



STAs and Related Projects Update



Quarterly Meeting of the Technical Oversight
Committee

August 28, 2007

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South Florida Water Management District

**Everglades Protection Area Tributary Basins
Long-Term Plan for Achieving Water Quality Goals**



STA Performance Data

Updated 8/24/07 - Contains Preliminary Data



- **STA-1E (9/2004 – 7/2007)**
 - Average inflow = 203 ppb
 - 27 m tons removed; average outflow = 115 ppb
- **STA-1W (8/1994 – 7/2007)**
 - Average inflow = 163 ppb
 - 339 m tons removed; average outflow = 55 ppb
- **STA-2 (7/1999 – 7/2007)**
 - Average inflow = 105 ppb
 - 184 m tons removed; average outflow = 21 ppb
- **STA-3/4 (10/2003 – 7/2007)**
 - Average inflow = 118 ppb
 - 226 m tons removed; average outflow = 20 ppb
- **STA-5 (9/1999 – 7/2007)**
 - Average inflow = 235 ppb
 - 161 m tons removed; average outflow = 106 ppb
- **STA-6 (10/1997– 7/2007)**
 - Average inflow = 80 ppb
 - 36 m tons removed; average outflow = 20 ppb



SAV Inoculation



- **Completed between July 30 and August 1, 2007**
- **Total 59,470 pounds of SAV material**
- **Transported from STA-2 Cell 3 to STA-1W Cell 2B and Cell 3, STA-2 Cell 4 and STA-3/4 Cell 1B**
 - **Southern Naiad, Chara and Illinois Pondweed**
- **Total cost: \$50,000 (helicopter, harvester, Gradall)**
 - **District staff costs not included**



EAA Reservoir A-1



- GMP1 - Construction is completed (\$10M under budget)
- GMP2 – Rock processing plant installation ongoing
- GMP3 – Remainder of seepage canal 25% complete.



EAA Reservoir A-1



Blasting Caprock



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EAA Reservoir A-1



Rock Processing GMP2



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EAA Reservoir A-1



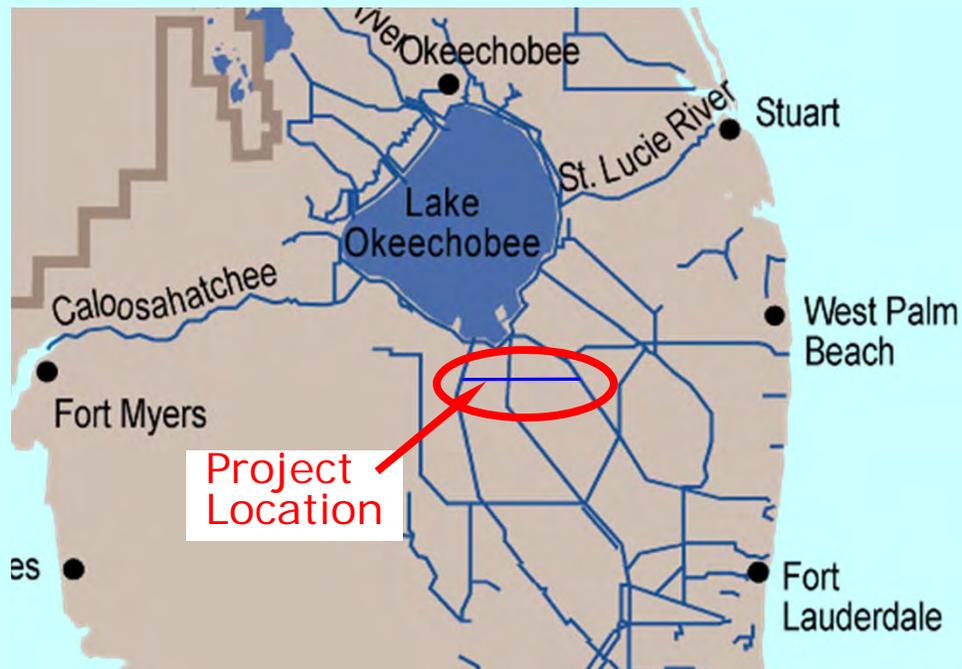
- Accomplishments to date:
 - Mobilization and 3 miles initial seepage canal completed (GMP 1)
 - Rock Mining in preparation of aggregate production (GMP 2)
 - Remaining work on seepage canal 25% complete (GMP 3)
 - Initiated procurement process of pump equipment

- What's next:
 - Preparation for negotiations for embankment construction (GMP 4)
 - Pre-purchase pumping equipment-initiated proposal to be advertised next quarter

- Challenges
 - Wet Season
 - Rain Impacts
 - Final Permitting



Bolles and Cross Canal Improvements

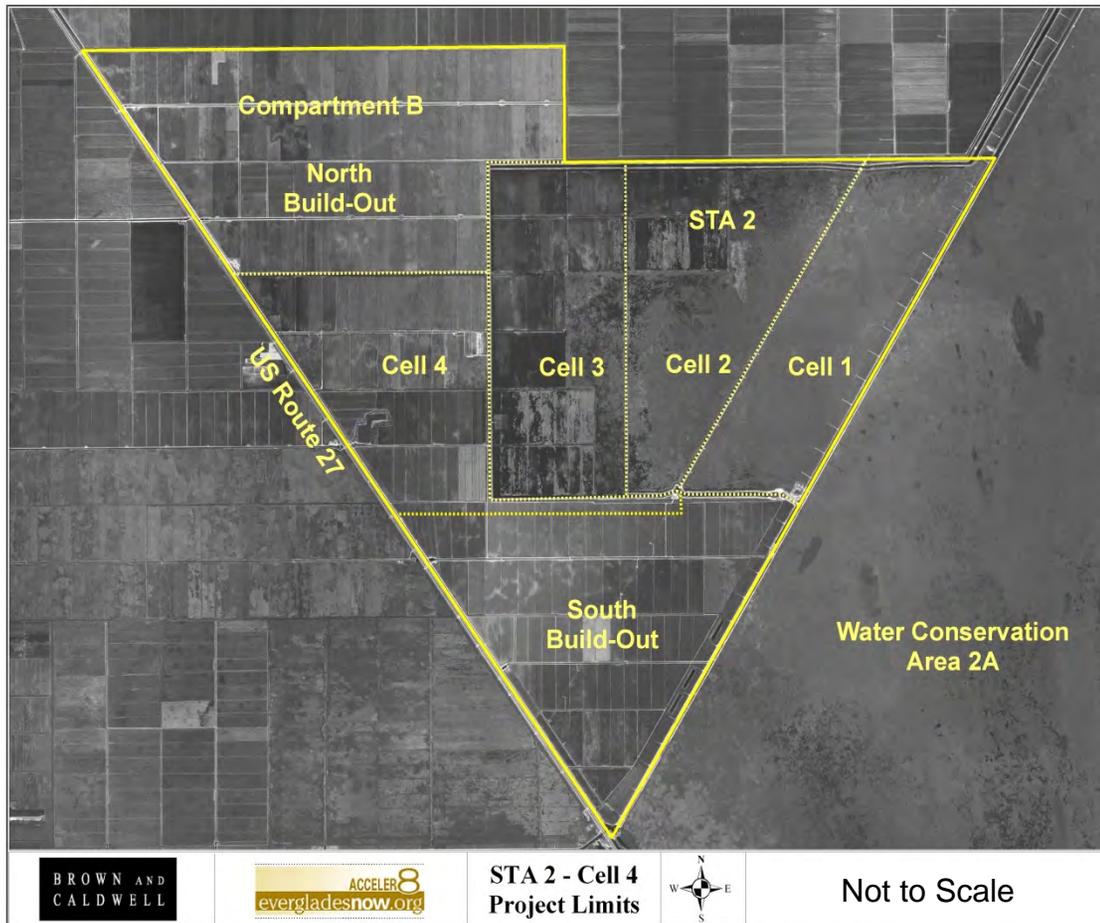


- Finalizing the Basis of Design Report for L-21
- Finalized Summary of Preliminary Evaluation for L-16
- L-16 will be accomplished as part of the Everglades Agricultural Area Conveyance and Regional Treatment (ECART) Project

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Compartment B STAs



Purpose: The development of additional Stormwater Treatment Area (STA) to further improve the quality of water discharging to the Everglades Protection Area (EPA) by assisting with the redistribution of flows and loads to the STA system

Completed

- Phase 1 – Initial Expansion
- STA-2 Cell 4 (1,902 Acres)

Under Design

- Phase 2 - Build-out
- Compartment B Build-Out (6,722 Acres)

**Everglades Protection Area Tributary Basins
Long-Term Plan for Achieving Water Quality Goals**

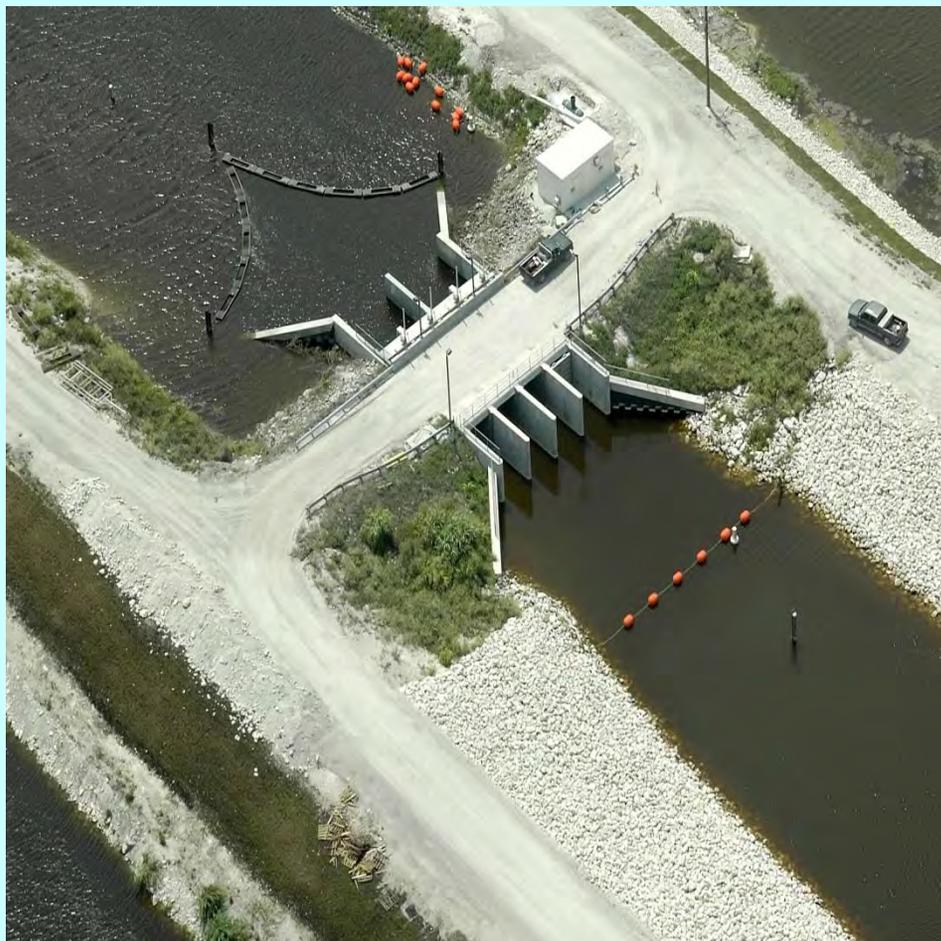


Compartment B

STA-2 Cell 4



- **Design:**
 - April 2005 – Oct 2005
- **Construction Start:**
 - Jan 2006
- **Flow Capable:**
 - Nov 11, 2006
- **Final Completion:**
 - August 2007
- **Construction Contract:**
 - \$ 18.2 Million

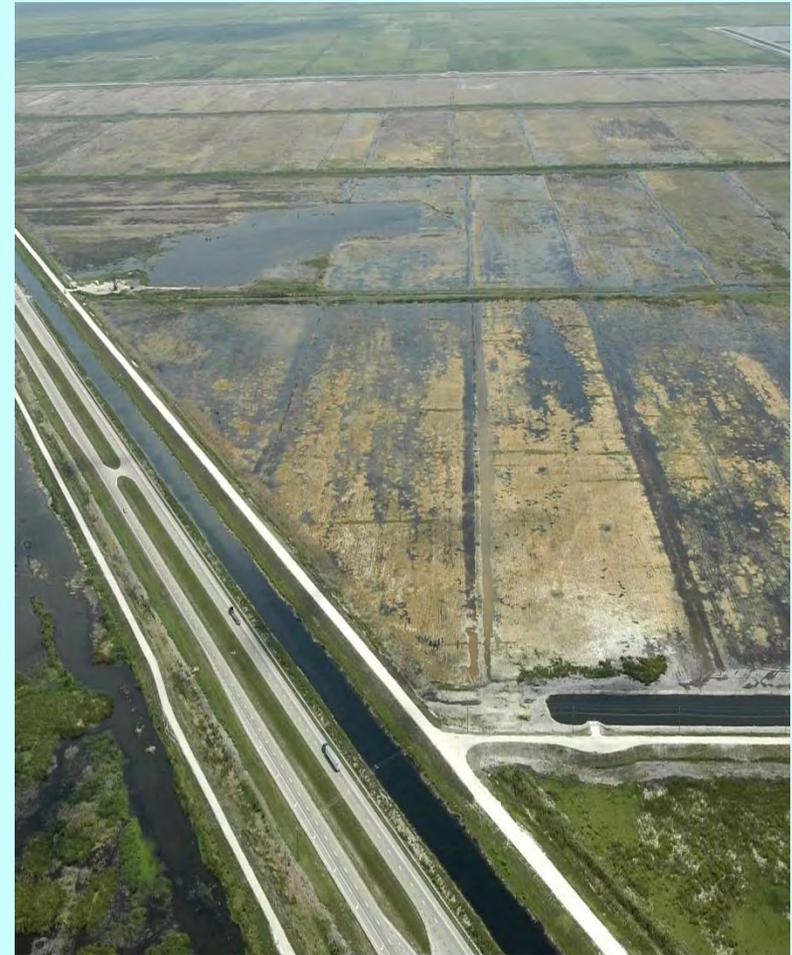


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Compartment B

STA-2 Cell 4



**Everglades Protection Area Tributary Basins
Long-Term Plan for Achieving Water Quality Goals**



Compartment B – Phase 2 Compartment B Build-out



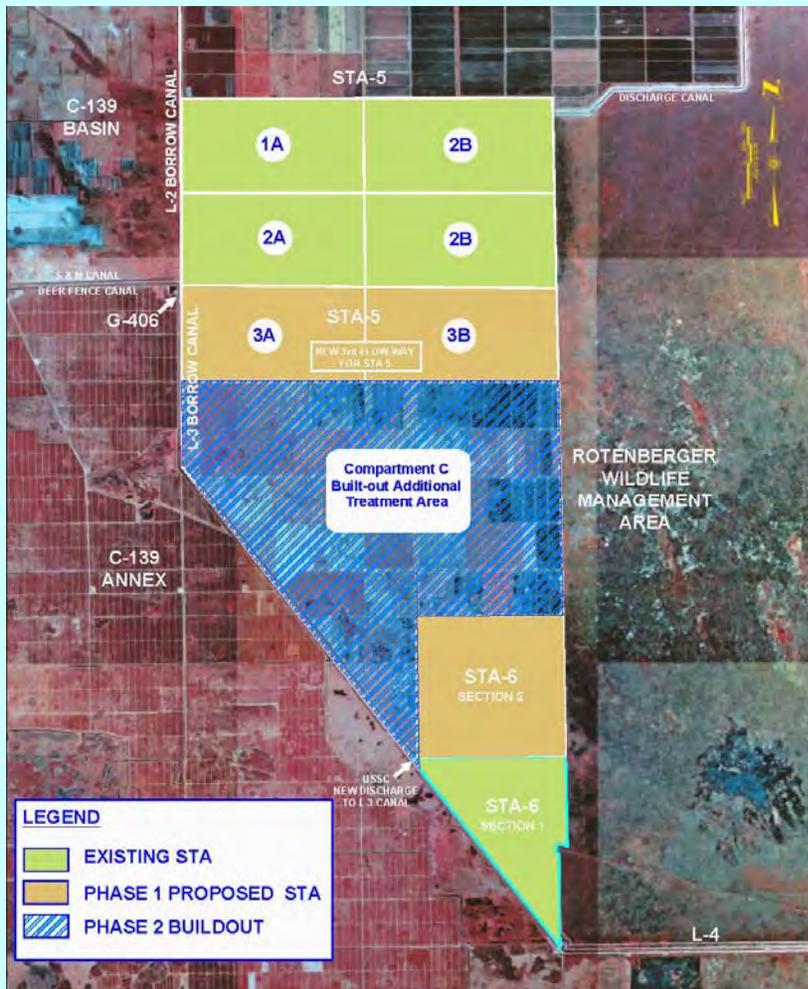
- **Accomplishments to date:**
 - **Completed preliminary survey work (topographic & boundary)**
 - **Completed preliminary geotechnical data collection**
 - **Completed Final Basis of Design Report**

- **What's next:**
 - **Complete Preliminary Design-Civil Works**
 - **Complete Preliminary Design-Pump Stations**

- **Construction Completion**
 - **Civil Works 2010**
 - **Pump Stations 2011**



Compartment C STAs



Purpose: The development of additional Stormwater Treatment Area (STA) to further improve the quality of water discharging to the Everglades Protection Area (EPA) by assisting with the redistribution of flows and loads to the STA system

Completed

- Phase 1 – Initial Expansion
- STA-5 Flow-way 3 (1,985 Acres)
- STA-6 Section 2 (1,387 Acres)

Under Design

- Phase 2 - Build-out
- Compartment C Build-Out (6,200 Acres)

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Compartment C – Phase 1

STA-5 Flow-way 3



- Design:
 - Feb 2005 – Oct 2005
- Construction Start:
 - Jan 2006
- Flow Capable:
 - Nov 21, 2006
- Final Completion:
 - May 2007
- Construction Contract:
 - \$ 12.0 Million



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Compartment C – Phase 1 STA-5 Flow-way 3



**Everglades Protection Area Tributary Basins
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STA-6 Section 2



Design:

- Jan 2005 – Dec 2005
- Construction Start:
 - Feb 2006
- Flow Capable:
 - Dec 11, 2006
- Final Completion:
 - August 2007
- Construction Contract:
 - \$ 22.4 Million



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STA-6 Section 2



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Compartment C – Phase 2

Compartment C Build-out



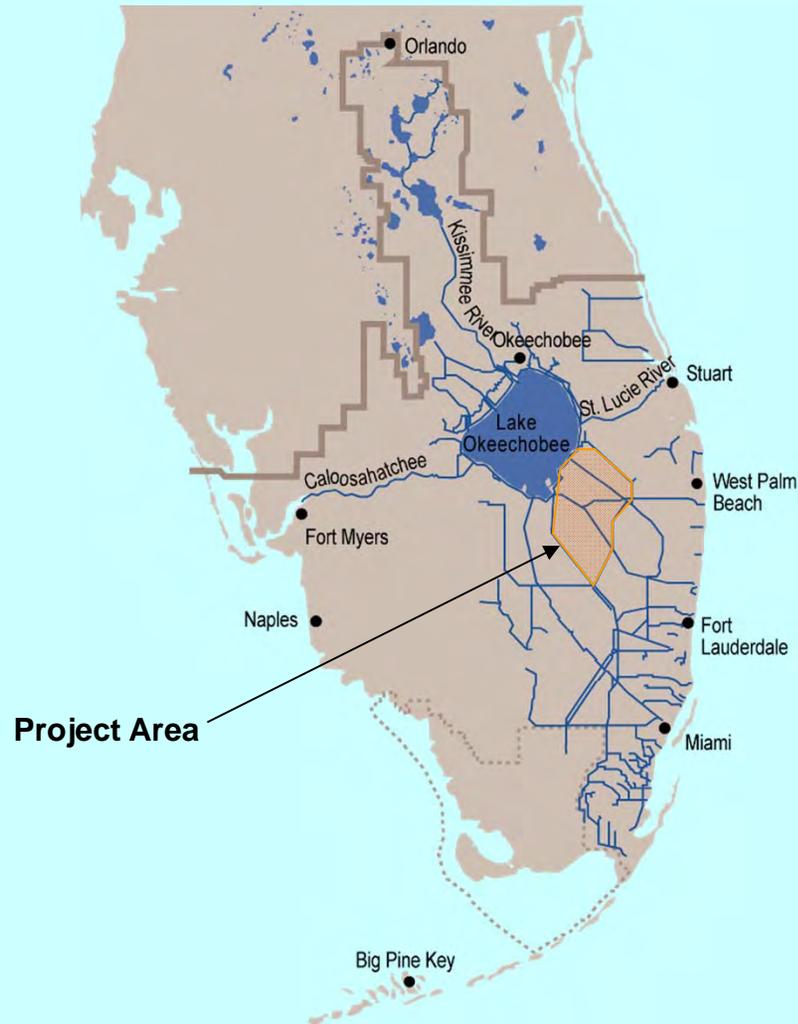
- **Accomplishments to date:**
 - **Completed preliminary survey work (topographic & boundary)**
 - **Completed preliminary geotechnical data collection**
 - **Completed Compartment C Watershed Hydraulic Study**
 - **Completed Draft Basis of Design Report**

- **What's next:**
 - **Finalize Basis of Design Report**
 - **Preliminary Design-Civil Works**
 - **Preliminary Design-Pump Station**

- **Construction Completion**
 - **Civil Works 2010**
 - **Pump Station 2011**



EAA Conveyance and Regional Treatment (ECART) Project



Project Purpose:

Redistribution of flows and loads to optimize the performance of the existing and expanded STAs to improve water quality in the EPA

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EAA Conveyance and Regional Treatment (ECART) Project



EAA RFS Alternative 1

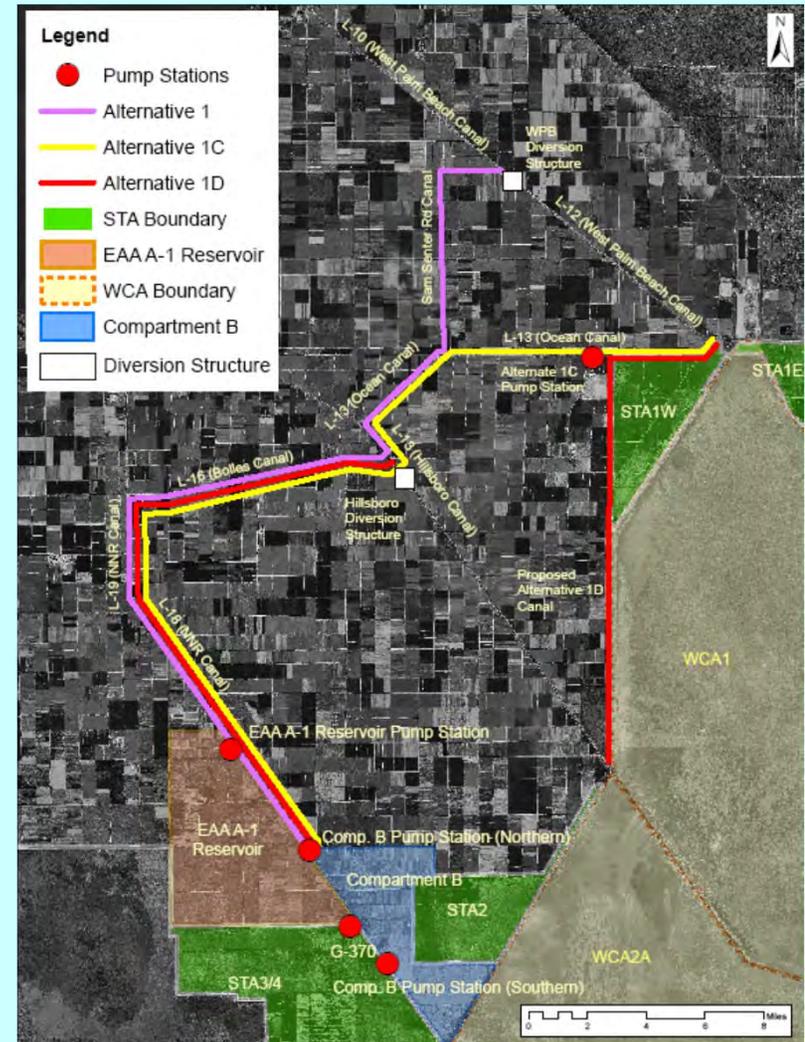
- 40 miles of canal work
- New structure at West Palm Beach Canal
- New structure at Hillsboro Canal
- 1,354 acres of land acquisition

Alternative 1C

- Delete new structure at West Palm Beach Canal
- Delete connection from West Palm Beach Canal to Sam Senter Canal
- New 800 cfs pump station on Ocean Canal
- Improvements to Ocean Canal
- 870 acres of land acquisition

Alternative 1D

- Delete new structure at West Palm Beach Canal
- Delete connection from West Palm Beach Canal to Sam Senter Canal
- No improvements to Hillsboro and Ocean Canals
- New canal from Ocean Canal to Hillsboro Canal
- 1,208 acres of land acquisition



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EAA Conveyance and Regional Treatment (ECART) Project



- Accomplishments to date:
 - Completed Initial Design
 - Feasibility Analysis of Alternatives 1C & 1D
 - Initiated Preliminary Survey
 - Initiated Environmental Sampling Scope of Work Development.
 - Initiated Preliminary Geotechnical
- What's next:
 - Initiate Basis of Design Report



EAA Conveyance and Regional Treatment (ECART) Project



- Challenges:
 - Movement of water 40 miles with a 4 foot change in elevation
 - Hydraulic Modeling
 - Sizing of the canals
 - Existing infrastructure (Bridges, roads, utilities, etc...)
 - Complete an Environmental Assessment and Obtain Permits
 - Historical canals
 - Cultural Resources
 - Purchase of land for canal expansions
 - Efficient Design is based on knowing answers above

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Projects Update



Questions?

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