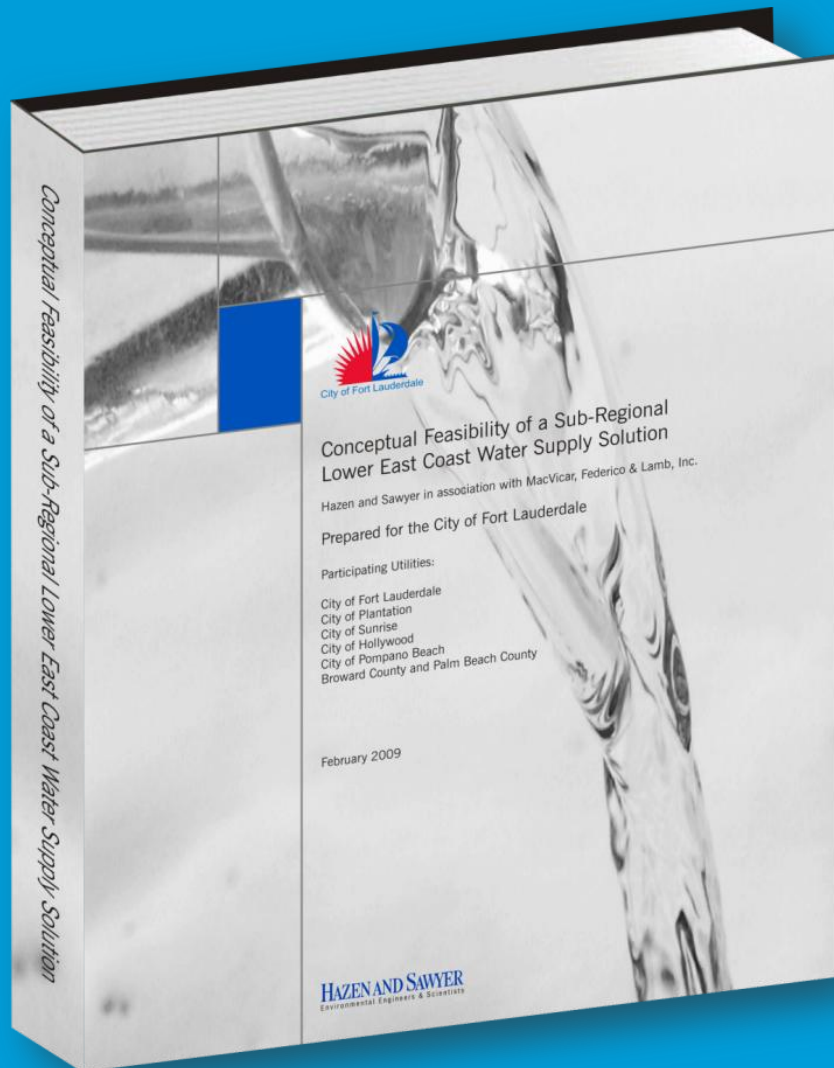


Sustainable Alternative Water Solution: Capture and Store Stormwater



- Storage Facility
 - Reservoir
 - Pump Stations
- Conveyance to users
 - STA/WCA-1
 - LWDD

Original Feasibility Study published in February 2009



- Joint effort – local governments / SFWMD
- Sponsored by 7 “Participating Utilities”
 - Palm Beach County
 - Broward County
 - Pompano Beach
 - Plantation
 - Sunrise
 - Fort Lauderdale
 - Hollywood
- All other utilities in Study Area can benefit

Who Can Benefit?

- Environment
 - Water for environmental restoration
 - Reduced nutrients to Lake Worth Lagoon
- Municipal Utilities
 - Palm Beach County
 - Broward County
- Agriculture?
- Industry?

What are Environmental Benefits?



- Manage Flows to WCA-1 for Environmental Restoration
- Decreased Sediment Load to Lake Worth Lagoon
 - ⊗ Reduced Turbidity
 - ⊗ Increased Light Penetration
 - ⊗ Improved Bio-Diversity
 - ⊗ Improved Water Quality

Municipal Utility Benefits?



- Additional water supply
- Existing wellfields recharged w/ fresh water
- Use existing water plants
 - Less energy use
- Lower carbon footprint
- Lower cost
- Sustainable from rainfall

SFWMD Board Direction

- Governing Board October 13, 2010 – presentation on the Broward County Water Resources Task Force Report
- Proposed C-51 reservoir project study was highly ranked
- Board discussed potential benefits to Everglades restoration efforts to meet water quality obligations
- Board directed staff to take the lead in developing consensus for this major regional water supply project

Current and Future Actions

Memorandum of Understanding

- Water Availability: SFWMD modeling
- Potential Users: Utilities future water needs
- Natural System Needs: SFWMD to identify
- Initial Feasibility Determination
- Governance and Permitting Decisions
- Conveyance Decisions
- Public Communication

Memorandum of Understanding

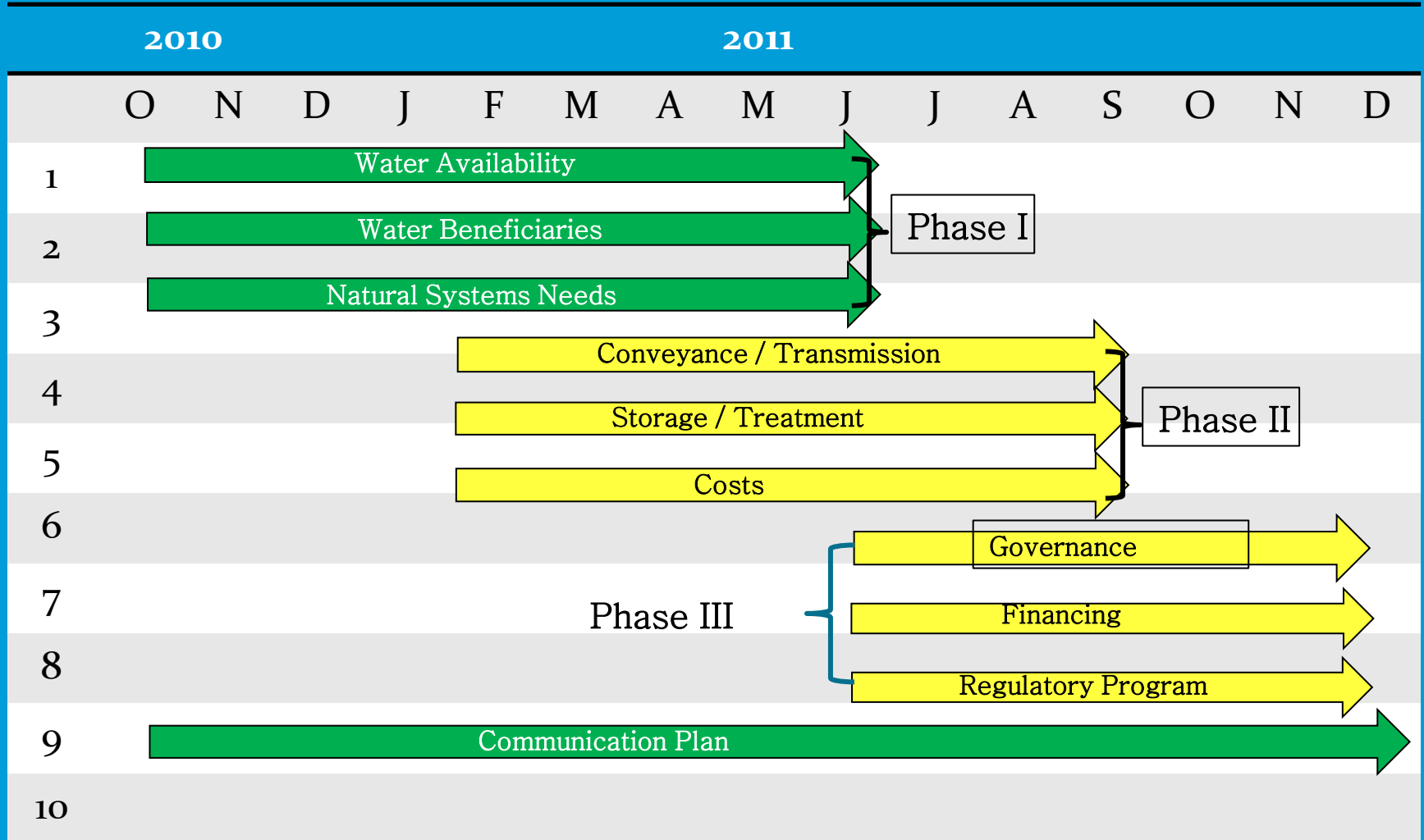
- Non-binding
- Signatories
 - Lake Worth Drainage District
 - Palm Beach County Utilities
 - City of Fort Lauderdale
 - SFWMD
 - Joinder – Allows other parties to participate
- Initial Feasibility Determination
 - Does project meet participants objectives

Future Agreements

Funding Participation

- Preliminary Project Design and Cost Estimate: All Parties
 - Conveyance Routes:
 - Storage and Treatment
 - Report

C-51 Reservoir Partnership Study



Pending Activities

- SFWMD Board approval of the MOU: April 14, 2011
- Formation of the Steering Committee
 - SFWMD Senior Staff
 - LWDD
 - Utilities
- SFWMD Modeling
 - Water Availability
 - Reservoir Operations
- Water Needs
 - Utilities, Environment

Thank you

Comments and
Questions