South Florida Everglades Ecosystem Restoration Program

Restoration Program and Project Briefings

Joint Working Group / Science Coordination Group Meeting
October 23, 2014

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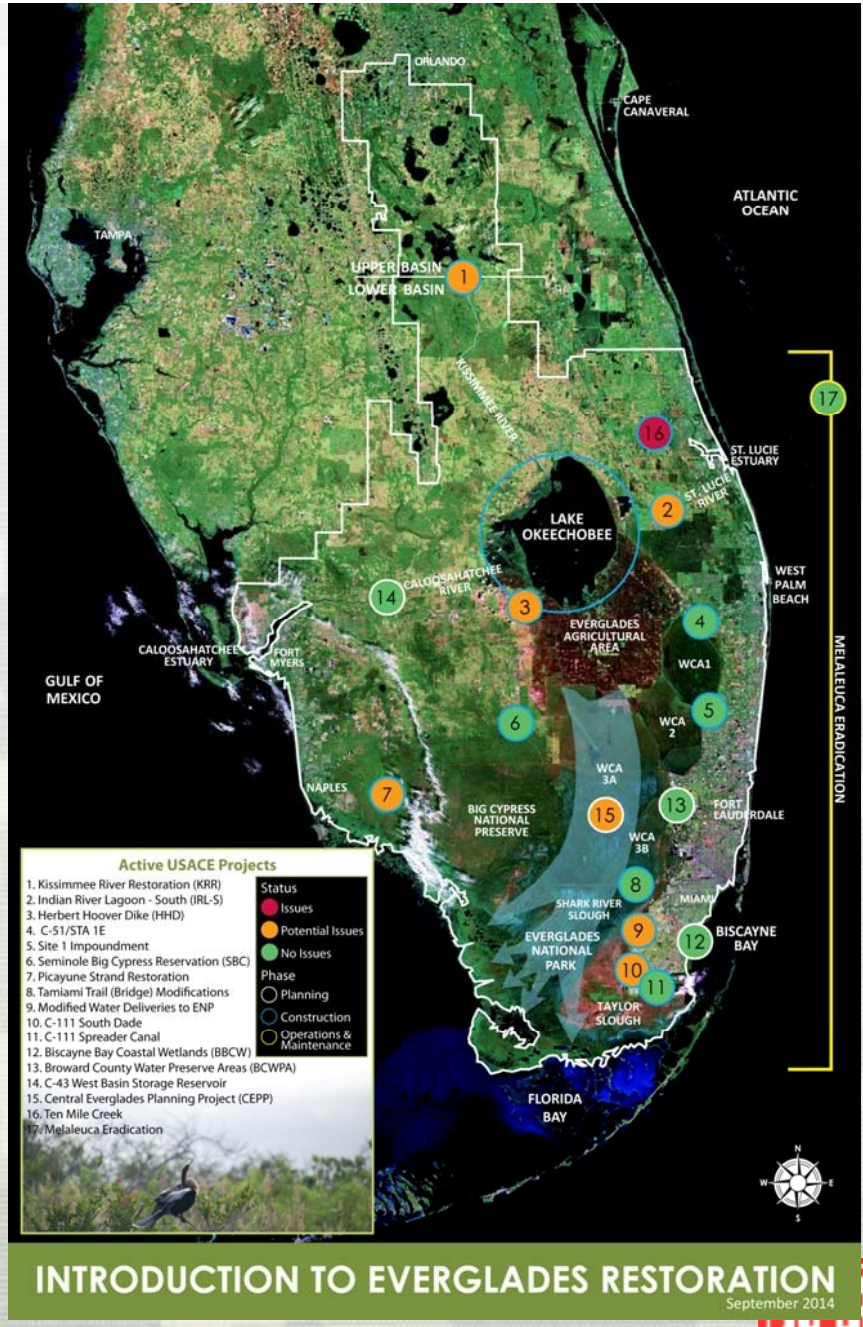
USACE – Jacksonville District

South Florida Ecosystem Restoration (SFER) Program

- Large-scale, watershed project area (over 18,000 square miles)
- Intense stakeholder interest
- Competing interests
- Complexity of problems
- Conflicting agency responsibilities



INTRODUCTION TO EVERGLADES RESTORATION
September 2014

SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

- Kissimmee River Restoration
- Modified Water Deliveries to ENP
- Critical Projects Program
- Herbert Hoover Dike
- Central & Southern Florida Project
  - CERP
    - GEN 1
    - GEN 2
    - CEPP
  - C-51 / STA-1E
  - C-111 South Dade

NOT PART OF SFER BUT LINKED TO SYSTEM

Foundation Projects

Kissimmee River Restoration

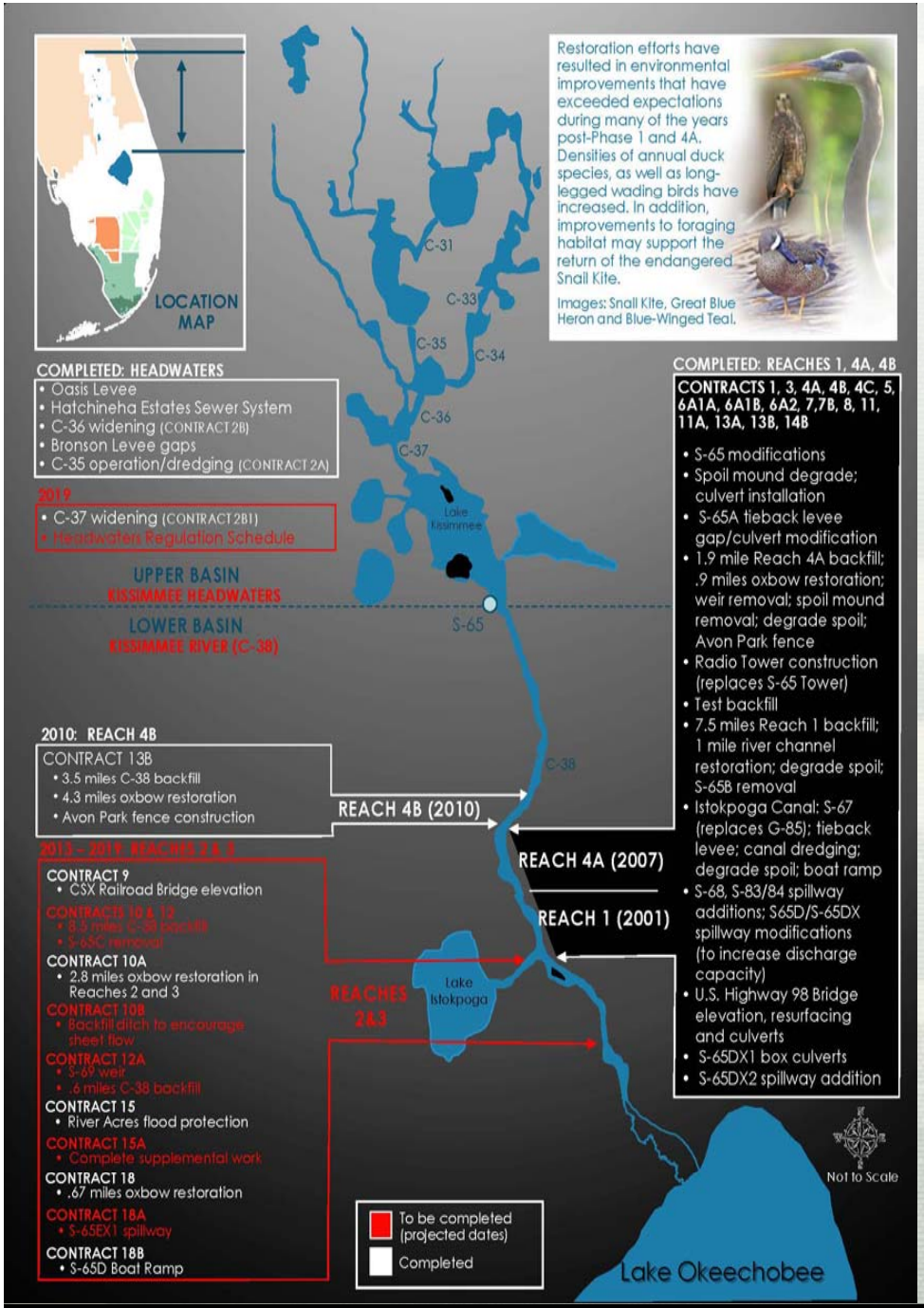
West Palm Beach Canal (C-51/STA-1E)

Seminole Big Cypress

Modified Water Deliveries to Everglades National Park

C-111 South Dade

Kissimmee River Restoration



Restoration of more than 40 sq. mi. of river-floodplain ecosystem, including 20,000 acres of wetlands and 44 miles of historic river channel.

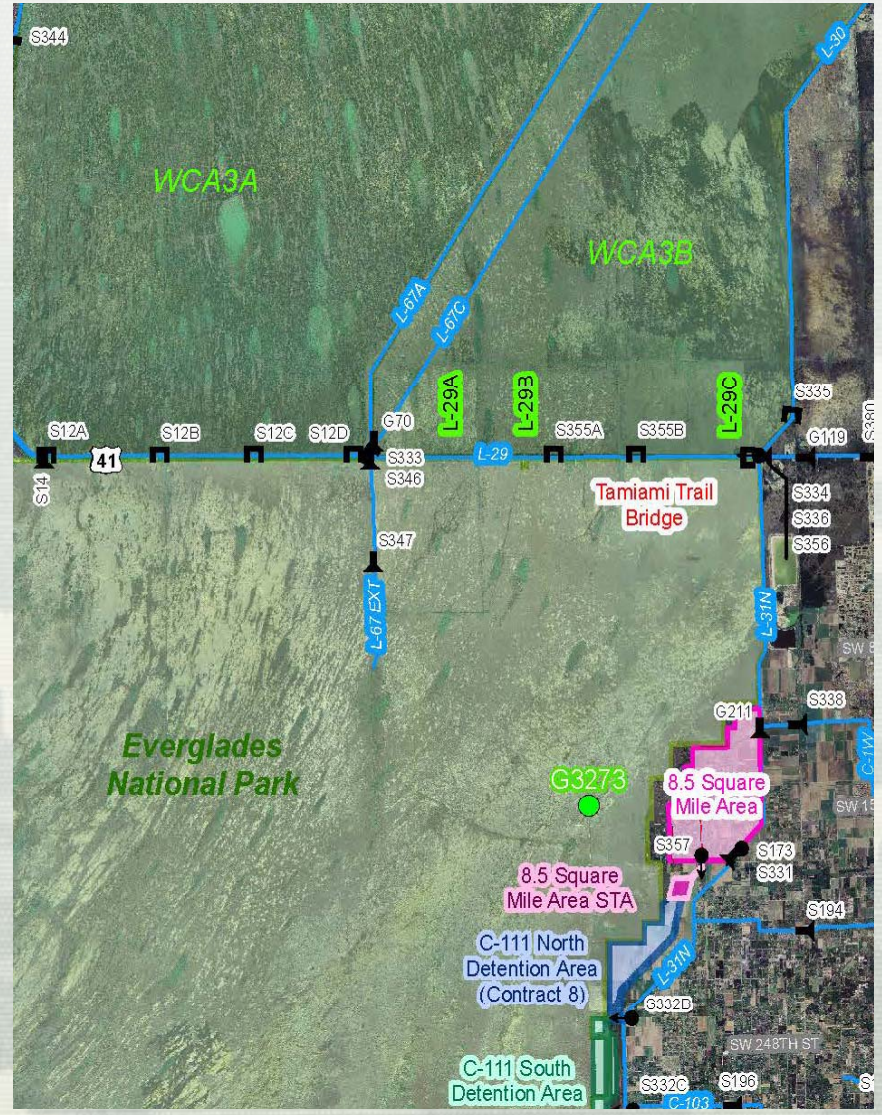
Remaining Project Efforts:

- **Award Remaining Construction Contracts**
  - Backfill 9 miles of the channelized Kissimmee River
  - Remove S-65C Lock and Spillway
  - Construct weir to redirect flows through the historic channel
- **Complete Post Authorization Change Report to request Congressional authority to credit the non-Federal sponsor for engineering solutions performed in lieu of real estate acquisition and additional modeling and monitoring to support restoration efforts.**
- **Acquire additional real estate for project operations.**

Path Forward:

- **Complete construction by 2019;**
- **Implement Headwaters Regulation Schedule upon completion of all segments;**
- **Ecological Monitoring**

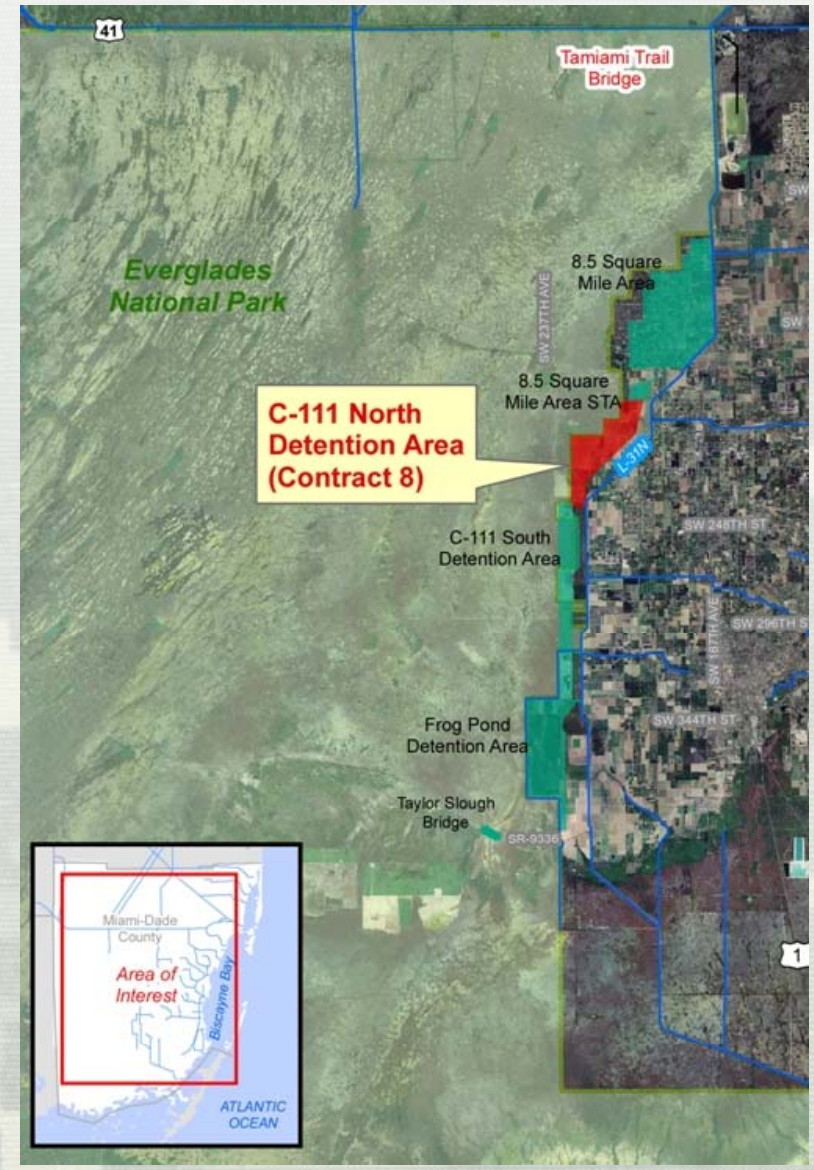
Modified Water Deliveries to ENP



Project Components/Status:

- Constructed S-355A & S-355B
- Raised Tigertail Camp
- Degraded the lower 4 miles of L-67 extension & levee
- Constructed temporary S-356 pump station
- Completing construction of 8.5 Square Mile Area flood mitigation features
- One-mile Tamiami Trail bridge constructed
- Initiating Operations Test of S-356/G-3273 – March 2015

C-111 South Dade



Status:

- 7 Contracts Complete
- 2 contracts pending:
  - •Contract 8 - Northern Detention Area
  - •Contract 9 - L-31W canal plugging
- Completion of Contract 8 is necessary to allow full operations of the Modified Water Deliveries project
- Schedule for Contract 8
  - PCA Amendment 1 Signed 14 Aug 14
  - Contract Award 17 Jul 15
  - Const Physically Complete 3 Jan 17

CERP Implementation

1st Generation

- Site 1 Impoundment
- Indian River Lagoon – South (IRL-S)
- Picayune Strand Restoration Project
- Melaleuca Eradication and Other Exotic Plants
- DECOMP Physical Model

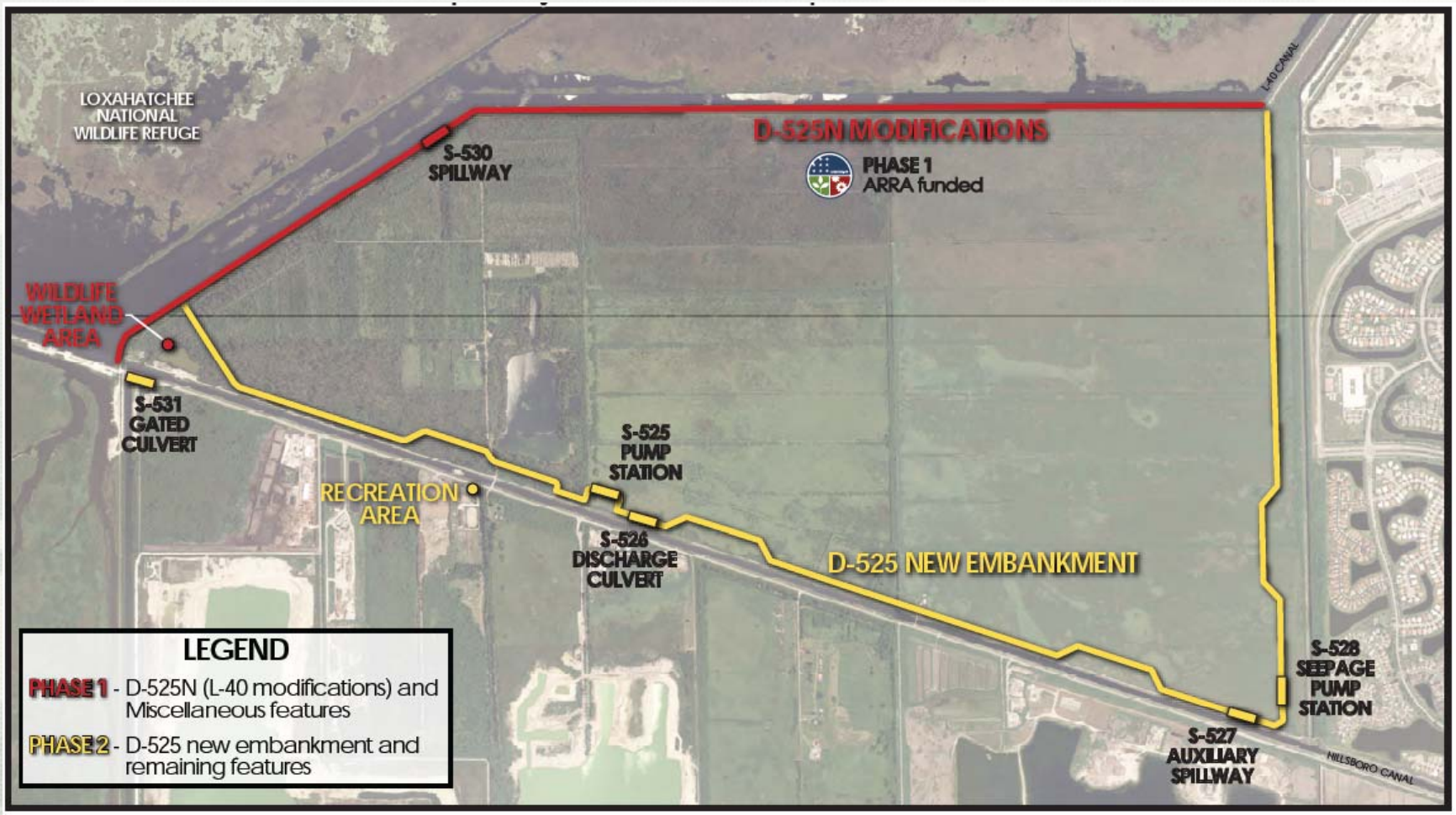
2nd Generation

- C-43 West Basin Storage Reservoir
- C-111 Spreader Canal Western Project
- Biscayne Bay Coastal Wetlands
- Broward County Water Preserve Area

Central Everglades Planning Project

Loxahatchee River Watershed Restoration

Site 1 Impoundment

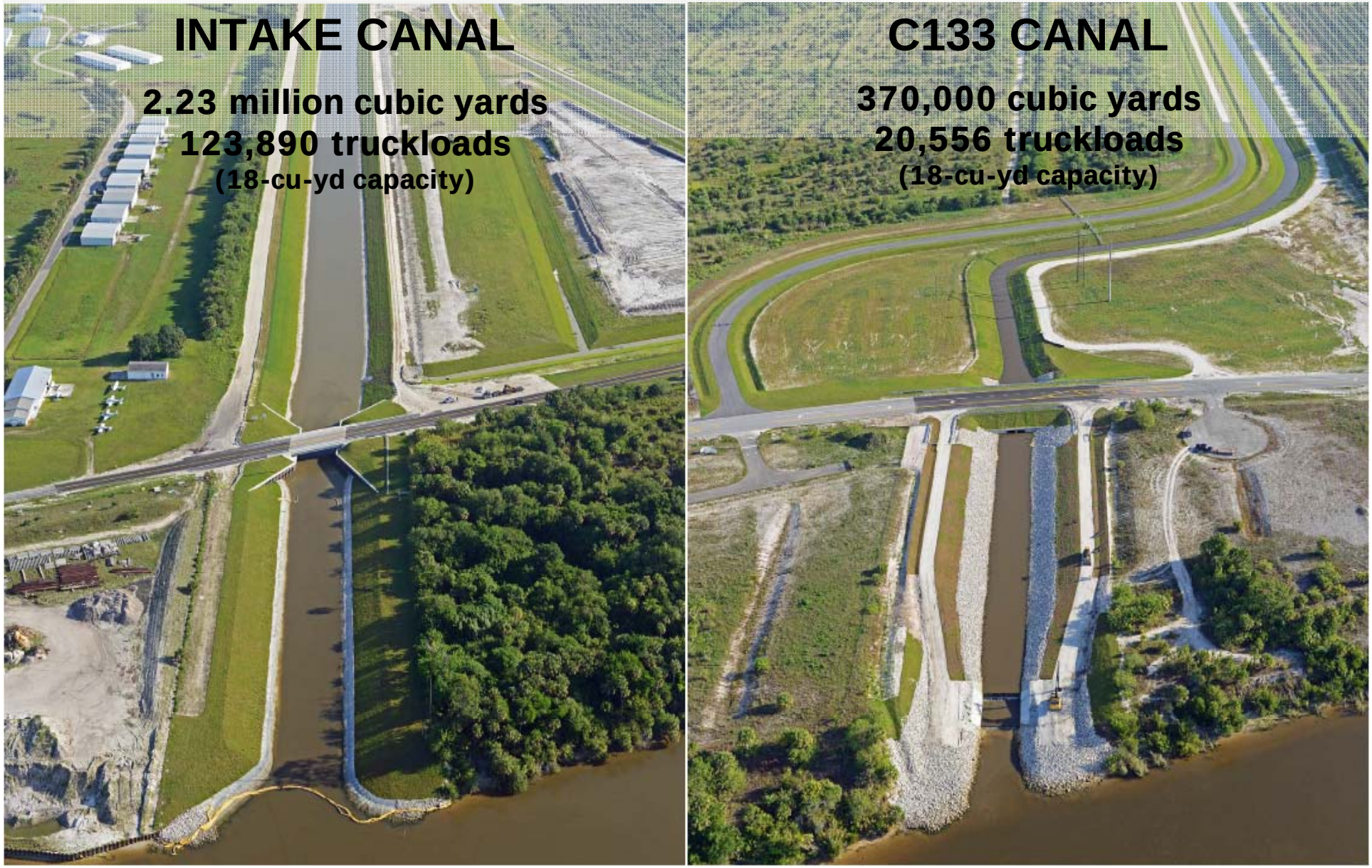


Project Purpose: Improve water deliveries to Hillsboro Canal by capturing and storing water in above ground reservoir (13,280 acre-feet capacity)

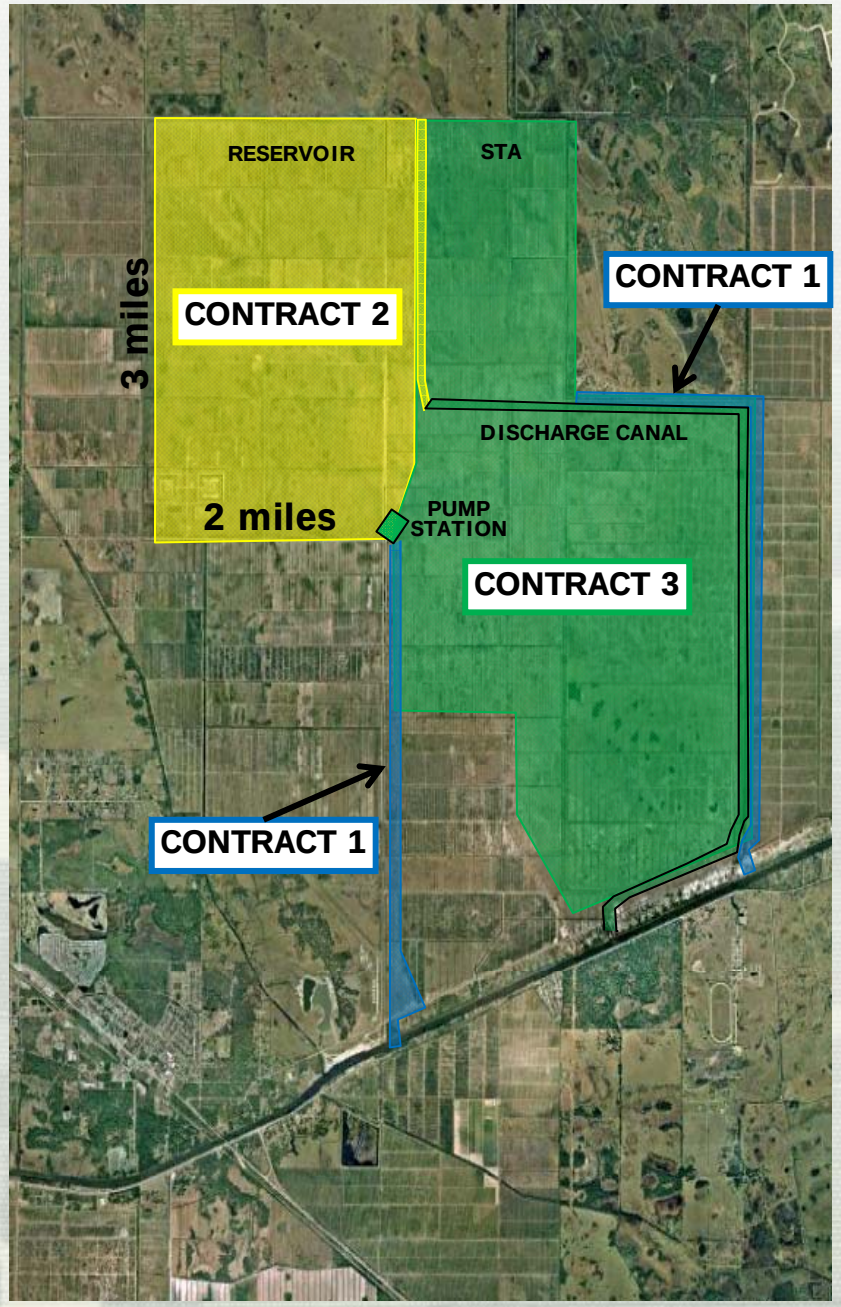
Site 1 Impoundment

- Phase 1: Construction initiated in FY2010 and reinitiated in FY2012
- Scheduled for completion in July 2015

Indian River Lagoon – South (IRL-S): C-44 Reservoir/STA



Indian River Lagoon – South (IRL-S): C-44 Reservoir/STA



Purpose: Capture local run-off from the C-44 basin, reducing average annual total nutrient loads and improving salinity regimen for the St. Lucie Estuary and southern portion of the Indian River Lagoon.

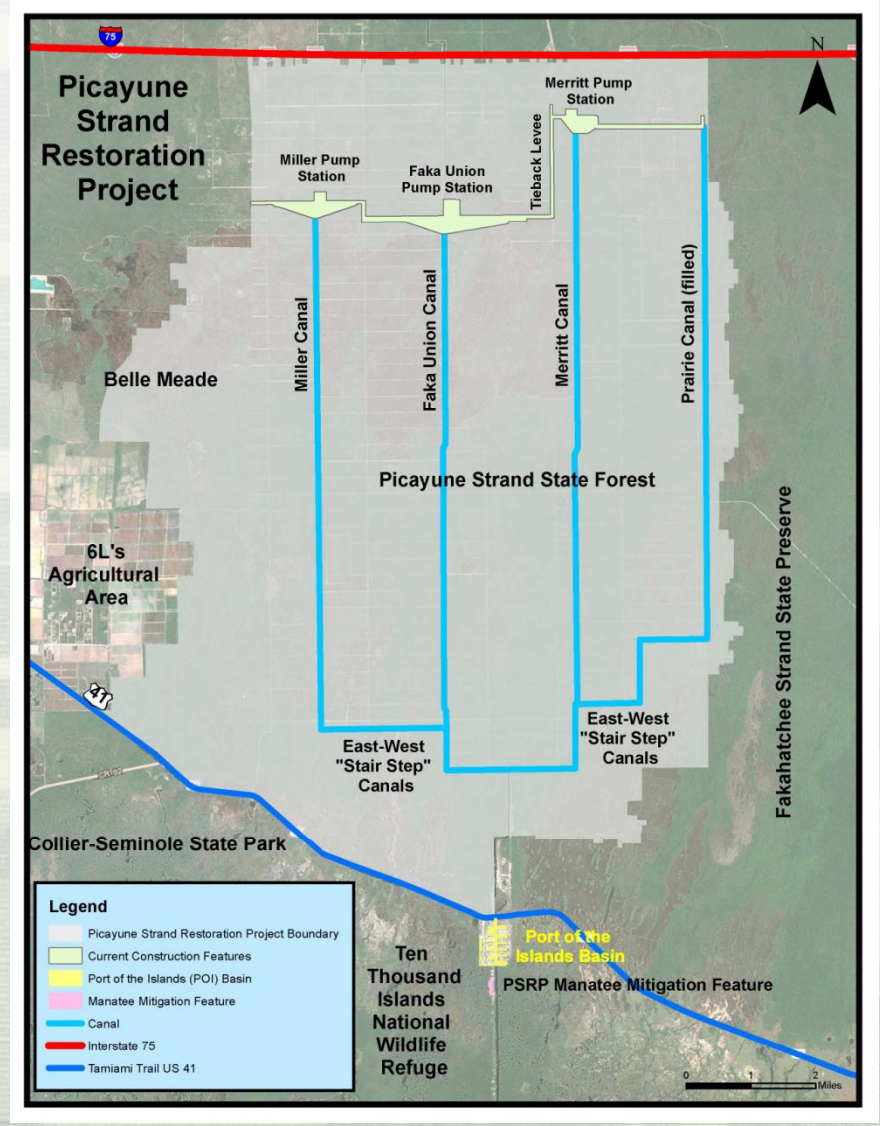
Major Components:

- Construction of intake canal and access roads
- Construction of above-ground reservoir
- Construction of storm-water treatment area

Schedule:

Contract	Award	Completion
CNT-1 (USACE)	JUL 11	Completed
CNT-2 (USACE)	JUN 15	SEP 19
CNT-3 (SFWMD)		
System Discharge	SEP 14	JUL 15
STA	OCT 14	JUL 17
Pump Station	MAY 15	OCT 17

Picayune Strand Restoration Project



PROJECT FEATURES

- Three pump stations: Merritt, Faka Union, and Miller
- Three spreader basins
- Plugging 48 miles of canals
- Removing and degrading 260 miles of crumbling roads
- Managing non-native vegetation
- Features to maintain current levels of flood protection (levees, canals and culverts)
- Features to mitigate effects of manatee refugium at the Port of the Islands Marina

Picayune Strand Restoration Project

Merritt Pump Station Features:

- 810-cubic feet per second (cfs) pump station, spreader basin, and tie-back levee (Complete)
- Plug 13.5 miles of canals to block flow (Under Construction)
- Remove and degrade 95 miles of roads and tram roads (Complete)

Faka Union Pump Stations Features:

- 2,650-cfs pump station, spreader basin, and tie-back levee (Under Construction)
- Plug 12 miles of canal to block flow (Following Completion of Pump Station)
- Remove 100 miles of roads (Complete)

Miller Pump Stations Features:

- 1,250-cfs pump station, spreader basin, and tie-back levee (Under Construction)
- Plug 13 miles of canal to block flow (Following Completion of Pump Station)
- Remove and degrade 65 miles of roads (Under Construction)

Melaleuca Eradication and Other Exotic Plants

- Joint USACE, Department of Agriculture (USDA), and South Florida Water Management District (SFWMD) effort
- Divided into two phases:
  - Construction of an annex to USDA Laboratory facility at Davies FL (Completed 2013)
  - 25 year “Raise, Release, and Monitor ” (RRM) operation to combat invasive non-native plants with biological control agents
- FY14 was first full year of RRM operations

DECOMP Physical Model

L-67A S-152 Structure (pictured)

- 10-60” gated culverts
- Headwater: 5.90’ to 11.50’ (NAVD88)
- Tailwater: 4.5’ to 8.80’ (NAVD88)

L-67C Backfill / Levee Degrade

- 1000’ Complete Backfill (marsh grade)
- 1000’ Partial Backfill
- 1000’ No Backfill
- 3000’ Levee Degrade

Operation / Testing

- Completed 1ST Year
- 2ND year Nov‘14-Jan’15
- Additional 3RD year FY16

2nd Generation CERP Projects

C-43 West Basin Storage Reservoir

- Purpose = improve timing, quantity and quality of freshwater deliveries to Caloosahatchee River estuary
- Record of Decision signed and report submitted to Congress on 13 Apr 11
- Authorized in WRRDA 2014

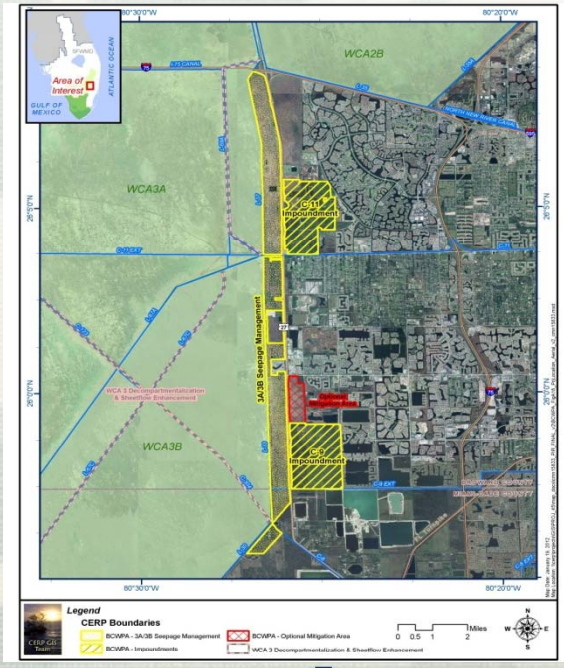
C-111 Spreader Canal

- Purpose = improve water deliveries to Florida Bay and to improve hydropatterns and hydroperiods in Southern Glades /Model Lands
- Record of Decision signed and report submitted to Congress on 19 Jul 12
- Authorized in WRRDA 2014

2nd Generation CERP Projects

Biscayne Bay Coastal Wetlands

- Purpose = improve freshwater deliveries to Biscayne Bay
- Record of Decision signed and report submitted to Congress on 19 Sep 12
- Authorized in WRRDA 2014



Broward County Water Preserve Area

- Purpose = reduce seepage, recharge groundwater, provide water supply, and prevent saltwater intrusion in western Broward County
- Record of Decision signed and report submitted to Congress on 25 Oct 12
- Authorized in WRRDA 2014

Central Everglades Planning Project (CEPP)

STATUS:

- **Final PIR/EIS and Draft Chief's Report**
  - State & Agency Review, public review initiated 8 August 2014
  - Comment Period closed 3 October 2014
  - Comments under review
  - Closing out Agency Response to Independent External Peer Review

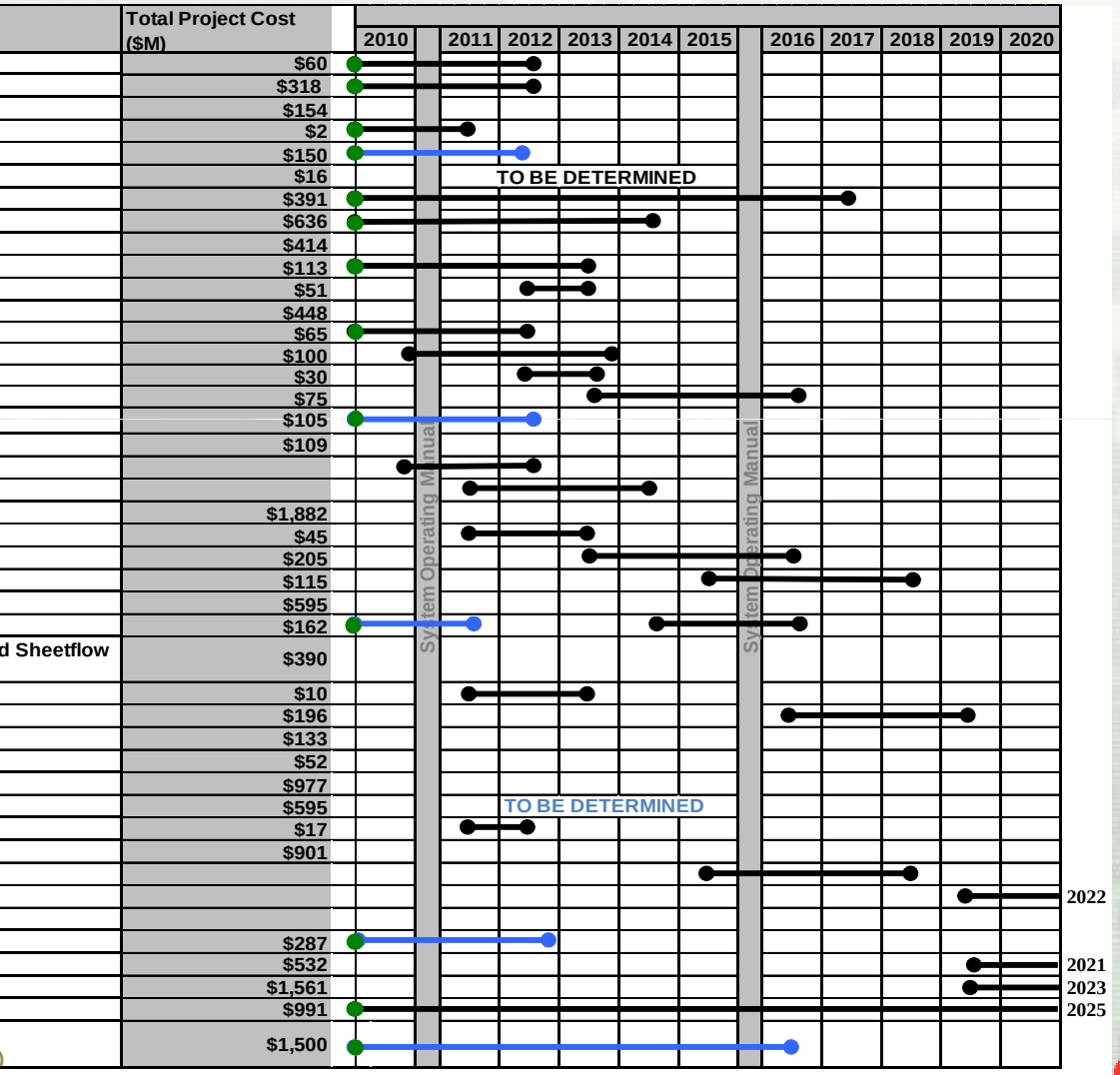
- **Final Chief's Report**
  - Expected to be completed Dec/Jan timeframe
  - Will then be forwarded to Office of Management and Budget for review

Integrated Delivery Schedule (IDS)

- Comprehensive sequencing and scheduling of construction projects in the South Florida ecosystem restoration program
- Incorporates both Federal and State initiatives
- Allows implementing agencies to provide guidance to decision-makers for scheduling, staffing, and budgeting
- Living document that will be updated to reflect major program changes

Integrated Delivery Schedule (IDS)

	Project	Total Project Cost ($M)
1	Seminole Big Cypress	$60
2	West Palm Beach Canal/STA-1E	$318
3	C-111 Spreader Canal	$154
	Design Test	$2
	Western Project	$150
4	L-31N Seepage Management Pilot Project	$16
5	C-111 South Dade	$391
6	Kissimmee River Restoration	$636
7	Modified Water Deliveries to Everglades National Park	$414
	Tamiami Trail Modifications	$113
	Conveyance and Seepage Control Features	$51
8	Picayune Strand Restoration	$448
	Merritt Pump Station	$65
	Faka Union Pump Station	$100
	Flood Protection Features	$30
	Miller Pump Station	$75
9	Lakeside Ranch STA Phase 1	$105
10	Site 1 Impoundment	$109
	Phase 1	
	Phase 2	
11	Indian River Lagoon-South	$1,882
	C-44 Intake Canal	$45
	C-44 Reservoir	$205
	C-44 STA	$115
12	Biscayne Bay Coastal Wetlands	$595
	Phase 1	$162
13	Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement (Decomp)	$390
	Decomp Physical Model	$10
	Decomp Part 1	$196
	Decomp Part 2	$133
	Decomp Part 3	$52
14	Caloosahatchee River (C-43)	$977
	West Basin Storage Reservoir	$595
15	Melaleuca Eradication and Other Exotic Plants	$17
16	Broward County Water Preserve Areas	$901
	C-11 Impoundment	
	WCA 3A&3B Levee/S-356	
	C-9 Impoundment	
17	North Palm Beach County Part 1	$287
18	ENP Seepage Management	$532
19	Lake Okeechobee Watershed	$1,561
20	Herbert Hoover Dike Rehabilitation	$991
21	Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area Projects (100% State)	$1,500



Projects are currently federal construction.

Projects are currently non-federal construction, subject to change based on further authorization and funding.

Construction has started on these projects.

October 2010

South Florida Everglades Ecosystem Restoration Program

Questions?