

PALM BEACH COUNTY  
BOARD OF COUNTY COMMISSIONERS  
AGENDA ITEM SUMMARY

Meeting Date: April 3, 2012

Consent [ ]  
Public Hearing [ ]

Regular [X]

Department: Water Utilities Department

I. EXECUTIVE BRIEF

**Motion and Title:** Staff recommends motion to receive and file: a presentation providing a status report on the C-51 Reservoir project.

**Summary:** On October 18, 2011, the Board of County Commissioners (Board) approved a Memorandum of Understanding directing Staff to provide input into and monitor the progress of the C-51 Reservoir project. This status report is intended to update the Board with respect to the following:

- Project Timing
- Water Quality Concerns
- Current Project Cost
- Utility Participation
- Leadership and Governance Issues.

This presentation was scheduled at the request of the Board on February 6, 2012.  
Countywide (MJ)

**Background and Justification:** The District approved the Regional Water Availability Rule in 2007, which requires the use of Alternative Water Supply projects to meet water demands in excess of those in 2006. Palm Beach and Broward County municipal water utilities completed a report in 2009 entitled "Conceptual Feasibility of a Sub-Regional Lower East Coast Water Supply Solution". Although growth has slowed and permitted water supplies are adequate currently, sustainable water supplies are needed to meet demands for planned build-out populations. The goal of this project to WUD is a 50-year non-reviewable consumptive use permit that meets our build out needs in a sustainable way.

**Attachments:**

1. Power Point Presentation
2. Memorandum of Understanding

Recommended By:  3/8/12  
Department Director Date

Approved By:  3-15-12  
Assistant County Administrator Date

**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

Fiscal Years	2012	2013	2014	2015	2016
Capital Expenditures	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
External Revenues	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Program Income (County)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
In-Kind Match County	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
NET FISCAL IMPACT	<u>0</u> <i>See below</i>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Budget Account No.:	Fund _____	Dept _____	Unit _____	Object _____	

Is Item Included in Current Budget?      Yes \_\_\_\_ No \_\_\_\_

Reporting Category N/A

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**

*No Fiscal Impact*

**C. Department Fiscal Review:** *Delia M. West*

**III. REVIEW COMMENTS**

**A. OFMB Fiscal and/or Contract Development and Control Comments:**

*[Signature]* *3/17/2012*  
 OFMB  
*3/19/12*      *3/21/12*

*[Signature]* *3/15/12*  
 Contract Development and Control  
*3-14-12 B. L. Keck*

**B. Legal Sufficiency:**

*[Signature]* *3/15/12*  
 Assistant County Attorney

**C. Other Department Review:**

\_\_\_\_\_  
 Department Director

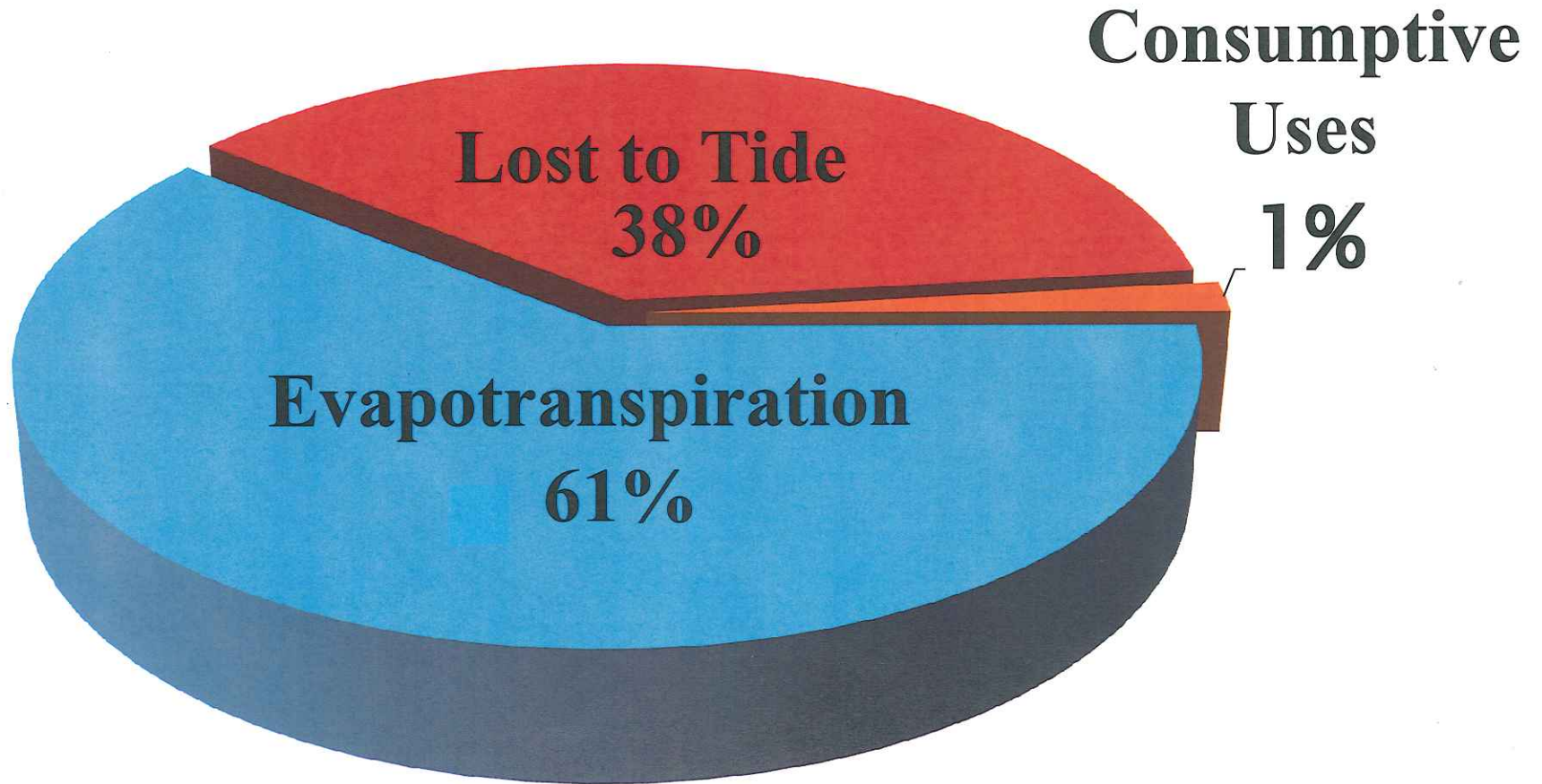




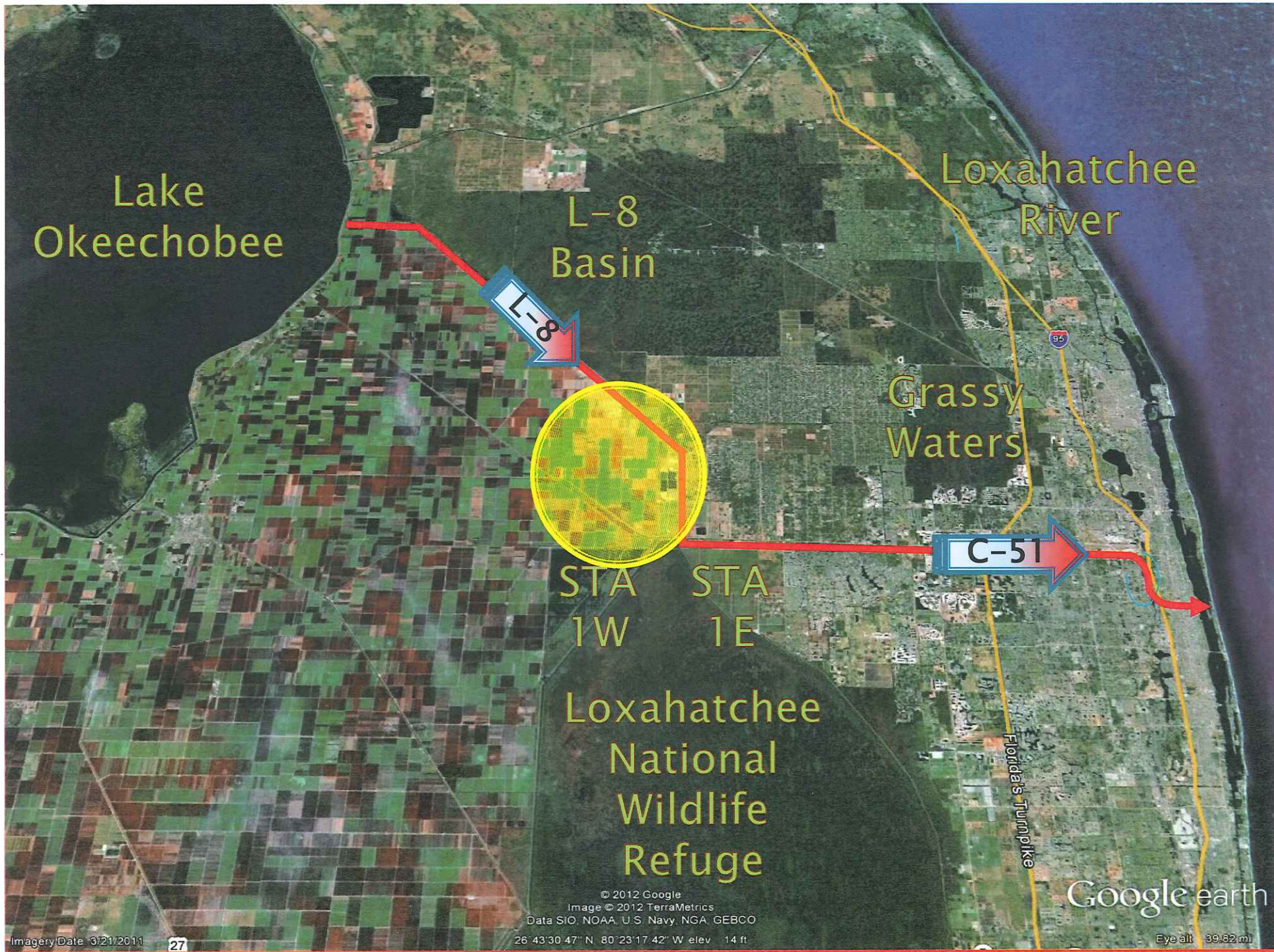
# C-51 RESERVOIR PROJECT STATUS

## APRIL 2012

# FLORIDA WATER BUDGET







Lake Okeechobee

L-8 Basin

Loxahatchee River

Grassy Waters

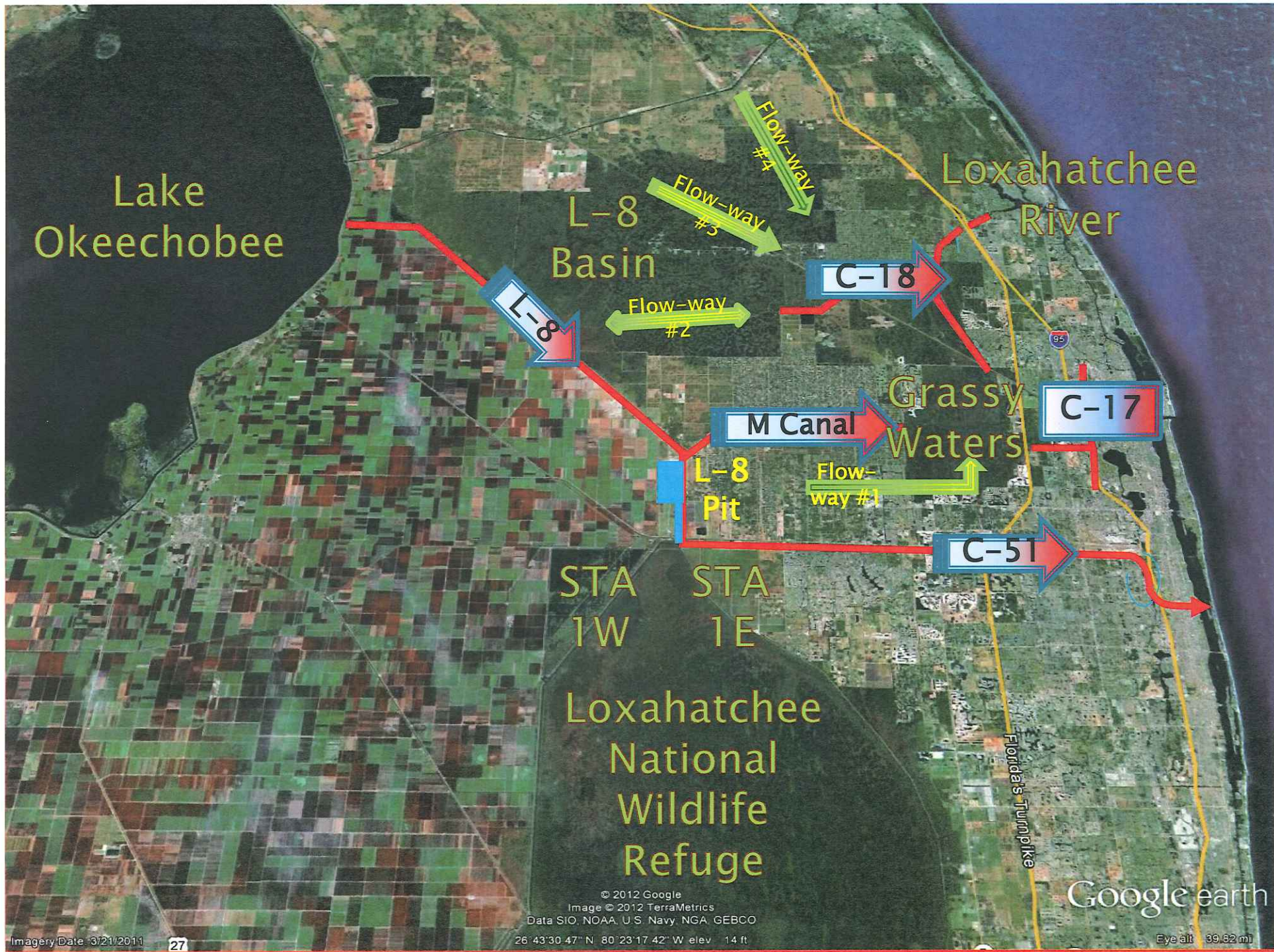
STA 1W STA 1E

Loxahatchee National Wildlife Refuge

Florida's Turnpike

Google earth





Lake Okeechobee

Loxahatchee River

L-8 Basin

Grassy Waters

Loxahatchee National Wildlife Refuge

M Canal

L-8 Pit

L-8

C-18

C-17

C-51

STA 1W STA 1E

© 2012 Google  
Image © 2012 TerraMetrics  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
26° 43' 30.47" N 80° 23' 17.42" W elev. 14 ft

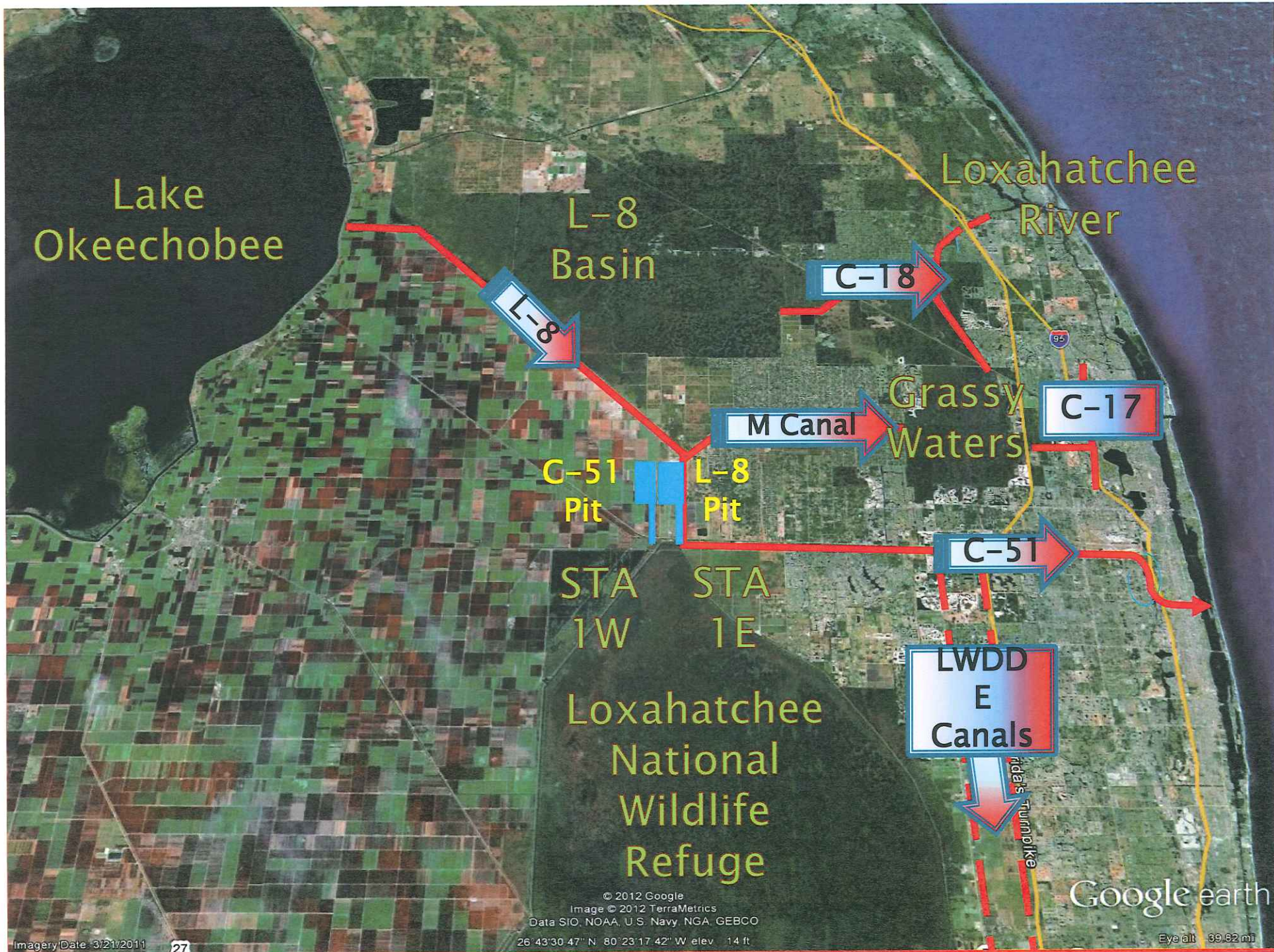
Google earth

Imagery Date: 3/21/2011

27

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Lake Okeechobee

L-8 Basin

Loxahatchee River

C-18

Grassy Waters

C-17

M Canal

C-51 Pit

L-8 Pit

C-51

STA 1W

STA 1E

Loxahatchee National Wildlife Refuge

LWDD E Canals

Florida Turnpike

© 2012 Google  
Image © 2012 TerraMetrics  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

26° 43' 30.47" N 80° 23' 17.42" W elev. 14 ft.

Google earth

Eye alt 39.92 mi



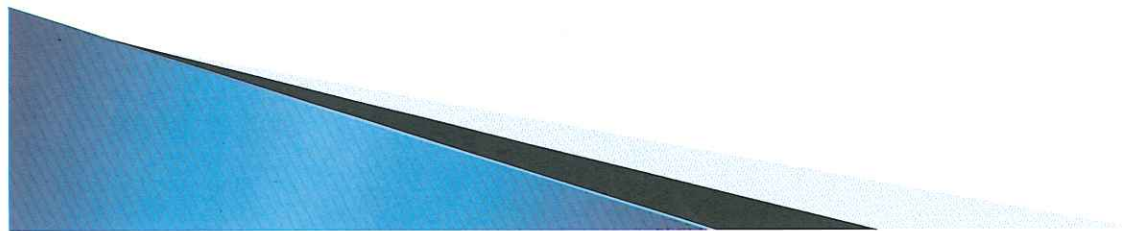
# WHAT HAS BEEN DONE TO DEVELOP THE C-51 PROJECT?





# WHAT ARE THE ISSUES?

- **Timing**
- **Water Quality**
- **Project Cost**
- **Participation**
- **Leadership & Governance**

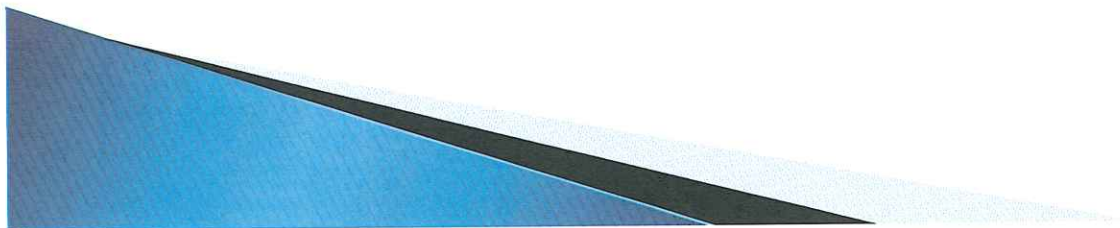




# TIMING

- **Water Supply Needs Differ Among All Utilities in the LEC**
- **PBCWUD Does Not Anticipate Need for Additional Water Before 2023**

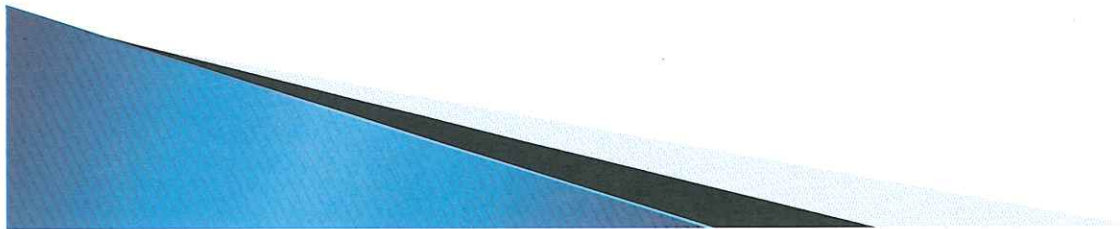
2010 Pumpage (MGD)	2023 Permit (MGD)	Projected Buildout Demand (MGD)
57	87	115





# **Water Quality Concerns**

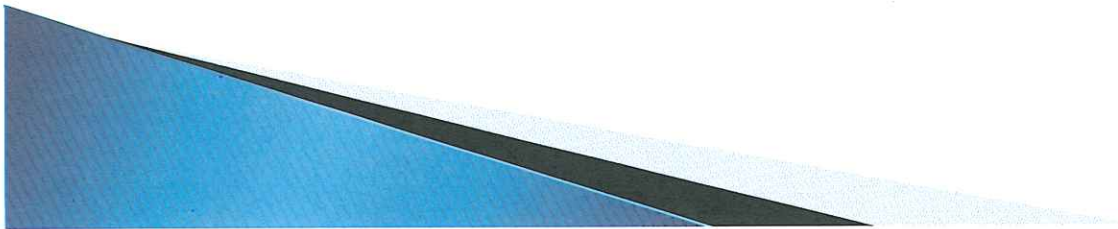
**NNC Rule & Broward County's Water  
Quality Ordinances Create Water Storage,  
Conveyance & Discharge Uncertainty!**





# PROJECT COST

- **Current Estimated Project Cost at \$755 Million to \$1.0 Billion**
- **At 80% Utility Participation, Unit Costs Of New Reservoir Still Less Than Cost of a New R/O Alternative**



# COST COMPARISON

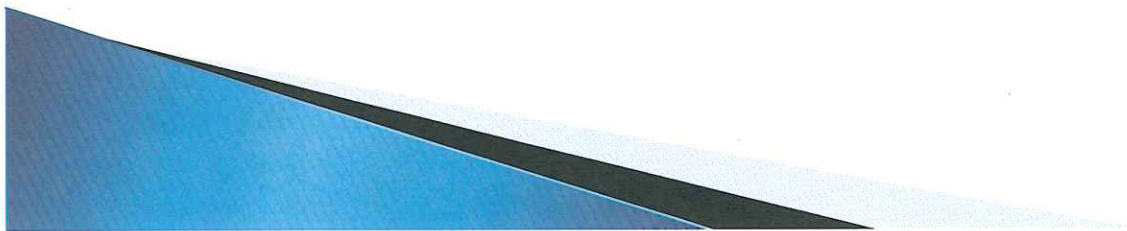
<b>NEW WATER POTABLE QUALITY</b>	<b>Capital Cost (\$/gallon capacity)</b>	<b>Annual O&amp;M Cost (\$/1000gal)</b>	<b>Total Cost (\$/1000gal)</b>
<b>C-51 Reservoir w/Conventional Treatment *</b>	<b>4-5</b>	<b>1</b>	<b>2-3</b>
<b>Reclaimed Water Recharge</b>	<b>9-23</b>	<b>2</b>	<b>4-7</b>
<b>Floridan Aquifer R/O</b>	<b>6-11</b>	<b>1.4</b>	<b>3-4</b>

\* 80% of SE Florida Utilities Participating



# **PARTICIPATION**

**Out of 53 Utilities in Palm Beach & Broward  
Counties, Only 9 Have Endorsed the  
Memorandum of Understanding (<20%)**



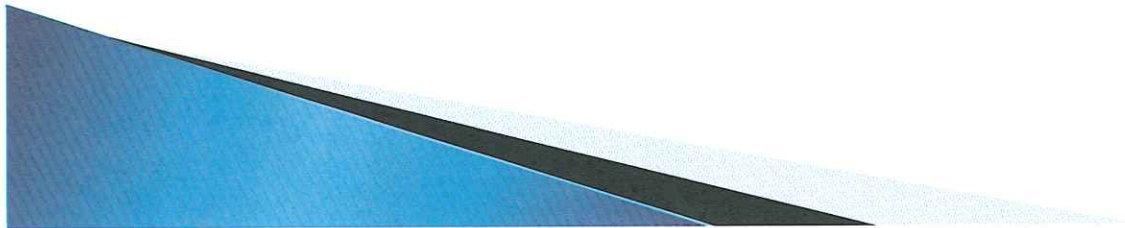
# LEADERSHIP & GOVERNANCE

## ● LWDD:

- ✓ Important Role
- ✓ Unable To Muster Utility Support

## ● SFWMD:

- ✓ Only Agency That Can Incentivize Utilities
- ✓ Navigate Stakeholder and Permitting Issues
- ✓ A Regional Project
- ✓ Needs to be fully integrated into lower east coast water supply plan (LECWSP)





# Staff Summary

PROMOTE **SFWMD** LEADERSHIP ROLE



NO EXPENDITURES BY **PBC** ARE  
RECOMMENDED AT THIS TIME



CONTINUE TO MONITOR ONLY



R 2011-1670

OCT 18 2011

**MEMORANDUM OF UNDERSTANDING BETWEEN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT, PALM BEACH COUNTY, LAKE WORTH DRAINAGE DISTRICT, AND CITY OF FORT LAUDERDALE, REGARDING C-51 WATER SUPPLY & WATER QUALITY RESERVOIR PLANNING AND DEVELOPMENT**

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is made and entered into by and between the SOUTH FLORIDA WATER MANAGEMENT DISTRICT ("DISTRICT"), PALM BEACH COUNTY ("PALM BEACH COUNTY"), LAKE WORTH DRAINAGE DISTRICT ("LWDD"), and the CITY OF FORT LAUDERDALE ("FORT LAUDERDALE"), collectively referred to as the "PARTIES," when including all entities signing this Agreement; "UTILITY PARTIES," when referring to all of the local governments which provide water, wastewater, and/or reclaimed water services to their citizens and customers and not the DISTRICT or LWDD; and, "UTILITY PARTY," when referring to one of the parties that is not DISTRICT or LWDD .

**WITNESSETH:**

WHEREAS, the DISTRICT is a public corporation of the State of Florida existing by virtue of Chapter 25270, Laws of Florida, 1949, and operating pursuant to Chapter 373, Florida Statutes, and Chapter 40E, Florida Administrative Code, as a multipurpose water management district, and whose mailing address is PO Box 24680, West Palm Beach, Florida 33416-4680.

WHEREAS, PALM BEACH COUNTY is a political subdivision of the State of Florida that owns and operates water, wastewater, and reclaimed water systems within incorporated and unincorporated areas of Palm Beach County; and whose mailing address for the purpose of this MOU is P.O. Box 24740, West Palm Beach, FL 33416;

WHEREAS, LWDD is a special district existing by virtue of Chapter 09-1063, Laws of Florida, and operating pursuant to Chapter 298, Florida Statutes, as a water control district, and whose mailing address is 13081 Military Trail, Delray Beach, Florida 33484;

WHEREAS, FORT LAUDERDALE is a municipality located in eastern Broward County, Florida that owns and operates a water and wastewater system within its jurisdictional boundary and unincorporated areas of Broward County and whose mailing address for the purpose of this MOU is Public Works Department, 100 N. Andrews, 4th Floor, Fort Lauderdale, FL 33301;

WHEREAS, the DISTRICT's 2000 Lower East Coast Regional Water Supply Plan ("LEC RWSP") and the 2005-2006 Update to the LEC RWSP concluded that traditional fresh groundwater and surface water were becoming increasingly limited to satisfy the region's water demands, resulting in the need to develop alternative water sources;

WHEREAS, Section 373.707, Fla. Stat., provides that it is in the public interest that county, municipal, industrial, agricultural, and other public and private water users, the Department of Environmental Protection, and the water management districts cooperate and work together in the development of alternative water supplies;



prolonged periods of low salinity can occur, especially during periods of prolonged discharge. Minimizing perturbation from large-scale C-51 Canal discharges and releasing freshwater to the estuary in a manner that more closely approaches natural volume and timing in relation to rainfall, may help stabilize salinity regimes to be better aligned with those that are more supportive of healthier, more productive estuarine flora and fauna;

WHEREAS, LWDD and the UTILITY PARTIES desire to explore opportunities to jointly develop a regional reservoir that will meet the water supply objectives of the LWDD, UTILITY PARTIES, and other potential water users; and,

WHEREAS, the DISTRICT desires to explore opportunities to jointly develop a reservoir that will meet the environmental and water supply objectives of the DISTRICT;

WHEREAS, the PARTIES encourage and desire other potentially affected utilities and stakeholders to participate in this MOU; and,

WHEREAS, the PARTIES agree that nothing in this MOU shall affect the UTILITY PARTIES' or LWDD's service areas, rights to provide service within those areas or any right obligation pursuant to their enabling laws, or the DISTRICT's consumptive use permitting authority;

NOW THEREFORE, in consideration of the foregoing premises, and the mutual covenants, terms, and conditions contained herein, the PARTIES agree to the following:

- I. RECITALS AND AUTHORITY: The recitals set forth in the WHEREAS clauses above are incorporated herein. This MOU is entered into by the DISTRICT, the LWDD, and the UTILITY PARTIES.
  - A. The DISTRICT enters into this MOU under the authority of Section 373.083, Florida Statutes, which authorizes each water management district governing board to enter into agreements with other public agencies and private corporations to accomplish the directives and goals of Chapter 373, Florida Statutes.
  - B. PALM BEACH COUNTY enters into this MOU under the authority of Sections 125.01 and 153.03, Florida Statutes, which authorizes counties to enter into agreements with other public agencies and private corporations to accomplish goals for providing water to their customers.
  - C. FORT LAUDERDALE enters into this MOU under the authority of Section 166.021, Florida Statutes, which, as provided by s. 2(b), Art. VIII of the Florida Constitution, grants municipal corporations the governmental, corporate, and proprietary powers necessary to enable it to conduct municipal government, perform municipal functions, and render municipal services.
  - D. LWDD enters into this MOU under the authority of Chapter 298, Fla. Stat.

potential water user, the PARTIES shall identify the quantity of water needed from the PROJECT and the timing of the potential user's water needs.

- iv. The PARTIES shall use reasonable efforts to complete the actions identified in Paragraph IV.B by June 30, 2011.

C. Natural System Needs:

- i. The DISTRICT shall identify the quantity and timing of water needed from the Project in 10-year increments up to the year 2060 for the Lake Worth Lagoon, Water Conservation Area #1, and other natural systems.
- ii. When identifying the amount of water needed for the natural system, the DISTRICT shall consider water quality treatment requirements that may be imposed, including the Southeast Florida Total Maximum Daily Loads, Federal Everglades settlement; water quantity commitments pursuant to CERP, and any other state or federal law, rule, regulation, agreement or order related to water quantity or water quality for natural systems.
- iii. When identifying the amount of water needed for the natural system, the DISTRICT may take into account the anticipated impacts of climate change and sea level rise.
- iv. The DISTRICT shall use reasonable efforts to complete this quantification by June 30, 2011.

D. Initial Feasibility Determination: Upon completion of items set forth in Paragraphs IV.A – IV.C, the PARTIES shall assess the PROJECT's feasibility in meeting the PARTIES' objectives.

E. Preliminary Project Design and Cost Estimate:

- i. If the PARTIES determine that the PROJECT continues to be a viable mechanism to meet the PARTIES' objectives based on the Initial Feasibility Determination, the PARTIES may enter into an agreement to undertake the actions set forth in this section. The PARTIES anticipate the agreement would be completed by July 30, 2011.
- ii. Upon execution of an agreement, the PARTIES shall work together, using the information gathered pursuant to this Section IV and any other relevant documents and reports agreed to by the PARTIES, to design the PROJECT, identify any infrastructure and operational changes that may be necessary for the success of the PROJECT, and estimate the cost of the PROJECT.



and Cost Estimate Report ("PDCR") based on the results of said tasks.

2. The PARTIES shall have the opportunity to review and comment on the PDCR prior to its finalization.

- V. SECOND FEASIBILITY EVALUATION: After completion of the planning tasks identified in Section IV and consideration of the PDCR, the PARTIES shall reassess the PROJECT's feasibility in meeting the PARTIES' objectives.
- VI. DESIGN, CONSTRUCTION, AND OPERATION: If the PARTIES determine that the PROJECT is appropriate and feasible to meet the PARTIES' objectives, the DISTRICT, LWDD, UTILITY PARTIES, and/or any other interested party shall execute a separate agreement which shall address funding, site acquisition, any additional design and engineering, construction, operation, permitting and regulatory considerations, and governance of the PROJECT.
- VII. TERM: The term of this MOU shall commence upon its complete execution by all PARTIES and shall remain in effect until March 30, 2012, or until execution of the separate agreement contemplated by Section VI, whichever occurs first.
- VIII. ENTIRE AGREEMENT: This MOU constitutes the entire agreement between the PARTIES and may not be amended or modified unless agreed to and approved in writing by all PARTIES.
- IX. ASSIGNMENT: No assignment, delegation, transfer, or novation of this AGREEMENT, or any part hereof, shall be made unless approved in writing by all PARTIES.
- X. DISCLAIMER OF THIRD PARTY BENEFICIARIES: This MOU is solely for the benefit of the PARTIES and no right or cause of action shall accrue to the benefit of any third party.
- XI. MISCELLANEOUS PROVISIONS:
  - A. Nothing in this MOU is intended to constitute a binding agreement to plan, design, finance, construct, and operate the PROJECT.
  - B. A consultant may be retained by the PARTIES, an individual party, or several parties, to perform any portion of the party's/parties' tasks or obligations under this MOU.
  - C. Additional parties wishing to participate in these objectives and activities outlined in this MOU shall sign the Joinder to the MOU which is attached hereto as Exhibit A. Upon execution, the Joinder shall bind the additional party to the terms of this MOU but said execution does not relieve the PARTIES identified in Paragraph I of such obligations. The joining entity shall provide each party with a copy of the executed Joinder.

R2011-1670

OCT 18 2011


PALM BEACH COUNTY  
A POLITICAL SUBDIVISION OF THE  
STATE OF FLORIDA  
Board of County Commissioners  
of Palm Beach County, Florida

Signed

  
Typed Name: Karen T. Marcus, Chair

Attested:

Sharon R. Bock, Clerk & Comptroller


  
(Deputy Clerk)



APPROVED AS TO FORM AND  
LEGAL SUFFICIENCY:

  
(County Attorney)

APPROVED AS TO TERMS AND  
CONDITIONS:

  
Bevin A. Beaudet, Director, PBC Water Utilities Dept.

Date: 9/7/11



IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written above.

WITNESSES:

Safeya Ali  
Safeya Ali  
Witness Print Name

Cynthia A. Stuart  
Cynthia A. Stuart  
Witness Print Name

(CORPORATE SEAL)

CITY OF FORT LAUDERDALE

By [Signature]  
JOHN P. "JACK" SEILER, Mayor

By [Signature]  
ALLYSON G. LOVE  
Acting City Manager

ATTEST:

[Signature]  
JONDA K. JOSEPH, City Clerk

Approved as to form:

[Signature]  
Victoria F. Minard  
Assistant City Attorney

JOINDER BY CITY OF DANIA BEACH

THIS JOINDER is executed on this 27 day of September, 2011, by City of Dania Beach, Florida, a municipality. Terms not defined herein shall have the meaning ascribed to them in the Memorandum of Understanding ("MOU") between the South Florida Water Management District, Palm Beach County, Lake Worth Drainage District, and City of Fort Lauderdale regarding C-51 Water Supply & Water Quality Reservoir Planning and Development, which is attached hereto and incorporated herein.

WHEREAS, the City of Dania Beach wishes to join the MOU to participate in the actions and obligations identified as the responsibility of the PARTIES and UTILITY PARTIES.

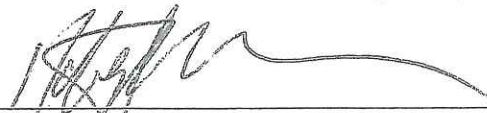
NOW, THEREFORE, the City of Dania Beach hereby agrees as follows:

1. The foregoing recital and those contained in the MOU are true and correct and incorporated herein by reference.
2. The City of Dania Beach hereby joins in the MOU to undertake all or part of the obligations of the PARTIES and UTILITY PARTIES but such joinder shall not be construed as assumption of such obligations by the City of Dania Beach.
3. This joinder shall be effective as of the date first written above and shall be binding upon the City of Dania Beach and its successors and assigns.

IN WITNESS WHEREOF, this has been executed.



Print Name: Patricia A. Flury, Mayor



Print Name: Robert Baldwin  
Print Title: City Manager

Legal Form Approved:



Thomas J. Ansbro, City Attorney

Attested:



Print Name: Louise Stilson, CMC, City Clerk

Date: 9-27-11





JOINDER BY City of Pompano Beach.

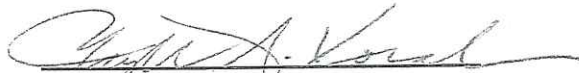
THIS JOINDER is executed on this 26 day of October, 2011, by Pompano Beach, a Municipal (insert legal entity status, e.g. political subdivision, Florida corporation, municipality). Terms not defined herein shall have the meaning ascribed to them in the Memorandum of Understanding ("MOU") between the South Florida Water Management District, Palm Beach County, Lake Worth Drainage District, and City of Fort Lauderdale regarding C-51 Water Supply & Water Quality Reservoir Planning and Development, which is attached hereto and incorporated herein.

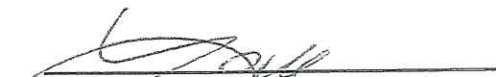
WHEREAS, Pompano Beach wishes to join the MOU to participate in the actions and obligations identified as the responsibility of the PARTIES and UTILITY PARTIES.

NOW, THEREFORE, Pompano Beach hereby agrees as follows:


1. The foregoing recital and those contained in the MOU are true and correct and incorporated herein by reference.
2. Pompano Beach hereby joins in the MOU to undertake all or part of the obligations of the PARTIES and UTILITY PARTIES but such joinder shall not be construed as assumption of such obligations by Pompano Beach.
3. This joinder shall be effective as of the date first written above and shall be binding upon Pompano Beach and its successors and assigns.

IN WITNESS WHEREOF, this has been executed.


  
By its Officials / City Manager :

  
Print Name: Lamar Fisher  
Print Title: Mayor

Legal Form Approved:

  
Gordon B. Linn, Esq.

Attested:

  
Print Name: Mary L. Chambers, City Clerk  
Date: 10/26/11