

Background and Evolution of the Proposed C-51 Reservoir

Joint Broward/Palm Beach Water Resources Task
Force Meeting

January 18, 2013



Discussion Topics

- Background
- Planning Efforts
- Regional Coordination
- Project Evolution and Benefits

Origins of the C51 Reservoir Concept

- Originally contemplated as part of CERP
- Involves capture of wet season discharges to reduce impacts on Lake Worth Lagoon
- Dependent upon “unknown user”

Early Planning Efforts

- 2006 - Coordination of 7 Broward and Palm Beach water utilities
- Investigation of a C51 Reservoir as a regional alternative water supply
- Significant Drivers:
 - Regional Water Availability Rule
 - Projected water deficits
- Proposed 1,200 acre reservoir
- Estimated to capture 120 MGD runoff

Phase I Planning Activities (2007-2008)

- Utilities jointly provided funds to support preliminary design and cost-benefit analyses
- SFWMD provided facilitator support
- Technical work products include preliminary analysis of:
 - Utility water demands
 - Water availability
 - Conveyance options
 - Project cost estimates
 - Economic analysis

Findings and Recommendations (2009)

- Phase I Findings:
 - Adequate water available to offset demands
 - Cost-competitive water source
- Issues raised for further analysis (Phase II SOW):
 - Regulatory Considerations
 - Conveyance Strategies and Options
 - Environmental Considerations
 - Governance
 - Full Cost Accounting
- June 2009 – Joint meeting of Palm Beach/Broward Water Resource Task Forces provides support for Phase IIA Scope of Work

Phase IIA – Scope of Work Findings (2010)

- Updated Water Demand Projections
 - 117 MGD by 2030
- Process for water supply certification
- Analysis of water conveyance options
 - No proposed routing through Refuge
 - LWDD canals and right-of-way with delivery to Hillsboro Canal
- Analysis of hydrologic and geotechnical conditions
- Cost-effectiveness analysis
 - \$490 million total project cost
 - \$0.68 to \$1.01 per 1,000 gallons

Expanded Coordination - 2010/2011

- Memorandum of Understanding (MOU)
 - SFWMD
 - LWDD
 - Palm Beach County
 - City of Fort Lauderdale
- MOU Joinder
 - Boynton Beach
 - Broward County
 - Dania Beach
 - Delray Beach
 - Margate
 - Plantation
 - Pompano Beach



Phase IIB Activities and Partners (2011)

- Lake Worth Drainage District (LWDD)
 - Work Group Coordination
- South Florida Water Management
 - Modeling /Water Availability (170 MGD)
 - Report Preparation
- County and LWDD
 - Conveyance options and infrastructure
 - Water quality analyses
- Palm Beach Aggregates
 - Updated Cost Estimates (\$760 M)

Phase IIB Work Product

- Preliminary Design and Cost Estimate Report completed in June 2012
- Total project size of 75,000 acre feet
- Estimated cost of \$756M
- Secondary canals proposed for routing
- Water quality considerations
- Governance and finance considerations require additional investigation

Stakeholder Feedback

- Project Value - Reductions in regional water demand reduces immediate need for full-scale project
- Cost - At full project cost, project may be less attractive relative to other alternative water supply options
- Participation - Uncertainty about extent of utility participation creates additional uncertainty in cost equation
- Recommended Next Steps –
 - Reassess costs
 - Consider a phased approach
 - Develop preferred governance and finance options

Benefits of Additional Storage

- Potential value to Everglades Settlement
- Improved flood control in western Palm Beach County
- Mitigate for water shortages during droughts
- Provide additional recharge to manage saltwater intrusion
- Potential to both preserve and augment existing water supplies

Benefits of Storage will Increase with Time

- Climate change poses implications for water supply and flood protection
- Considerations:
 - Increases in Sea Level
 - More intense storms
 - Increased frequency and severity of droughts
- Supports Integrated Water Resource Management – An important adaptation strategy recommended in the 4-County Regional Climate Action Plan

Questions?