

South Florida Ecosystem Restoration Task Force Consultation

- **C-111 Spreader Canal Western Project
Final Project Implementation Report**

- **Biscayne Bay Coastal Wetlands
Final Project Implementation
Report**

September 2011 Working Group
Meeting



Briefing Purpose

Pursuant to requirements of the Water Resource Development Acts of 1996, 2000 and the Programmatic Regulations (33 CFR 384 (2004), the Corps of Engineers and the non-Federal sponsor are responsible for consulting with and receiving recommendations from the Task Force throughout implementation of the CERP Plan

- **1st Generation Projects – authorized and in construction (Site 1, Indian River Lagoon South, Picayune Strand)**
- **2nd Generation Projects – up for authorization C-43, C-111 Spreader Canal, BBCW and Broward WPA**



Today's Presentation Outline

- **Consultation presentation on Biscayne Bay Coastal Wetlands Final Project Implementation Report – overview final plan, status and next steps**
- **Consultation presentation on C-111 Spreader Canal Western Final Project Implementation Report – overview final plan, status and next steps**



C-111 SPREADER CANAL Western Project

Working Group Consultation
Briefing Final PIR

September 2011



Project Objectives

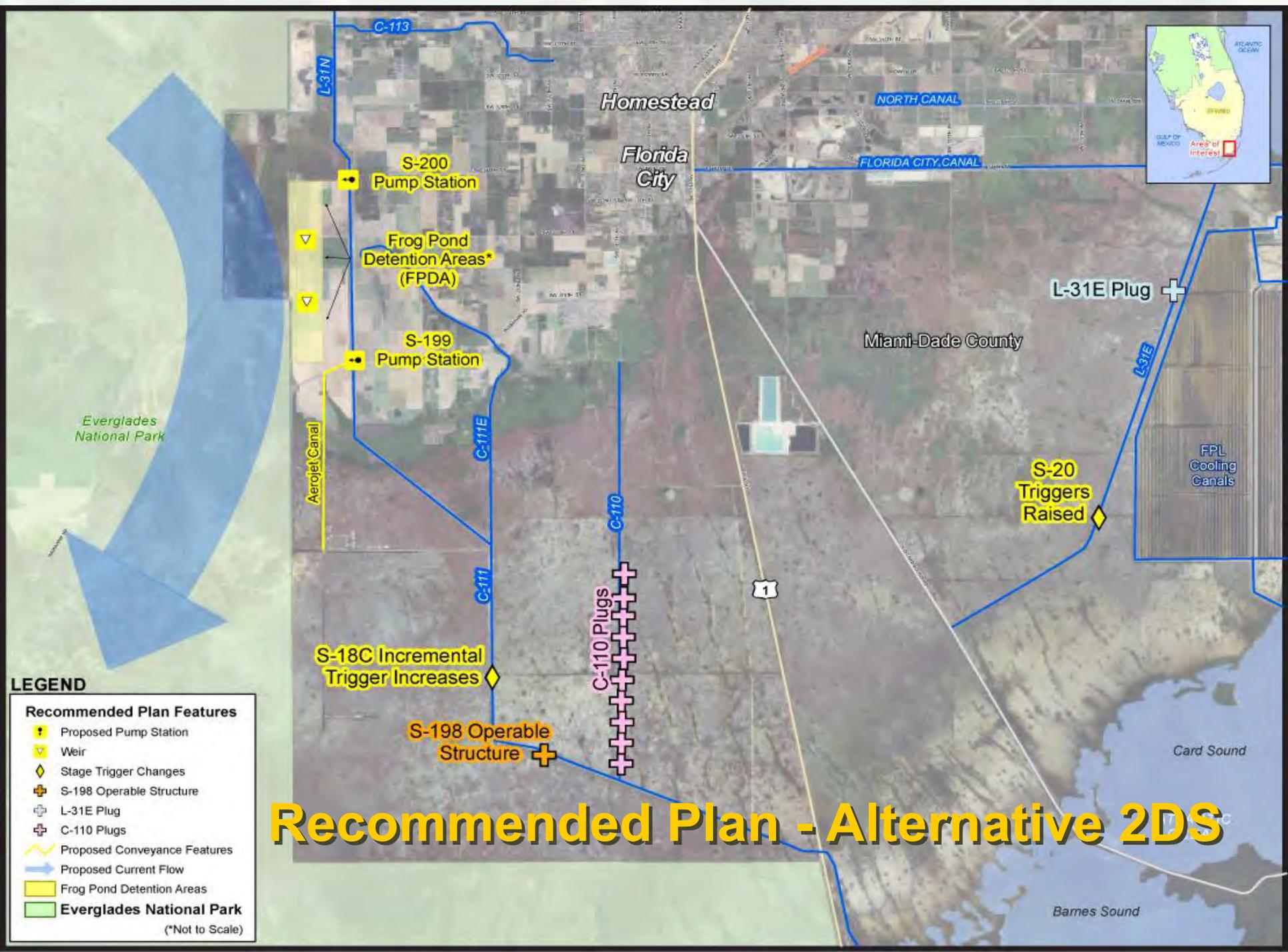
- ▶ Improve flow patterns, hydroperiods, and ecological connectivity of Southern Glades, Model Lands and adjacent natural areas
- ▶ Improve habitat functional quality of existing natural areas and increase spatial extent where practical
- ▶ Improve native plant and animal species and abundance and diversity
- ▶ Reserve sufficient water for the restoration of natural areas
- ▶ Eliminate ecologically damaging flow through C-111 Basin to Barnes Sound
- ▶ Provide ecologically compatible water quality consistent with restoration goals and federal and state requirements applicable to the South Glades, Model Lands and Everglades National Park



Final PIR/EIS Recommended Plan

- Recommended plan is consistent with previous briefing
- Hydraulic ridge – two new pump stations (S-200 and S-199) and two new retention areas (Frog Pond Detention Area and Aerojet Canal)
- Additional features include plugs in the C-110 and L-31E, and operational changes at S-18C and S-20
- Estimated average annual habitat lift is 8271 habitat units
- Estimated total project cost is \$162,124,000





Homestead

Florida City

NORTH CANAL

FLORIDA CITY CANAL

Miami-Dade County

L-31E Plug

FPL Cooling Canals

S-20 Triggers Raised

1

Card Sound

Barnes Sound

Everglades National Park

Aerofjet Canal

S-200 Pump Station

Frog Pond Detention Areas* (FPDA)

S-199 Pump Station

C-111E

C-110

C-111

C-110 Plugs

S-18C Incremental Trigger Increases

S-198 Operable Structure

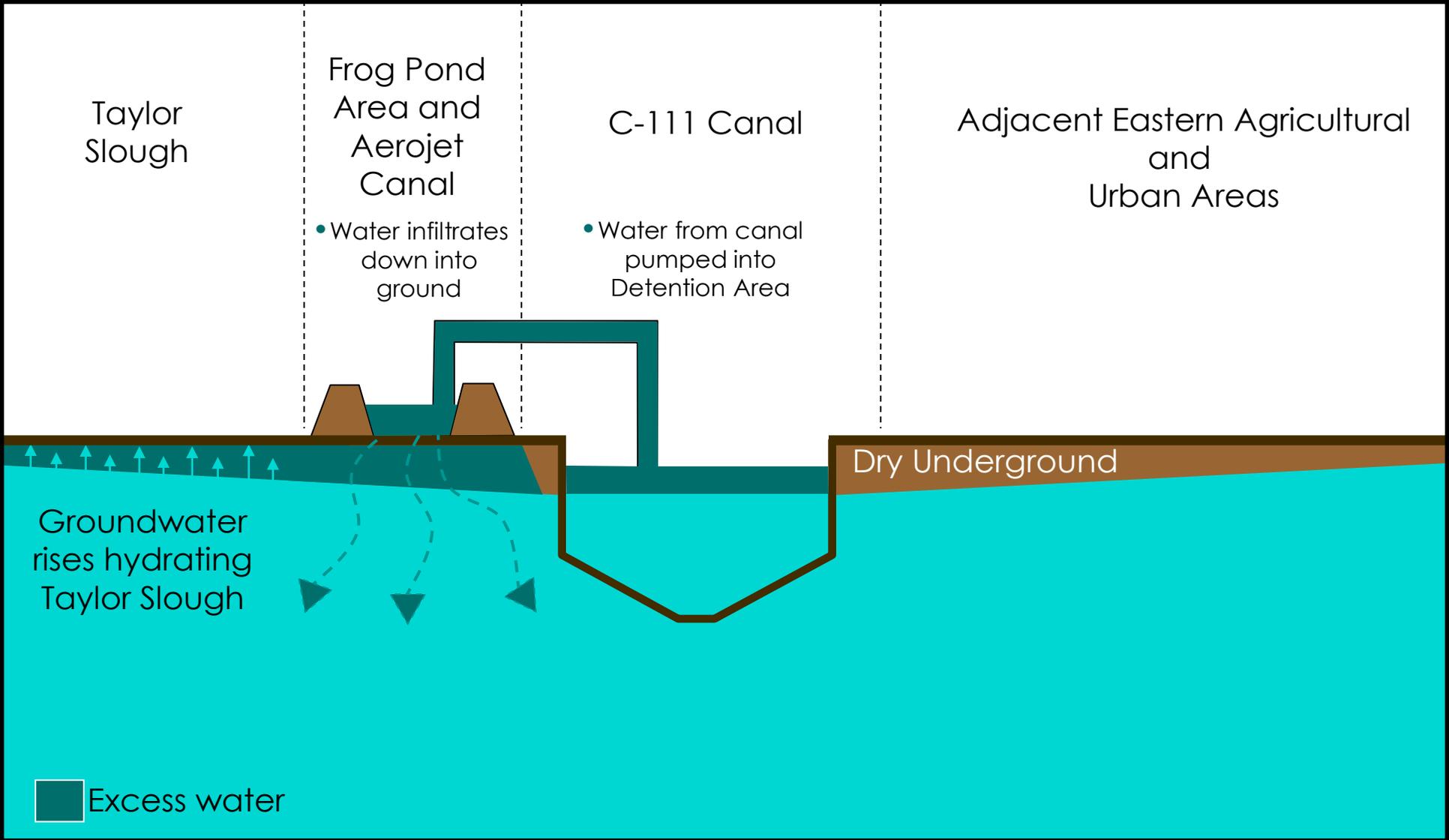
LEGEND

Recommended Plan Features

- Proposed Pump Station
- Weir
- Stage Trigger Changes
- S-198 Operable Structure
- L-31E Plug
- C-110 Plugs
- Proposed Conveyance Features
- Proposed Current Flow
- Frog Pond Detention Areas
- Everglades National Park

(*Not to Scale)

Recommended Plan - Alternative 2DS



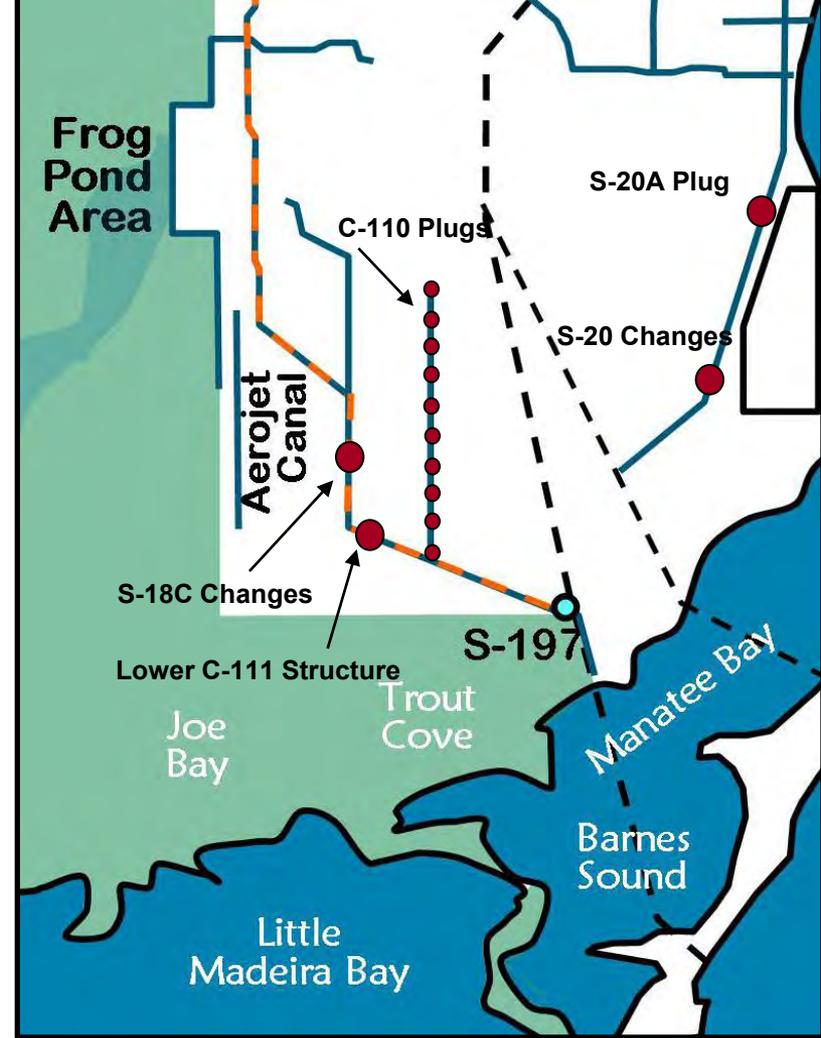
Hydraulic Ridge Concept

Detention area used to infiltrate water into ground and artificially raise groundwater table



Southern Glades and Model Land Features (from left to right on map)

- Incremental Operational Changes (trigger increases) at S-18C (existing Gated Spillway)
 - Operable Structure (Gated Culvert) in the lower C-111
 - Ten plugs in the C-110 Canal
 - Operational Changes at S-20
 - Plug at existing structure S-20A
- These features are incrementally justified, providing approximately 40% more benefits for only a 25% increase in cost



C-111

ROADS

EXISTING
STRUCTURE

NEW OR
MODIFIED

ENP

Benefits to System

- Rehydrated sawgrass freshwater habitat
- Increased nesting success for water dependent birds
- Restoration of nursery habitat in Florida Bay
- Approximately 240,000 acres of benefited area



Recommended Plan Costs & Cost Share

Item	Federal Cost	Non-Federal Cost	Total
Planning Engineering and Design (PED)	\$ 10,512,500	\$ 10,172,500	\$ 20,685,000
Construction Management	\$ 3,745,000	\$ 3,745,000	\$ 7,491,000
Lands, Easements, Relocations & Right-of-ways (LER&R)	\$ 623,000	\$ 67,059,000	\$ 67,682,000
Construction (Ecosystem Restoration)	\$ 66,053,000	\$ 0	\$ 66,053,000
Recreation	\$ 128,000	\$ 85,000	\$ 213,000
Total Project Cost	\$ 81,062,000	\$ 81,062,000	\$ 162,124,000
Operations, Maintenance, Repair, Rehabilitation & Replacement (OMRR&R) (includes Recreation)	\$ 734,500	\$ 759,500	\$ 1,494,000



Estimated Project Timeline



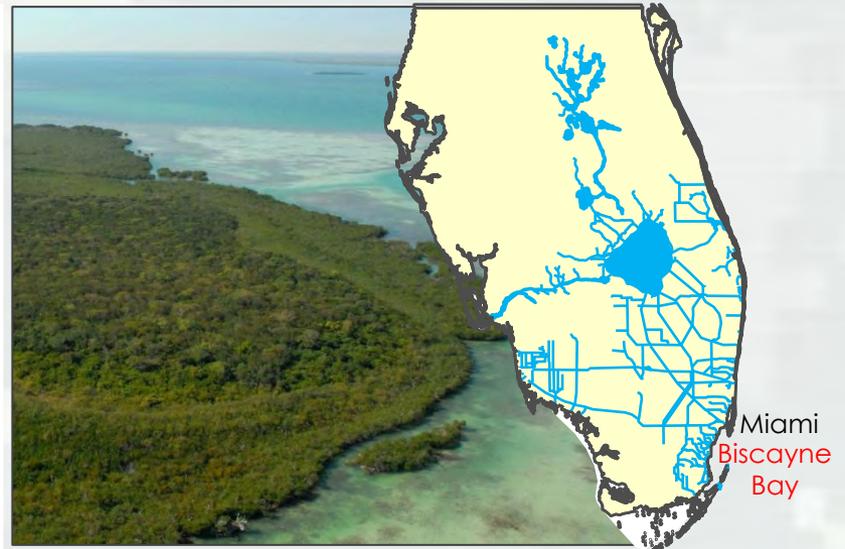
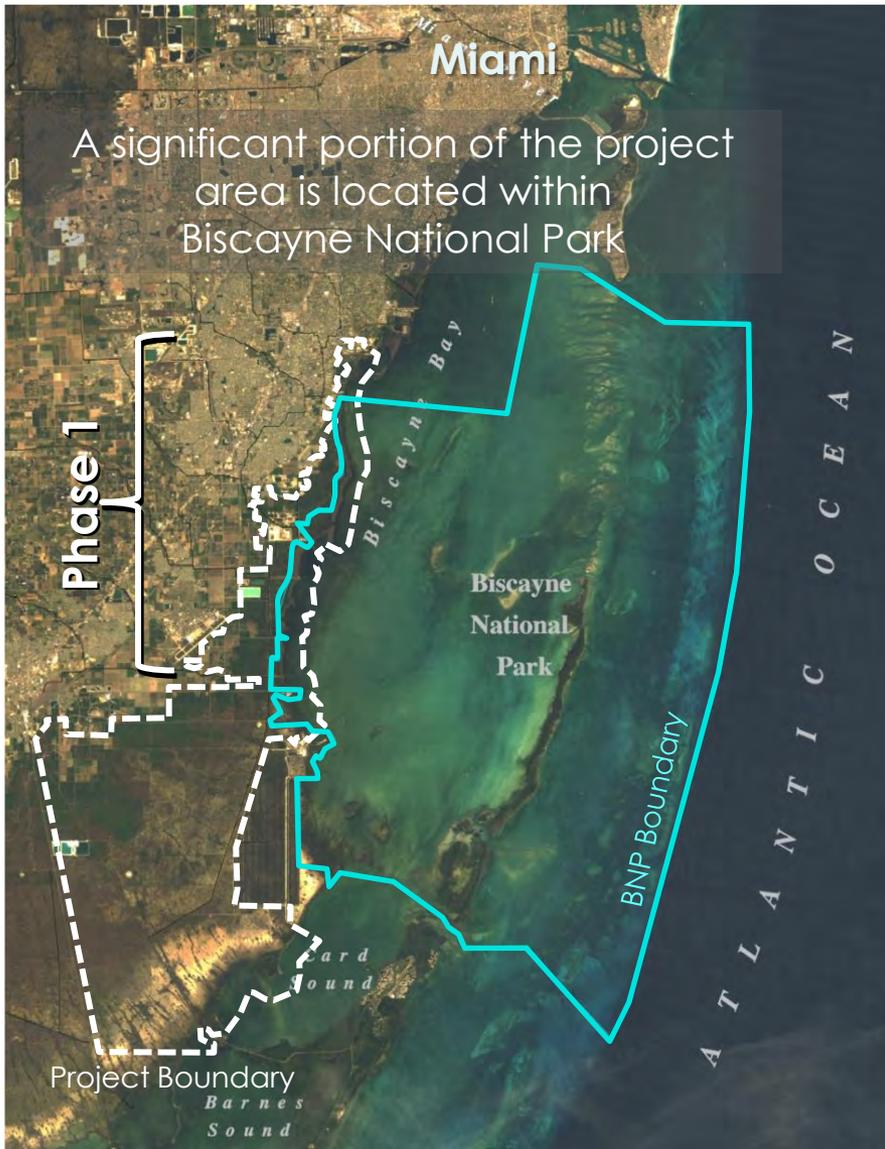
BISCAYNE BAY COASTAL WETLANDS PHASE 1

Comprehensive Everglades Restoration Plan (CERP)

Task Force Working Group Briefing
Presented by Kimberley Taplin

September 2011





Biscayne Bay Coastal Wetlands and Biscayne National Park

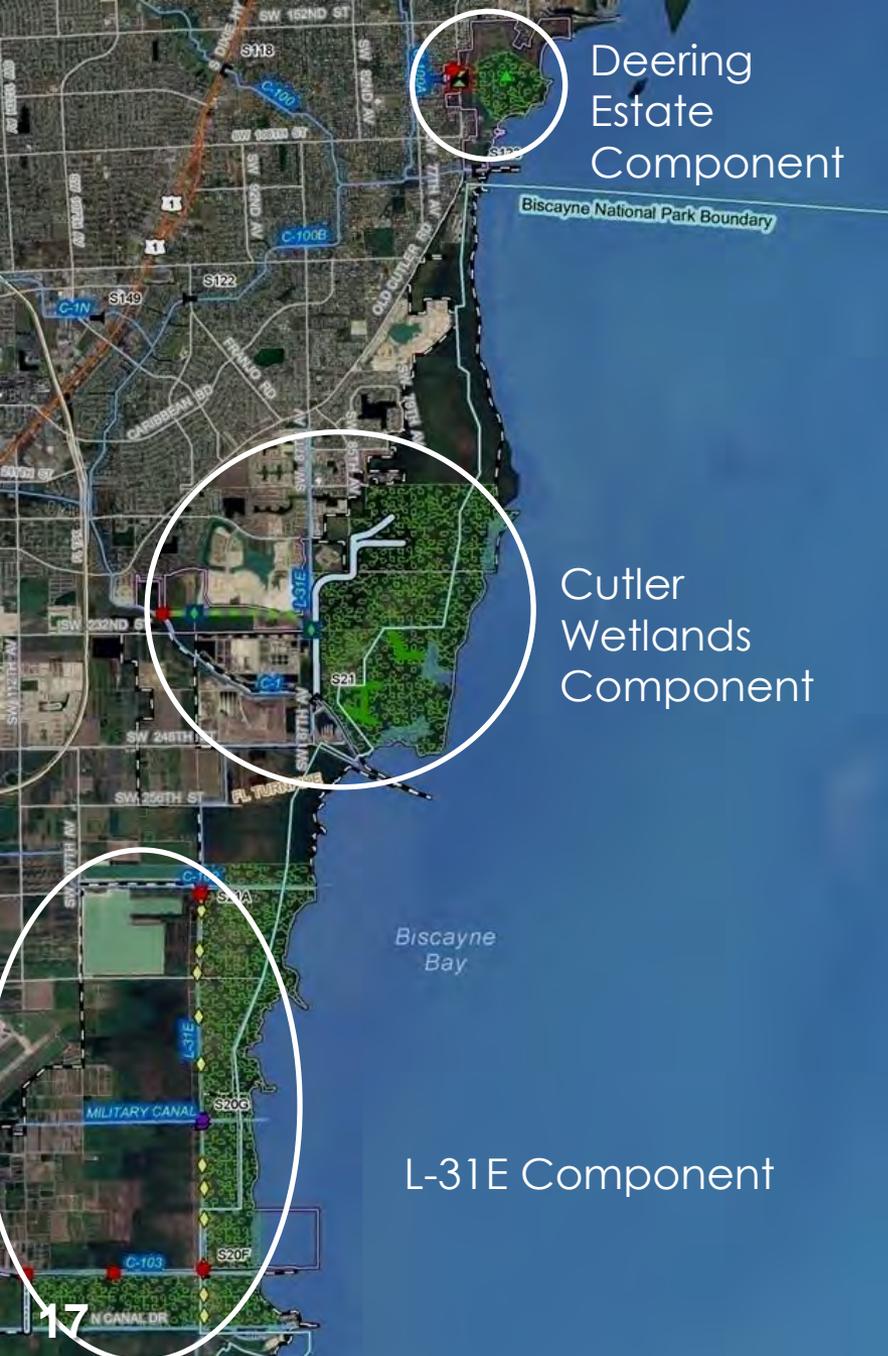
Serving the Quality of Life in South Florida



Project Objectives

1. Restore quantity, quality, timing and distribution of freshwater
2. Redistribute freshwater flows
3. Restore salinity regimes
4. Reestablish shoreline nursery habitat
5. Reestablish connectivity
6. Preserve and restore spatial extent of natural habitats
7. Provide recreational opportunities





Deering
Estate
Component

Biscayne National Park Boundary

Cutler
Wetlands
Component

Biscayne
Bay

L-31E Component

17



Recommended Plan Alternative O Phase 1





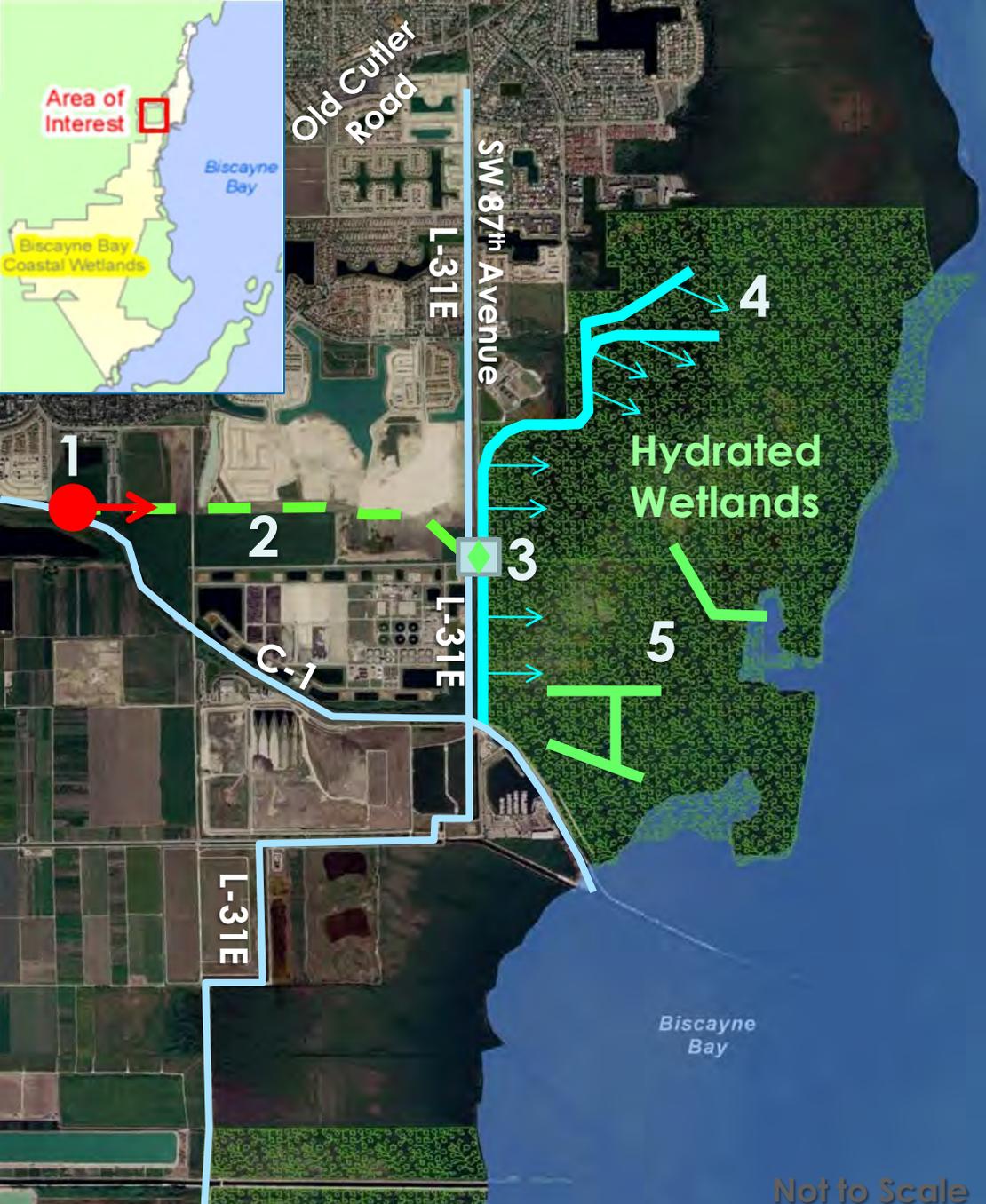
Recommended Plan Deering Estate Component

1. 500-foot extension of C-100A Spur Canal
2. pump station (100cfs)
3. 538 linear feet of 60" pipe
4. spreader structure



C-100A Spur Canal

BUILDING STRONG



Recommended Plan Cutler Wetlands Component

1. pump station on C-1 Canal (400cfs)
2. 7000+/- linear feet of lined conveyance canal
3. culverts
4. 13,160 linear feet of spreader canal
5. plugging (2500 linear feet) remnant mosquito ditches

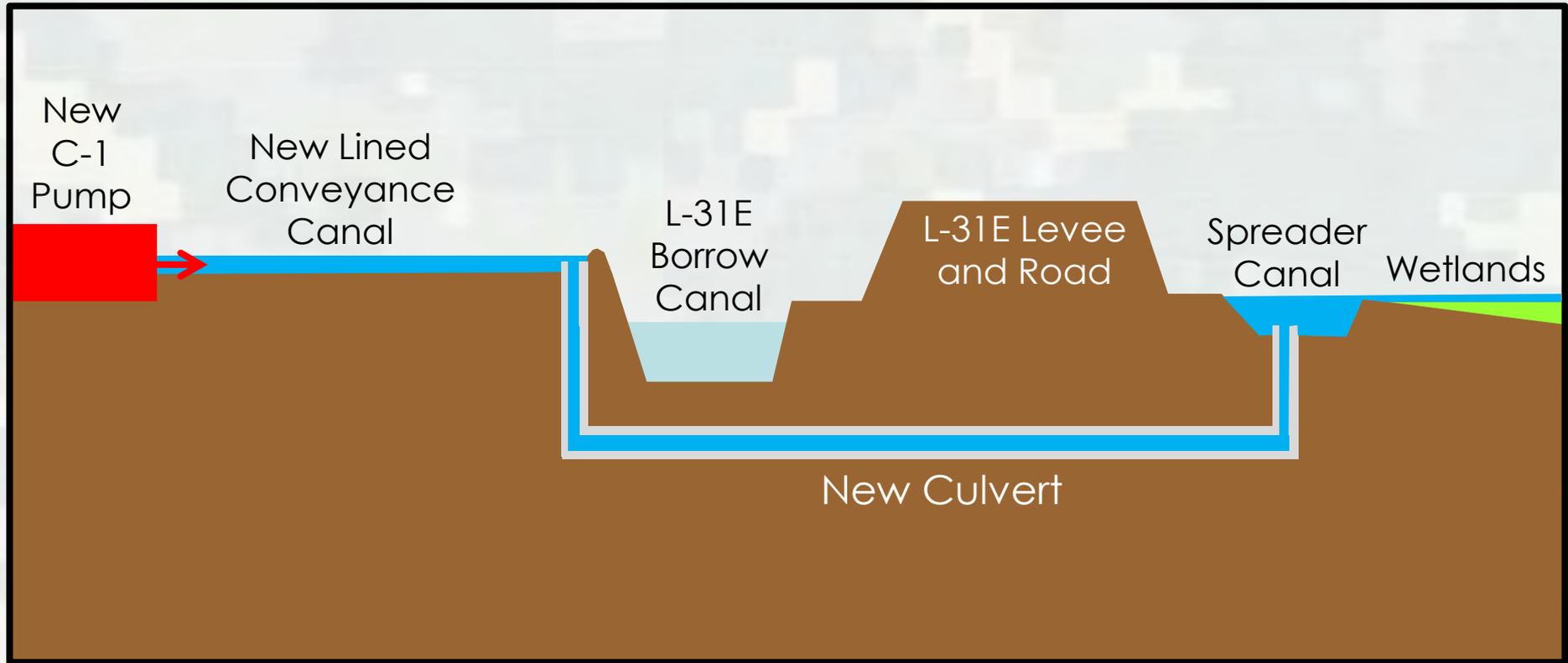
Not to Scale



BUILDING STRONG

Recommended Plan

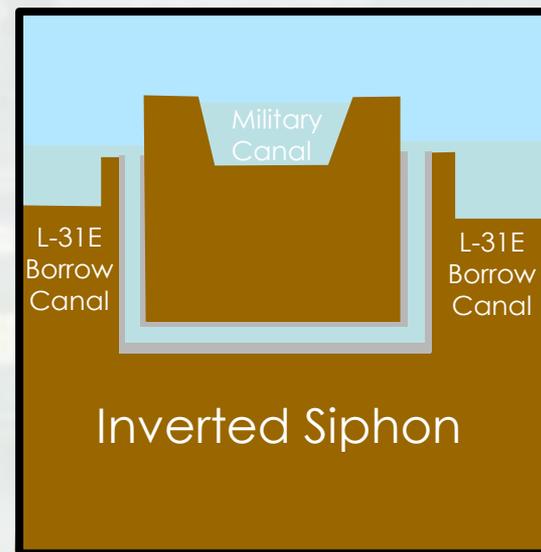
Cutler Wetlands Component Concept





Recommended Plan L-31E Component

1. pump station (50 cfs)
2. pump station (100cfs)
3. inverted siphon
4. 10 riser structures with flap gated culverts
5. pump station (40cfs)
6. pump station (40 cfs) & spreader canal
7. pump station (40 cfs) & spreader structure



BUILDING STRONG®

Not to Scale

Proposed Recreation Features

Activities

- Biking/walking trails
- Environmental interpretation
- Canoeing/kayaking
- Bank fishing
- Tent camping
- Nature study

Proposed facilities

- Interpretive signage and shade shelter,
- Handicapped accessible waterless restrooms
- Handicapped parking
- Tent platforms
- Pedestrian bridge
- Benches
- Bike rack
- Trash receptacles
- Park security gate
- Trail signage
- Potable water source
- Bird watching platform

Forecasted 29,200 additional recreation visits per year - average annual visits; Recreational features are proposed for fee lands and will be within the 10% rule



Recommended Plan - Cost Share

Item	Federal Cost	Non-Federal Cost	Total
Ecosystem Restoration (ER)			
PED	\$ 27,690,000	\$ 5,260,000	\$ 32,950,000
Construction Management	\$ 8,106,000	\$ 8,106,000	\$ 16,212,000
LER&R	-----	\$ 80,985,000	\$ 80,985,000
Ecosystem Restoration	\$ 58,555,000	-----	\$ 58,555,000
Recreation	\$ 1,158,000	\$ 1,158,000	\$ 2,316,000
Total Project Cost	\$ 95,509,000	\$ 95,509,000	\$ 191,018,000
Total Project Level Monitoring Costs	\$ 958,500	\$ 958,500	\$ 1,917,000
Annual OMRR&R	\$ 936,500	\$ 961,500	\$ 1,898,000
OMRR&R (vegetation management)	\$ 96,500	\$ 96,500	\$ 193,000
OMRR&R (non-recreation)	\$ 840,000	\$ 840,000	\$ 1,680,000
OMRR&R (recreation)		\$ 25,000	\$ 25,000



Anticipated Construction Schedule

	Start	Complete
State Expedited Features		
L-31 E Culverts	-----	(4 Culverts) April 2010
Deering Estate	May 2010	(currently 64%) October 2011 projected completion date
Cutler Wetlands	TBD	TBD
Phase 1 Project Construction	January 2015	November 2017

Phase 1 Project Cost: \$ 191,018,000



Anticipated Schedule

- Final Planning Implementation Report (PIR) and NEPA Report Published in Federal Register: October 2011
- Submit Chief's Report: February 2012
- Assistant Secretary of the Army (ASA) Review (start): March 2012
- Office of Management and Budget (OMB) Review (start): May 2012
- Record of Decision (ROD) Signed: August 2012
- ASA Report Submitted to Congress: August 2012
- Congressional Review (start): August 2012
- President Signs Authorization: January 2013
- Project Partnership Agreement (PPA) Initiated: January 2013
- PPA Executed: November 2013
- Real Estate Acquisition Complete: July 2014
- Construction Contract Awarded: January 2015

