



# C-51 Reservoir Update

**Governing Board  
August 14, 2014**

*Len Lindahl, Assistant Executive Director*

# C-51 Reservoir



- Located in western Palm Beach County
- Phase 1 - 17,000 ac/ft of storage
- Phase 2 – 44,000 ac/ft storage
- Capture and store excess surface water from C-51 basin.
- Increased water storage and delivery to help benefit South Florida's regional water supplies

# C-51 Reservoir Timeline

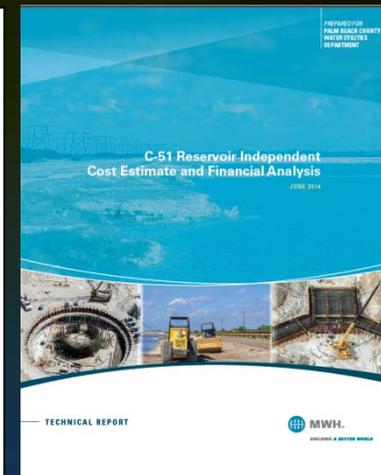
- **2006:** Seven South Florida utilities investigating a collaborative regional approach to develop alternative water supply
- **2009:** Conceptual Report concludes that there are environmental and water supply benefits associated with storing excess wet season water from C-51
- **2010:** Updated Conceptual Design Report and conceptual design features developed
- **2011:** C-51 MOU executed between LWDD, City of Ft. Lauderdale and other Municipalities.
- **2012:** Final Draft of the Preliminary Design and Cost Report released
- **2013:** District signs MOU with Palm Beach Aggregates to facilitate design, construction and operation of the C-51 reservoir.
- **2014:** C-51 Reservoir Independent Cost Estimate and Financial Analysis



## C-51 RESERVOIR – PRELIMINARY DESIGN AND COST ESTIMATE – DRAFT FINAL REPORT



Prepared By:  
Lake Worth Drainage District  
Palm Beach County  
Broward County  
South Florida Water Management District  
June 2012



TECHNICAL REPORT



# SFWMD/Palm Beach Aggregates Project MOU Agreement

## PBA Responsibilities

- Design, develop, secure permits, financing and construction of Phase I of the C-51 Reservoir
- Solicit and secure sufficient capacity allocation agreements to support construction of Phase I
- Develop and enter into Conveyance System Agreements as necessary with 298 Districts
- Transfer ownership to a not-for-profit corporation upon completion

## SFWMD Responsibilities

- Provide evaluation of permits, plans, operational analysis and evaluation of the connections between Phase I and the Conveyance Systems to move water into and out of the Reservoir
- Develop O&M Agreement
- Operation and Maintenance of Reservoir after construction is completed with reimbursement cost

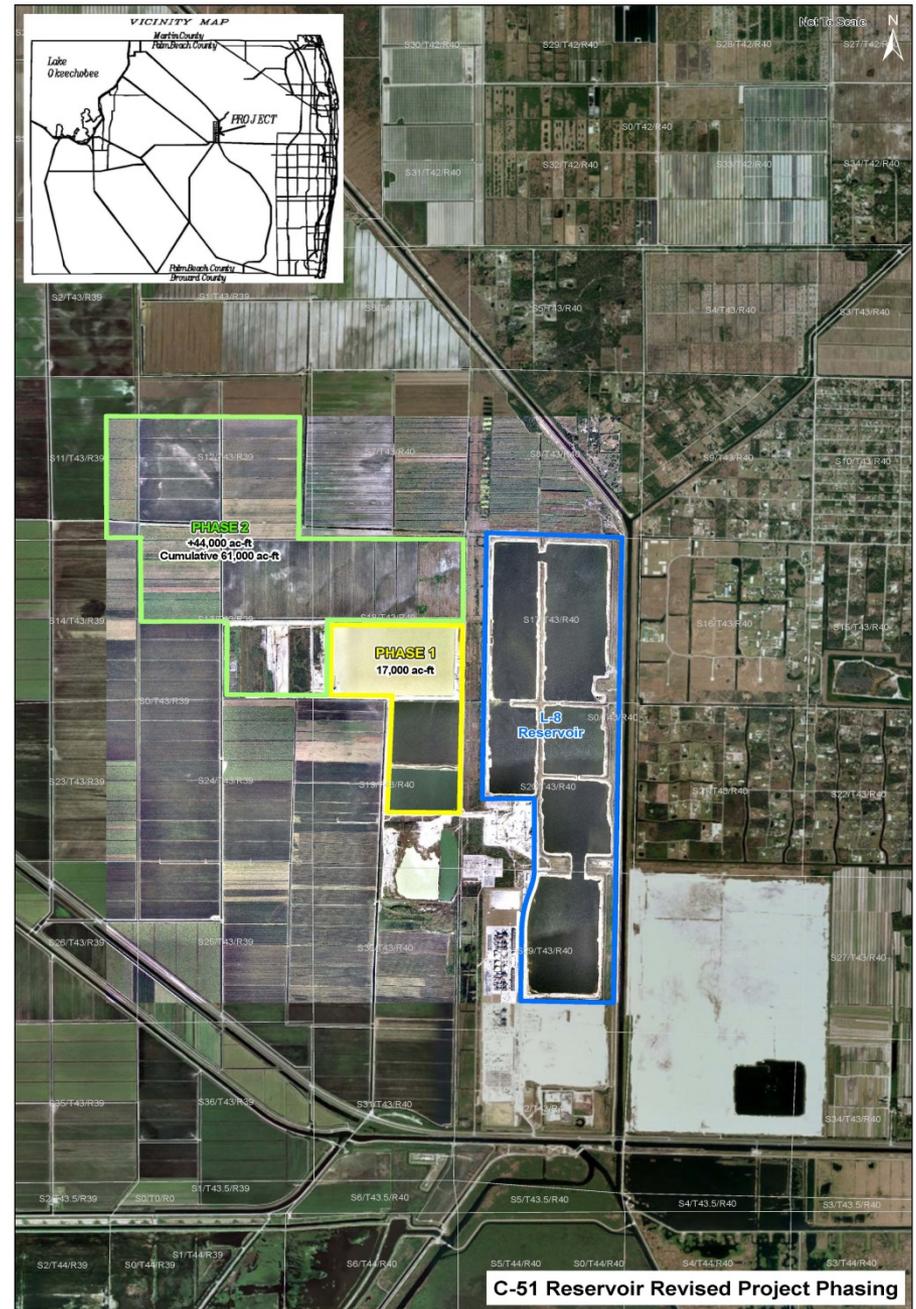
# C-51 Reservoir Project Phases

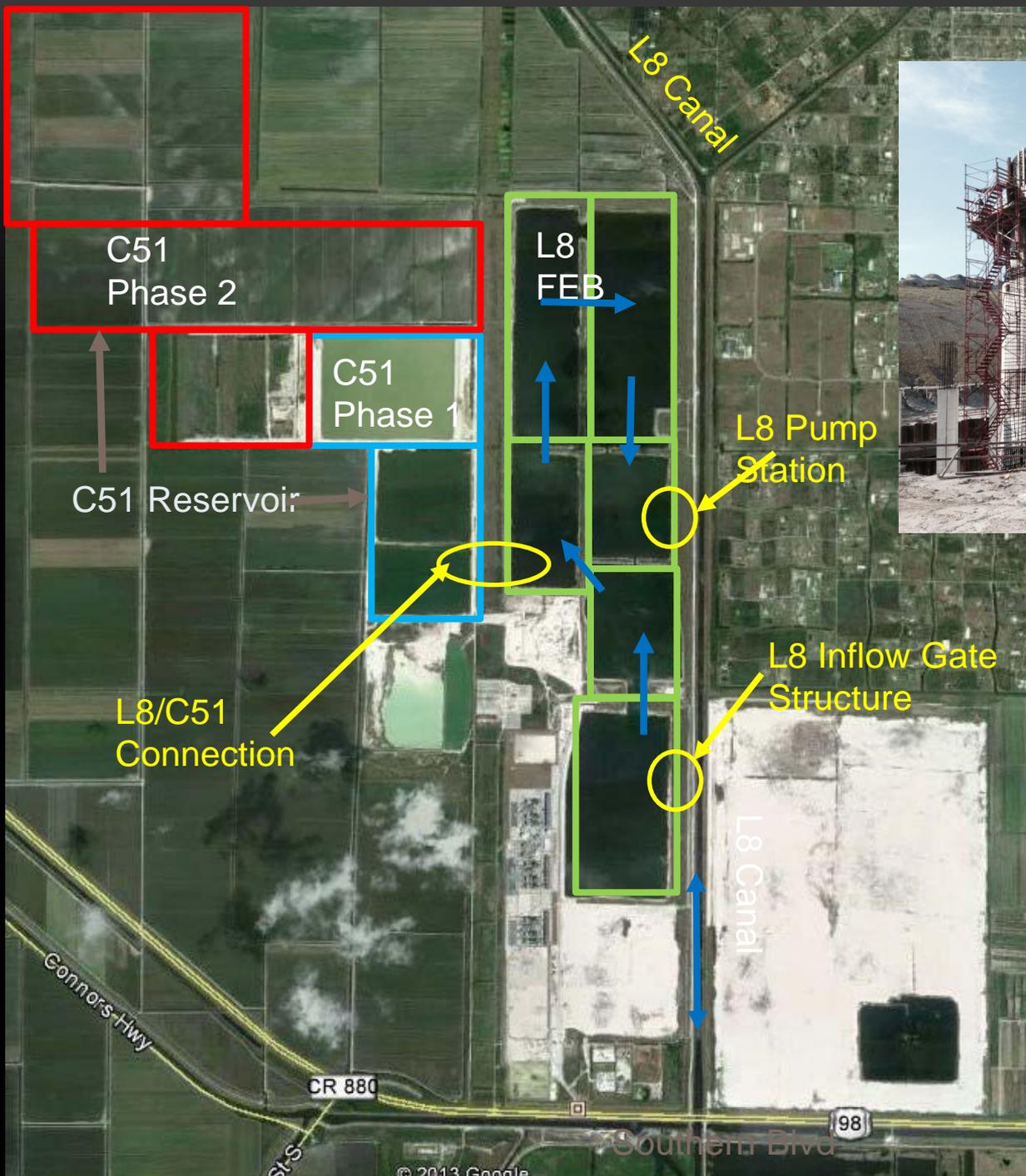
## ■ Phase I

- 17,000 Acre-Feet of Storage
- Control elevation 16.5 NAVD
- 2.5 years to construct
- ~35 mgd for water supply
- Majority of excavation complete
- Costs \$150-\$186M

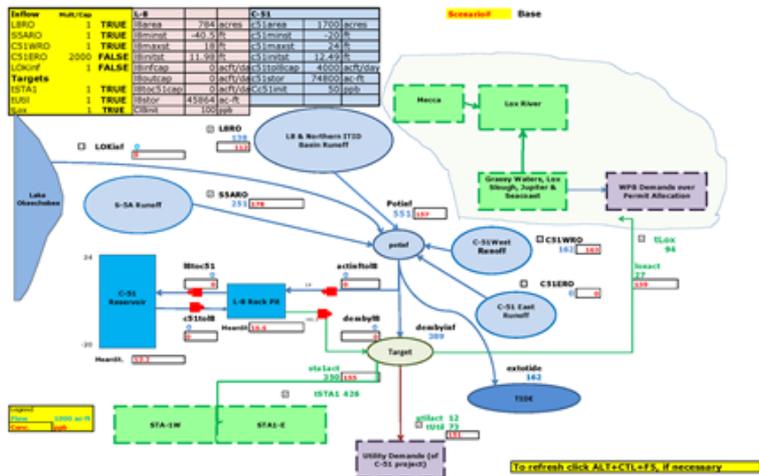
## ■ Phase II

- 44,000 Acre-Feet of Storage
- Control elevation 16.5 NAVD
- ~120 mgd for water supply
- 7 years to construct



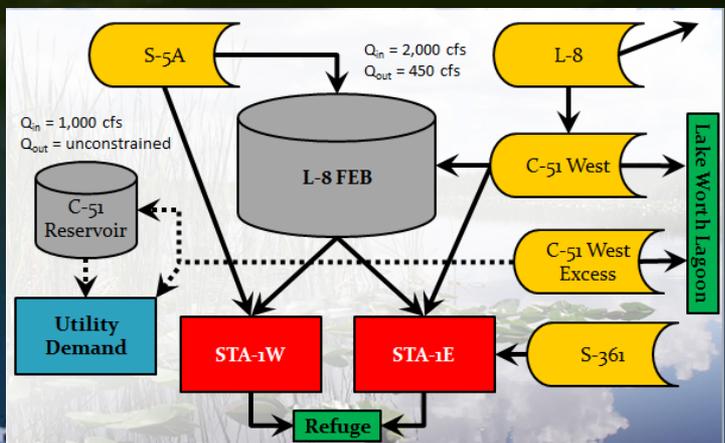


# Interaction of C-51 with other projects in the region



Eastern FEB Screening Tool

- Developed a screening level tool for evaluating C-51 reservoir and its interaction with;
  - Loxahatchee River Watershed Restoration projects
  - Stormwater Treatment Areas
- DMSTA modeling for investigating role of C-51/L-8 FEB in meeting Restoration Strategies requirements
- Modeling support for permitting of C-51 reservoir



# Conveyance Modeling (Phase 1)

- Preliminary modeling
  - Conveyance of 35 MGD appears to be feasible
  - Complex hydraulics routing-water exchanges along the way
  - Performed field test in LWDD System
- Additional modeling to be performed for actual delivery locations



# C-51 Reservoir Progress Update

- Environmental Resource Permit for Construction issued by FDEP April 2014
- Final Design of Hydraulic Connection by *WRS* Completed – SFWMD Review underway
- Final Reservoir Design by *AMEC* Completed – *SFWMD Review underway*
- District O&M Agreement – Draft Underway
- C-51 Reservoir CUP – Draft Application Underway
- Water Utility Allocation Agreements and Permit Applications – Pending
- Construction Timing – October 2014 for Connection to L-8
  - Current L-8 Contractor Construction Completion date April 2015
  - PBA Connection to L-8 will take ~ 6 mos.



# WRAC Comments – August 7, 2014

- Linkages to restoration
- Water quality concerns
- Large storage capacity relative to project footprint
- Financial considerations
- Reduction in competition between users and the natural system
- Environmental benefits to Lake Worth Lagoon
- Schedule



# Discussion