

C-51 Reservoir Project Phase 1 Update

SFWMD LEC Water Supply Plan Update
Stakeholder Meeting #2 - March 21, 2018

By Ernie Cox, Project Manager for Palm Beach Aggregates LLC

South Florida Water Challenge

- Lower East Coast Regional Availability Rule passed in 2006 requires all new water to be an Alternative Water Supply or other option described in the rule
- Floridan Aquifer Wells with Reverse Osmosis Treatment Very Expensive and Questionable Sustainability
- Reclaimed Water to Recharge Aquifers Even More Expensive
- Utilities joined together to evaluate C-51 Reservoir to capture excess storm water and recharge Surficial and Biscayne Aquifers to use existing well fields and treatment capacity
- C-51 Reservoir is preferred after extensive study

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

C-51 Reservoir – Palm Beach Aggregates and Local Sponsors



➤ Captures and stores excess surface water from the C-51 West Basin

➤ Proposes delivery of water as Alternative Water Supply

C-51 Reservoir Alternative Water Supply

- Water conveyed through a series of SFWMD, Lake Worth Drainage District, and other integrated canal systems
- No structural improvements necessary to deliver Phase 1 water
- Recharges local wellfields



Project History

- Originally contemplated as part of CERP
- 2006 - Coordination of seven Broward and Palm Beach water utilities and counties
- 2007-2008 - Partners cost-shared in initial preliminary design and cost-benefit analyses with policy and regulatory issues coordinated with SFWMD
- 2009 – 2013 – Regulatory, environmental, geotechnical, conveyance, governance, and financial considerations culminated in the Preliminary Design and Cost Estimate Report

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



Prepared By:
Lake Worth Drainage District
Palm Beach County
Broward County
South Florida Water Management District
February 2013

Project History

2013 – Present

Governance and Finance Work Group created via resolution and adopted by participants

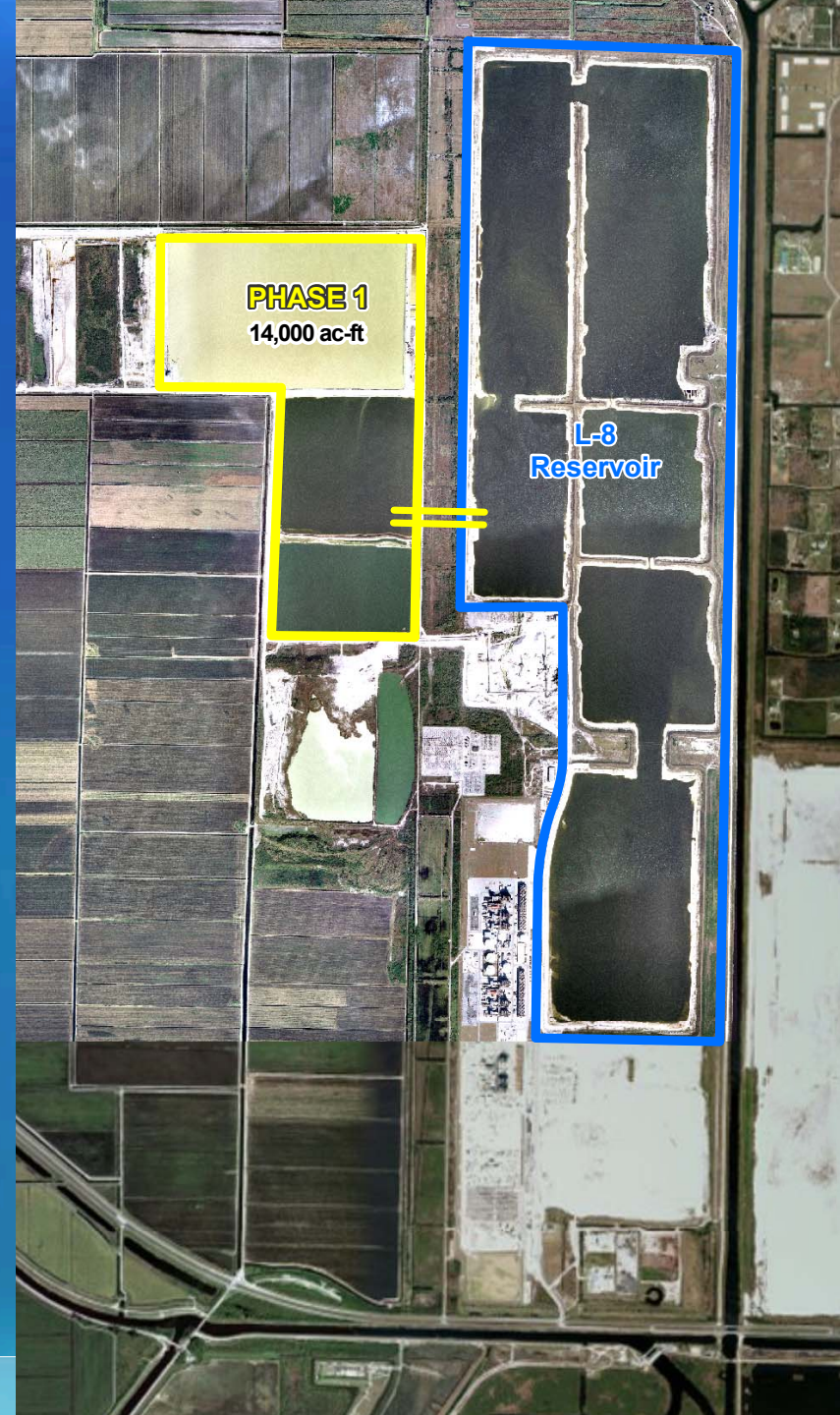
Broward County	Palm Beach County
Broward WRTF	Palm Beach WRTF
South Broward Drainage Dist.	Lake Worth Drainage District
Hallandale Beach	Boca Raton/Lantana
Coconut Creek	Palm Beach Gardens/Juno Beach
Town of Davie/Cooper City	Jupiter Inlet/Riviera Beach
Fort Lauderdale	Royal Palm Beach/Wellington
South Florida Water Management District	

Governance and Finance Work Group Report

- 2013 Joint Water Resources Task Force Meeting
- MWH Global Hired by Utilities
- Independent Cost Estimate
- Engineering Review
- Governance Structure
- June 2014 Report
- December 2014 Supplement
- “Top Off” Pump Discussions with SFWMD
- \$161 million for Phase 1 to be paid only upon completion and acceptance for operations
- Based on December 2014 Cost Estimates
- Equals \$4.60 capital cost per gallon

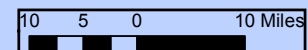
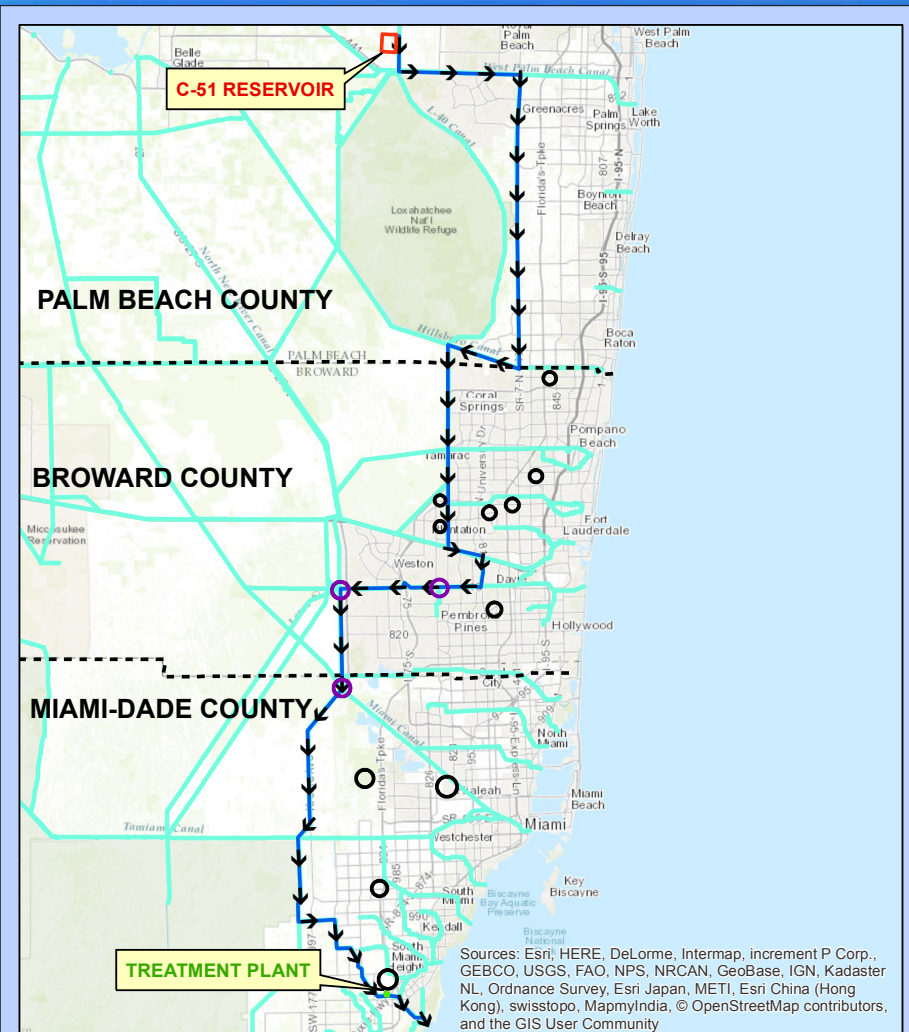
C-51 Reservoir Phase 1

- 14,000 acre-feet static storage
- 39,000 acre-feet dynamic storage
- 35 Million Gallons Per Day (MGD) for Alternative Water Supply
- 35 MGD would serve 233,333 households at 150 gallons per day per capita
- Majority of Excavation Complete
- \$161 million cost derived from Third Party Independent Estimate
- Permits in place, construction plans approved, can be operational 24 months from construction start



Conveyance Routing Lower East Coast

- Final routes not yet final: discussions ongoing as a component of Operating Plan
- Will use existing canals, pumps and structures, with improvements as needed
- Pending Operating Plan follows same approach as existing water supply deliveries to recharge well fields through canals
- 35 mgd is very small amount compared to capacity of canals and existing LEC permitted water supply



Current Capacity Allocation Agreement and Letters of Intent – Total of 35 MGD Available

- Broward County: 6 MGD (Executed Agreement)
- Sunrise: 5 MGD
- Lauderhill: 2 MGD
- Dania Beach: 1 MGD
- Total 14 MGD (21 MGD Remaining)
- Discussions with others in progress
- Opportunity to obtain alternative water supply consumptive use permits for duration of C-51 Reservoir CUP – until December 27, 2065

Permitting and Approvals for Phase 1 - In Place

- FDEP Environmental Resource Permit
- FDEP Consumptive Use Permit (50 year permit)
- Lake Worth Drainage District Agreement
- Governance & Finance Group Final Report
- C-51 Reservoir Inc. established and approved by IRS
- SFWMD Operations and Maintenance Agreement
- SFWMD Designated Pilot Project
- Easements Finalized with FPL
- 2017 Legislature – DEP Loan for \$30 million
- 2018 Legislature – Operations, Option for SFWMD
- Broward County Capacity Allocation Agreement
- Broward County CUP for South Regional Wellfield

Permitting and Approvals for Phase 1 - Pending

- Sunrise, Dania Beach, Lauderhill Capacity Allocation Agreements and CUP Modifications
- Finalize SFWMD Operating Plan and Routes
- Central Broward Water Control District Agreement
- SB 10 Loan Documents - \$30 million Loan
- Balance of Construction Financing after SB 10 Loan
- SFWMD Option of Storage for Environment
- Additional Participant(s)
- Target Construction Start Fall 2018 Pending Above
- Operational 24 months after construction starts