

SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER) PROGRAM

Program & Project Update

SFER Working Group / Science Coordination Group

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U.S. Army Corps of Engineers, Jacksonville District

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SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

Purpose and Agenda

The purpose of this briefing is to provide participants with an overview and update on the status of the South Florida Ecosystem Restoration (SFER) program and projects.

Agenda:

- 1) Program Overview
- 2) Project Status
- 3) FY19 & FY20 Budget Review
- 4) Key Take Aways

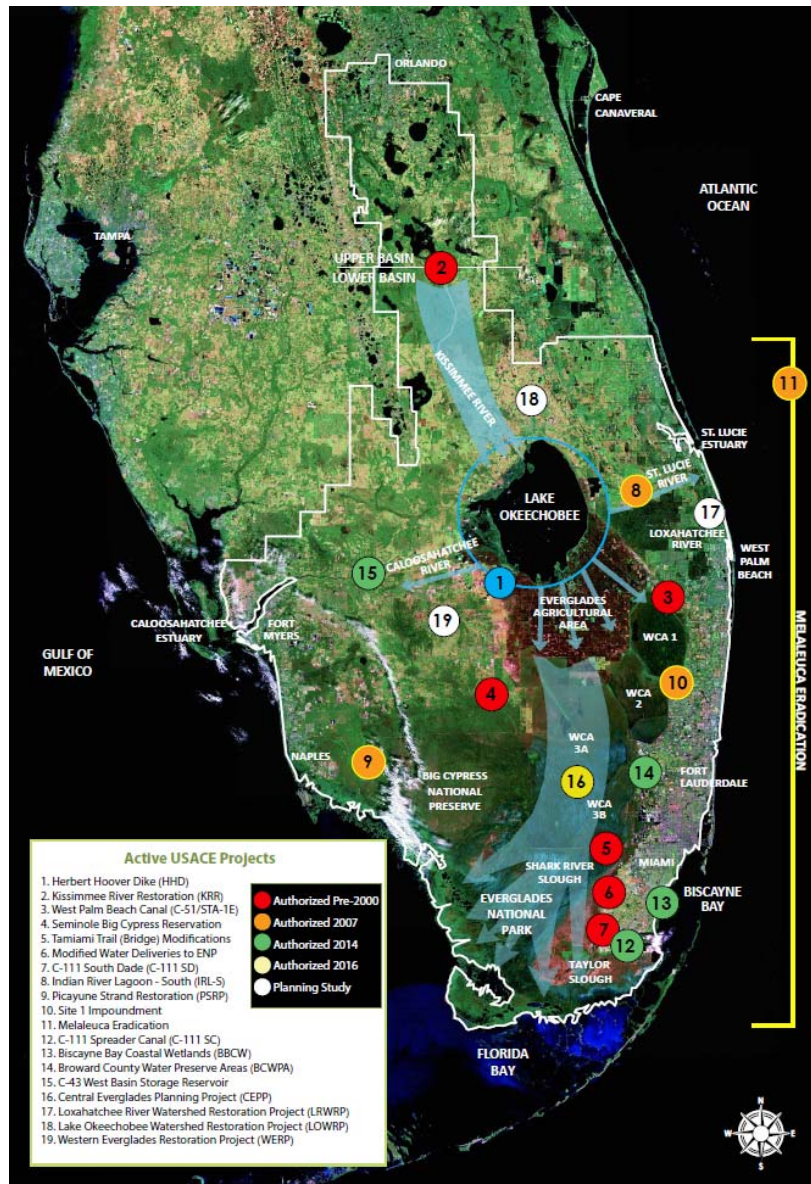


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SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

Program Overview



- Large-scale, watershed project area (Over 18,000 square miles), including Everglades & Dry Tortugas National Park, Biscayne National Park, Big Cypress National Preserve, Arthur R. Marshall Loxahatchee National Wildlife Refuge, and other Federal Lands
- Everglades National Park is an International Biosphere Reserve, a World Heritage Site, and a Ramsar Wetland of International Importance
- Improve the health of over 2.4 million acres of south Florida ecosystem, including Lake Okeechobee
- Flood Risk Management and Water Supply for over 8 Million residents; the largest metropolitan area in the southeastern U.S. in the 3rd largest state
- 70 Federally-listed threatened and endangered species
- Robust agricultural, recreational, and tourism industries

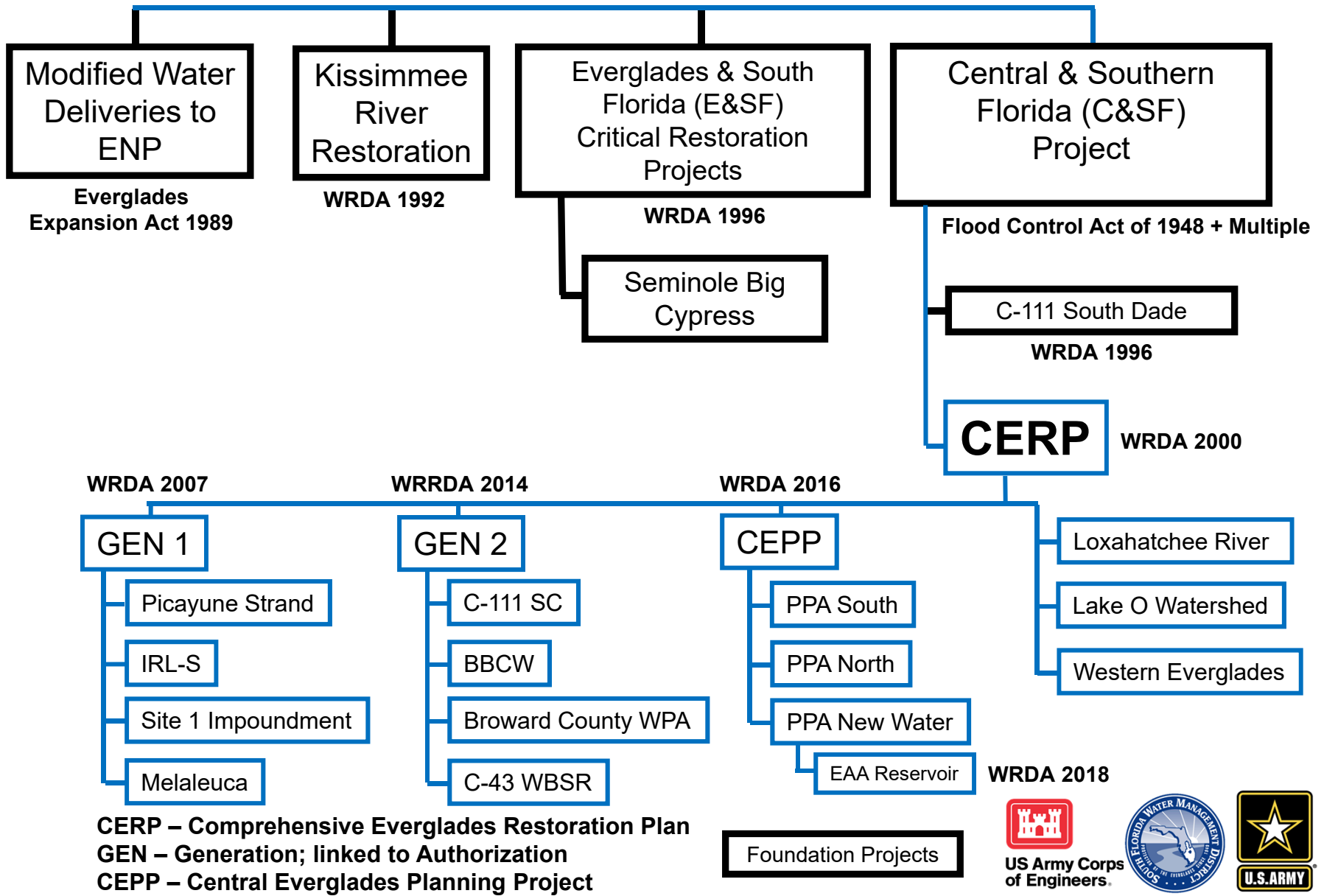


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Program Structure

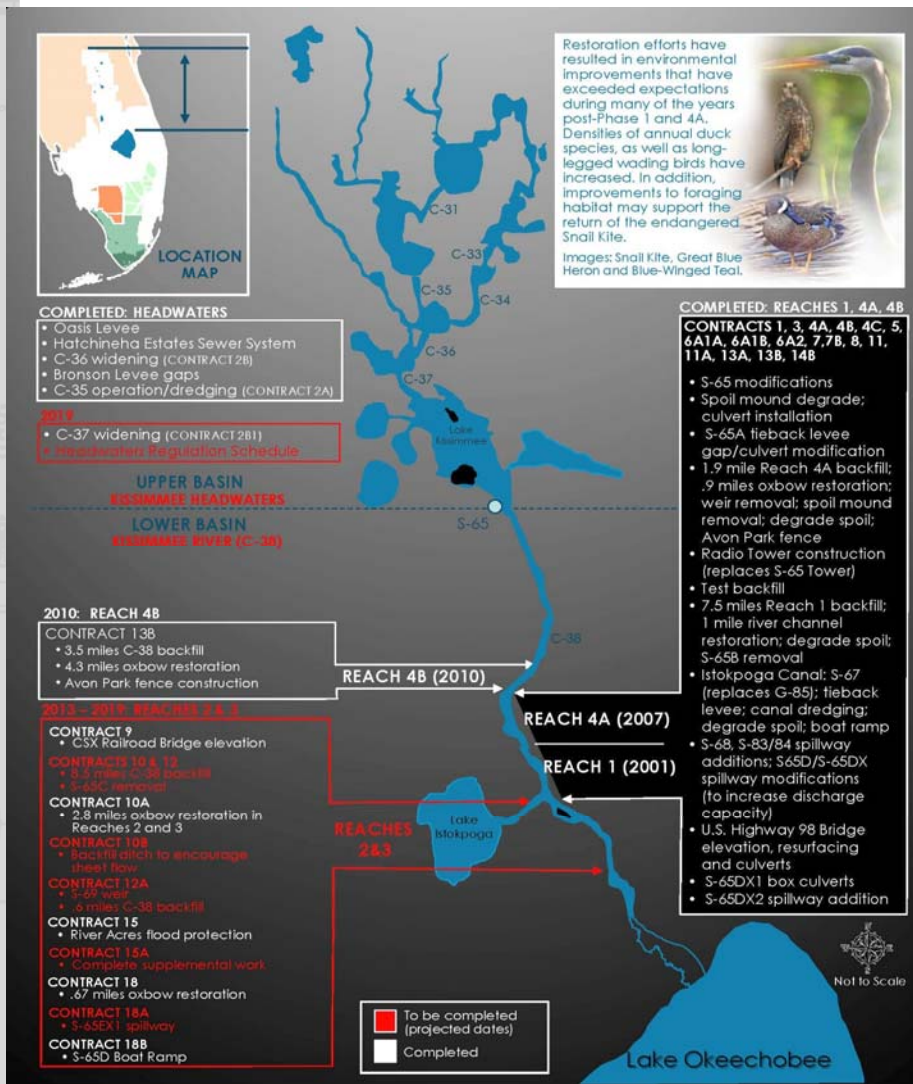


CERP – Comprehensive Everglades Restoration Plan
GEN – Generation; linked to Authorization
CEPP – Central Everglades Planning Project



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Kissimmee River Restoration



Restores critical floodplain habitat and timing of flows to Lake Okeechobee

Total Project Benefits:
 Conveyance of 130,000 acre-feet of natural floodplain storage to slow the flow of water into Lake Okeechobee & reduce the impacts of high-volume discharges into the St. Lucie & Caloosahatchee estuaries.

Status:

- Completed Post Authorization Change Report (PACR) authorized in WRDA 2018
- Construction contracts awarded in FY17
 - C-37 Embankment Armoring
 - S-69 Weir and Canal Backfill
- Assessing and quantifying impacts from 2017/2018 high water and Hurricane Irma
- Construction completion in 2021; initiate 5-year post construction monitoring



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Modified Water Deliveries to Everglades National Park



Restores water deliveries to Northeast Shark River Slough in Everglades National Park

Total Project Benefits:

Storage, conveyance and seepage management improve natural water flows to Everglades National Park, provide flood mitigation for residential areas, re-connect freshwater flows, and reduce seepage losses

Status:

Construction complete May 2018!

Conducting Increment Tests. Increment 1 produced an increase in the net flow of water into Northeast Shark River Slough; extensive data has been collected to use in Increments 2 and 3

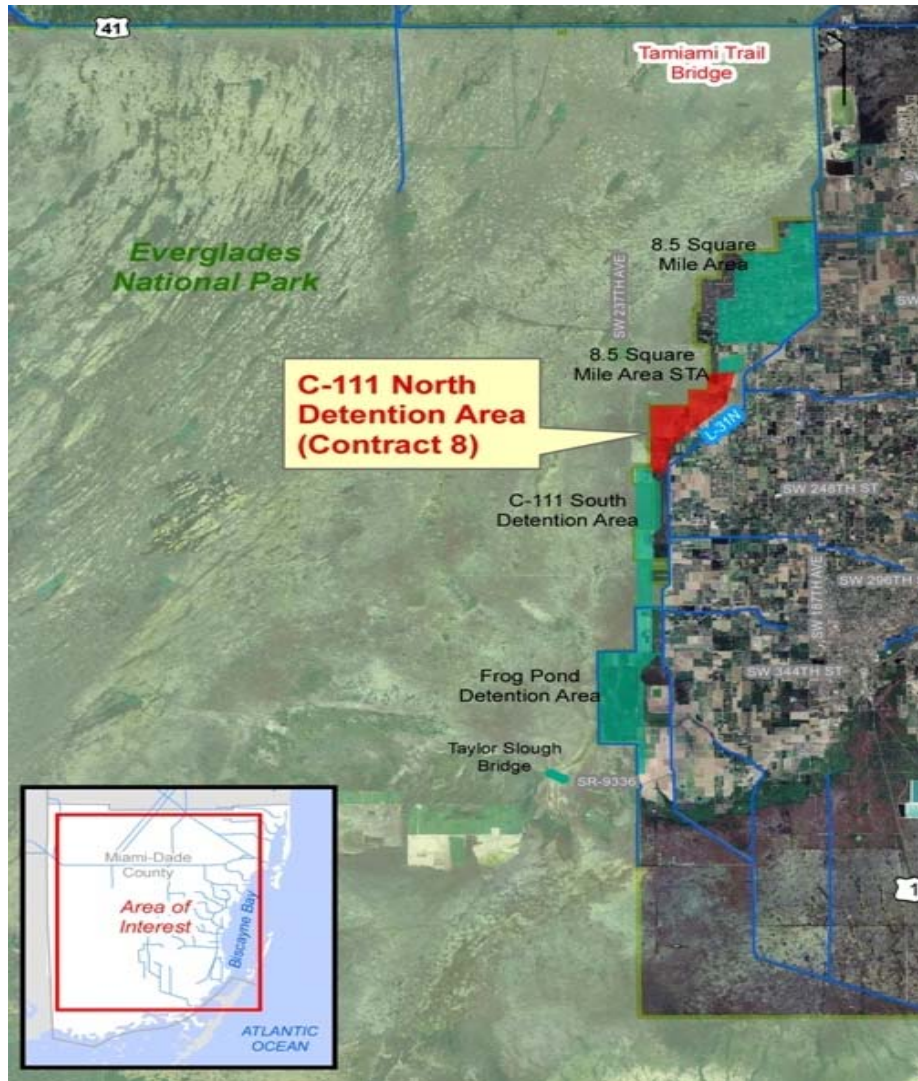


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C&SF: Canal 111 (C-111) South Dade



Reduces water losses from Everglades National Park and improves freshwater flow to Taylor Slough and Florida Bay

Total Project Benefits:

9,500 acre-feet of storage & seepage that reduces damaging canal discharges to Barnes Sound, reduces seepage losses from ENP, and maintains flood protection for commercial, residential, and agricultural properties to the east

Status:

Completed construction of critical project features (June 2018); with balance of construction complete in summer 2019. Conducting post authorization change report to address temporary pump stations (WRDA 2020)

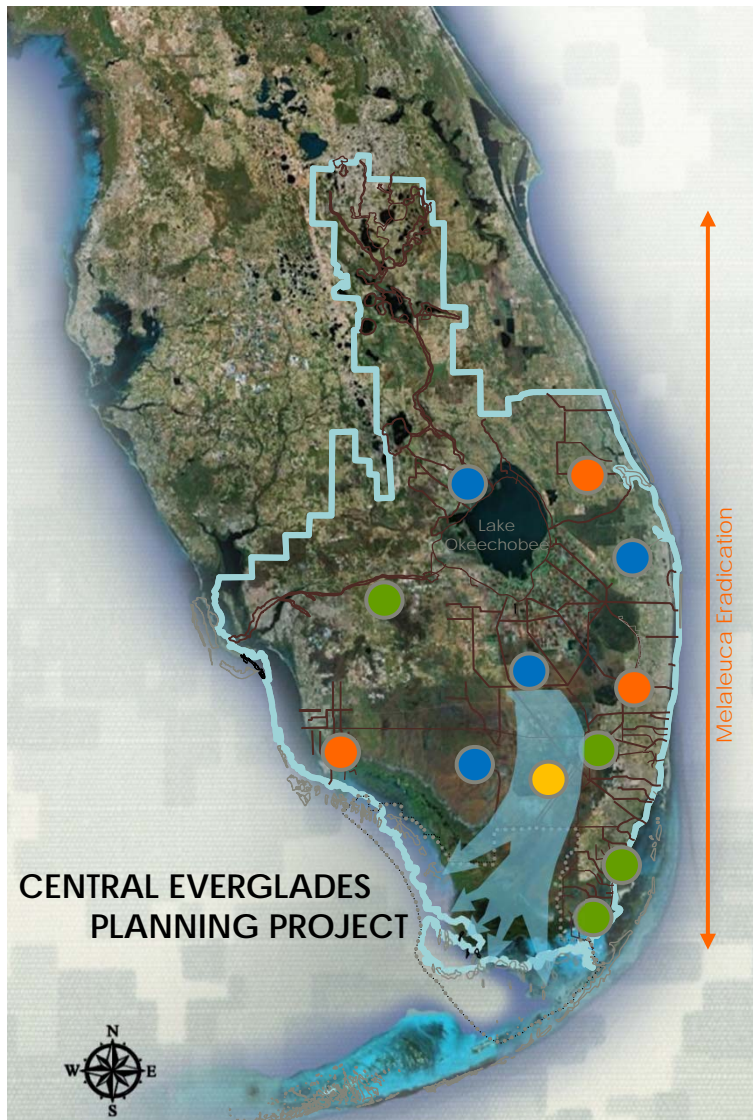


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Comprehensive Everglades Restoration Plan (CERP)



1st Generation

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

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
--EAA Storage Reservoir

CERP Planning/Design

Loxahatchee River Watershed Restoration
Lake Okeechobee Watershed Restoration
Western Everglades Restoration

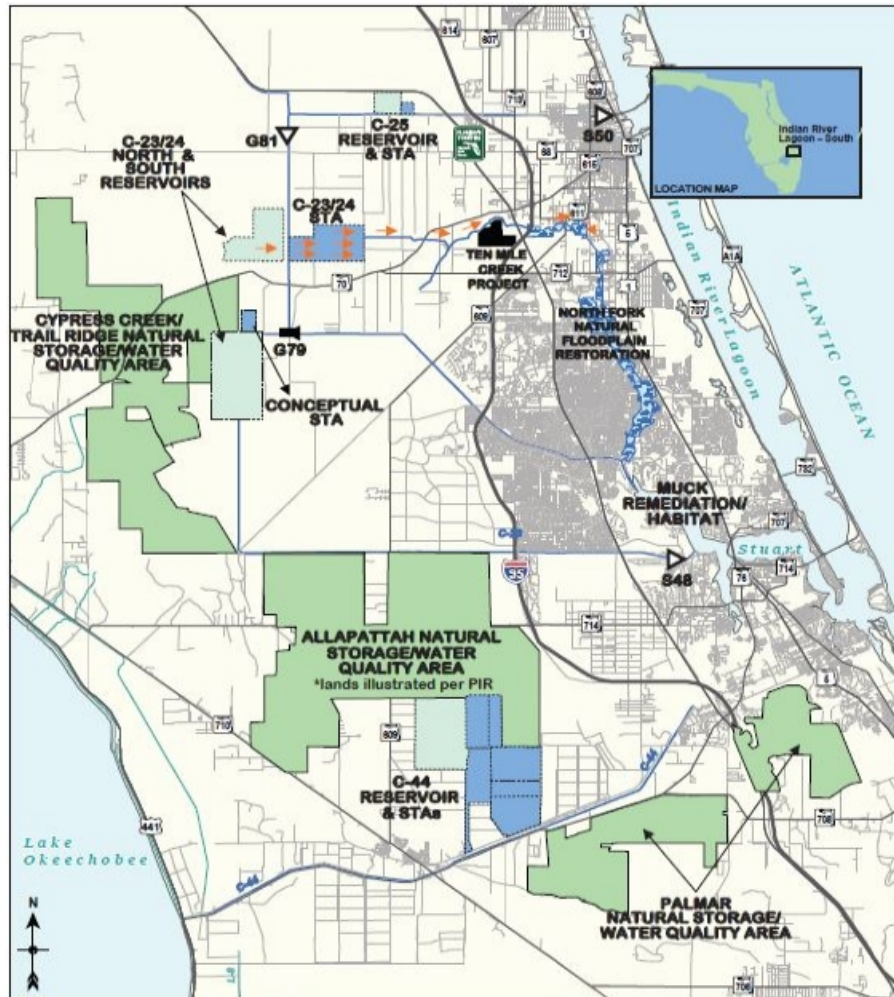


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CERP: Indian River Lagoon - South



The Indian River Lagoon and St. Lucie Estuary in Martin County are two of the country's most productive and most threatened estuaries; the project will reconnect and restore natural area in the headwaters and improve water flow to the river

Total Project Benefits:

- Storage and treatment of 60,500 acre-feet local basin runoff prior to it flowing into the St. Lucie Estuary
- 12,000 acres of above ground storage
- 9,000 acres of man made wetlands
- 889 acres of restored oyster habitat
- 922 acres of submerged aquatic vegetation restored

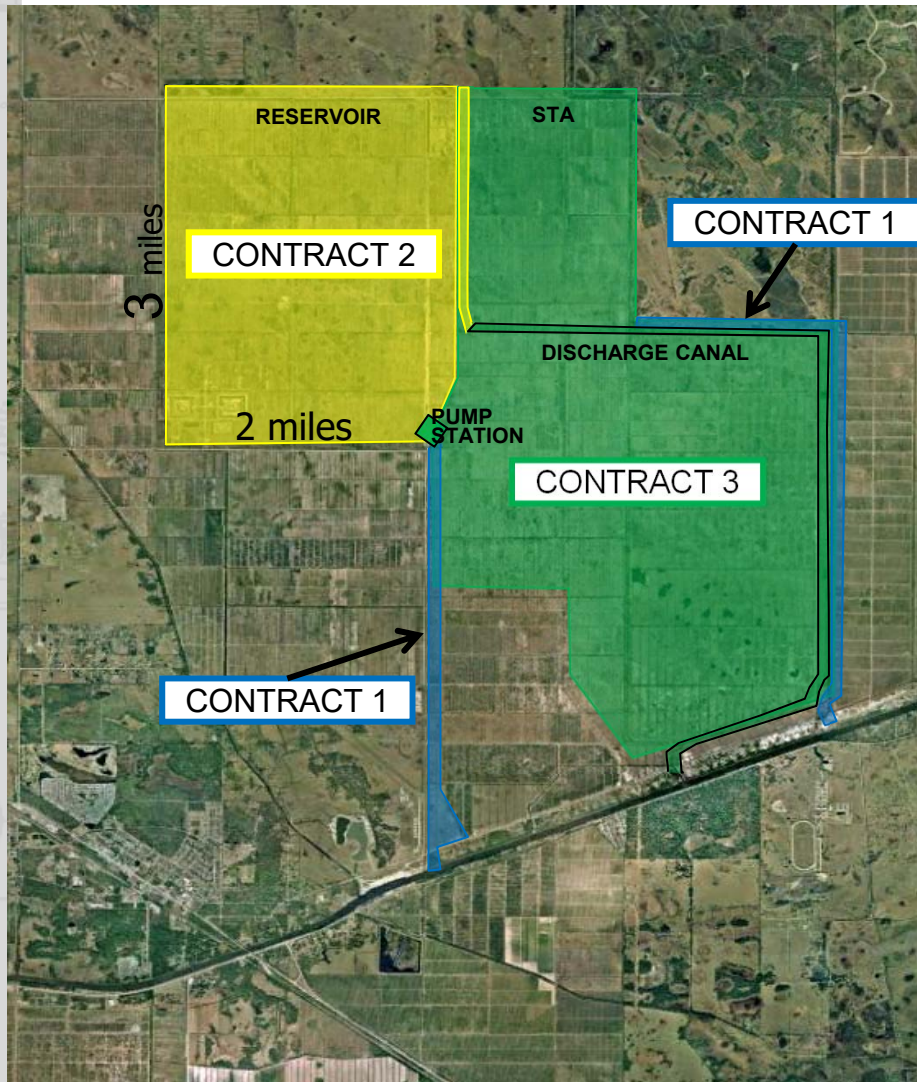


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CERP: Indian River Lagoon – South: C-44 Reservoir / STA



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.

Status:

Contract	Status
CNT-1 (USACE) – Intake Canal	Complete
CNT-2 (USACE) – Reservoir	Ongoing
CNT-3 (SFWMD)	
System Discharge	Complete
STA	Ongoing
Pump Station	Complete
OTMP (2-years) – Operational Testing and Monitoring	Following Construction Completion

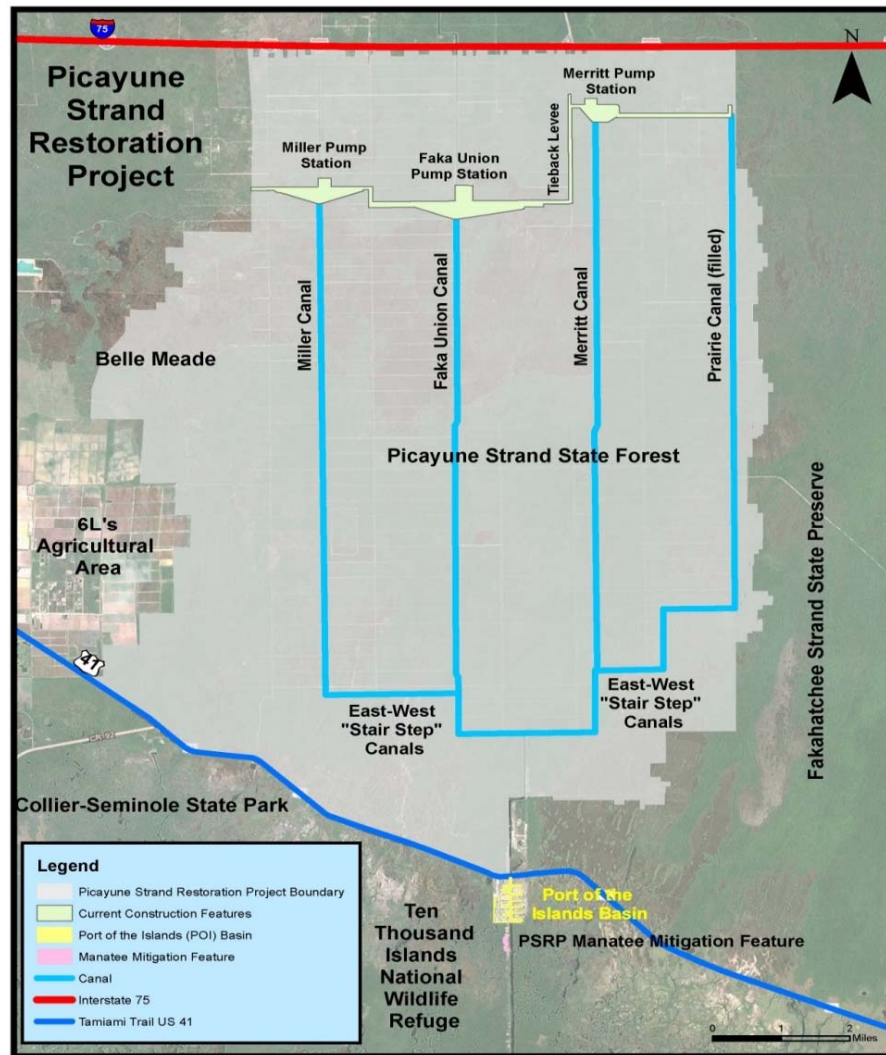


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CERP: Picayune Strand Restoration Project



The project will restore 55,000 acres of native Florida wetlands and uplands

Total Project Benefits:

- Conveyance of water which will restore more than 55,000 acres of natural habitat
- Three pump stations: Merritt, Faka Union, and Miller
- Plugging 48 miles of canals and removing/degrading 260 miles of roads
- Features to mitigate effects of manatee refugium at the Port of the Islands Marina

Status:

- Miller Pump Station construction complete in May 2018; conducting 1-year operational testing and monitoring period
- Design of SW Protection Features



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CERP: Caloosahatchee River (C-43) West Basin Storage Reservoir



The project will help restore the natural flow of water to the Caloosahatchee River

Total Project Benefits:

- 170,000 acre-feet of storage that will capture & store basin stormwater runoff, along with a portion of water discharged from Lake Okeechobee, for release into the Caloosahatchee River and Estuary, as needed

Status:

- SFWMD is designing and constructing project
- Construction completion in 2022
- Post authorization change report to update Total Project Cost (WRDA 2020)

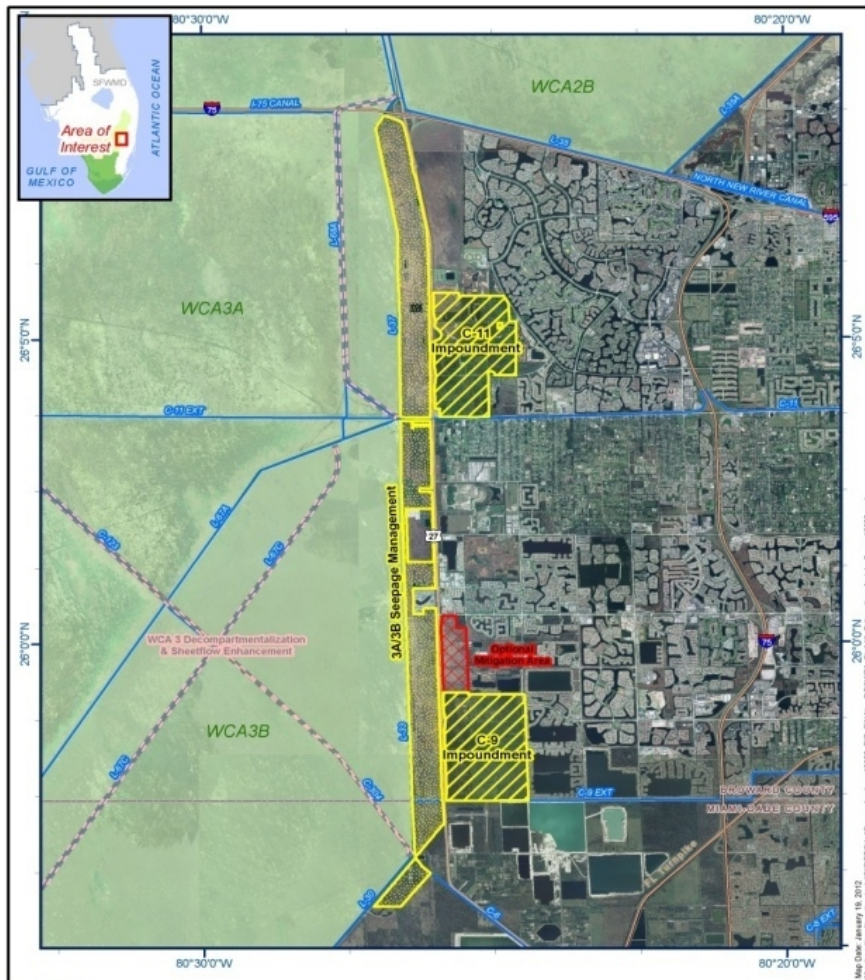


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CERP: Broward County Water Preserve Areas



The project will improve water quality; reduce seepage loss from the central Everglades, increase water supply, and reduce saltwater intrusion

Total Project Benefits:

- 10,800 acre-feet of storage and seepage management
- Reductions in seepage losses from Water Conservation Area 3
- Capture water lost to tide for redistribution and natural system deliveries

Status:

- Initial construction contract (Mitigation Area A Berm) completed in February 2019
- Design ongoing for the C-11 Impoundment



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CERP: Biscayne Bay Coastal Wetlands

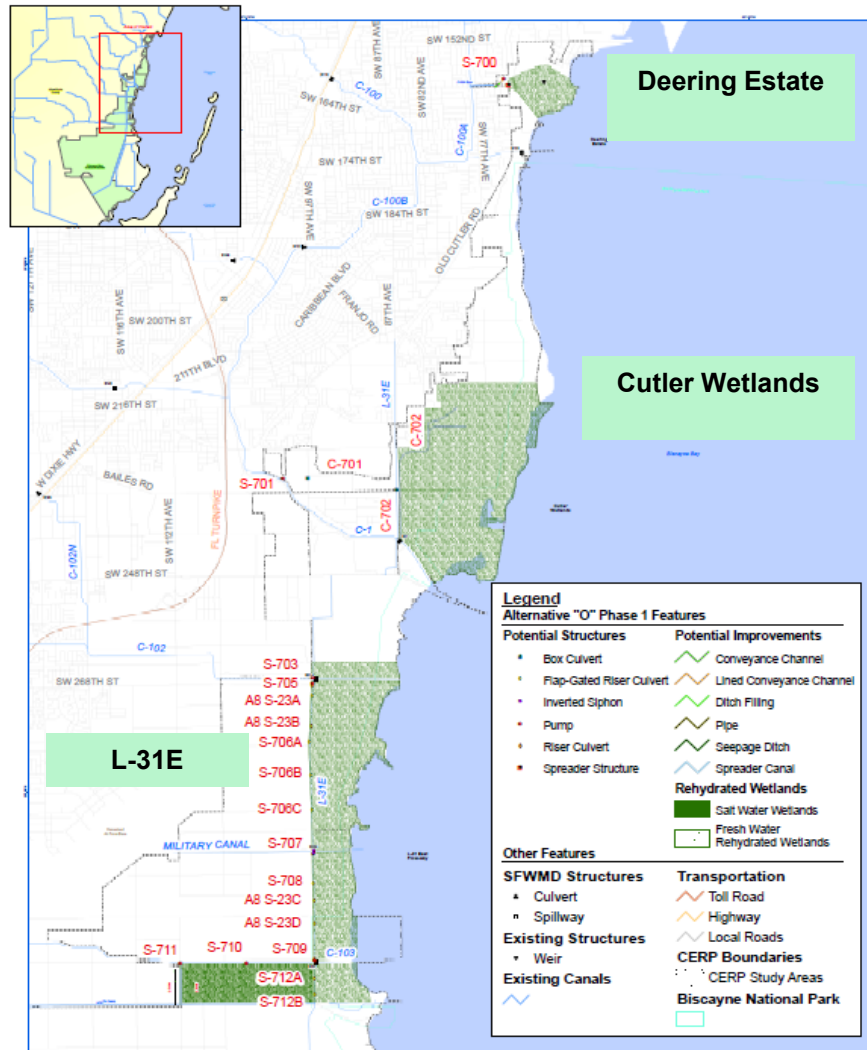
The project will restore the natural pattern of freshwater inflows to Biscayne Bay

Total Project Benefits:

- Conveyance and distribution of flows to rehydrate coastal wetlands, reduce point source discharges, and redistribute surface water; to improve the ecology of Biscayne Bay

Status:

- SFWMD completed Deering Estate and portions of the L-31 East culverts
- SFWMD constructing L-31 East components
- USACE design completion of final L-31 East components
- SFWMD designing Cutler Wetlands

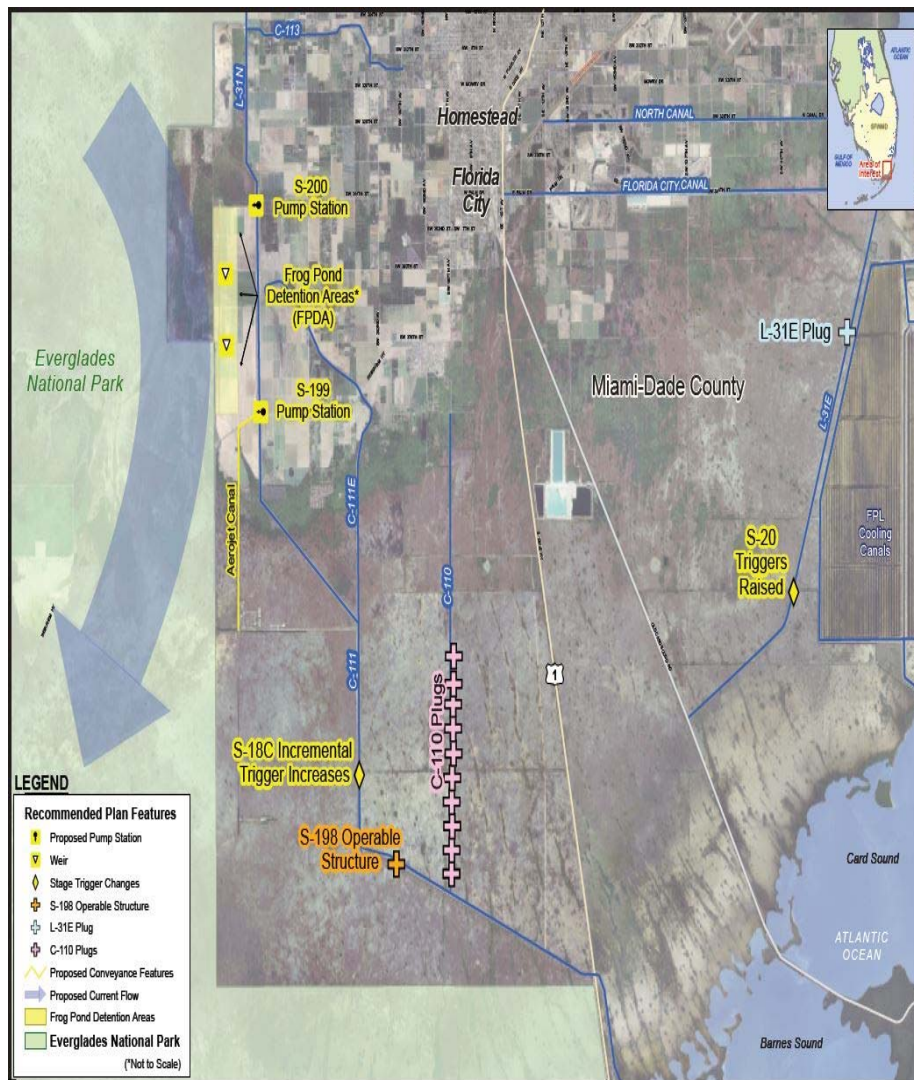


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CERP: C-111 Spreader Canal Western Project



The project will reduce water loss from Taylor Slough and increase freshwater flow to Florida Bay

Total Project Benefits:

- 590 acres of conveyance and storage that will reduce seepage losses from Everglades National Park, provide increased flows to Florida Bay, and restore near-shore habitat conditions for colonies of wading birds

Status:

- SFWMD completed construction of main project features
- Project operations and monitoring indicate flow has increased by ~25% into Taylor Slough

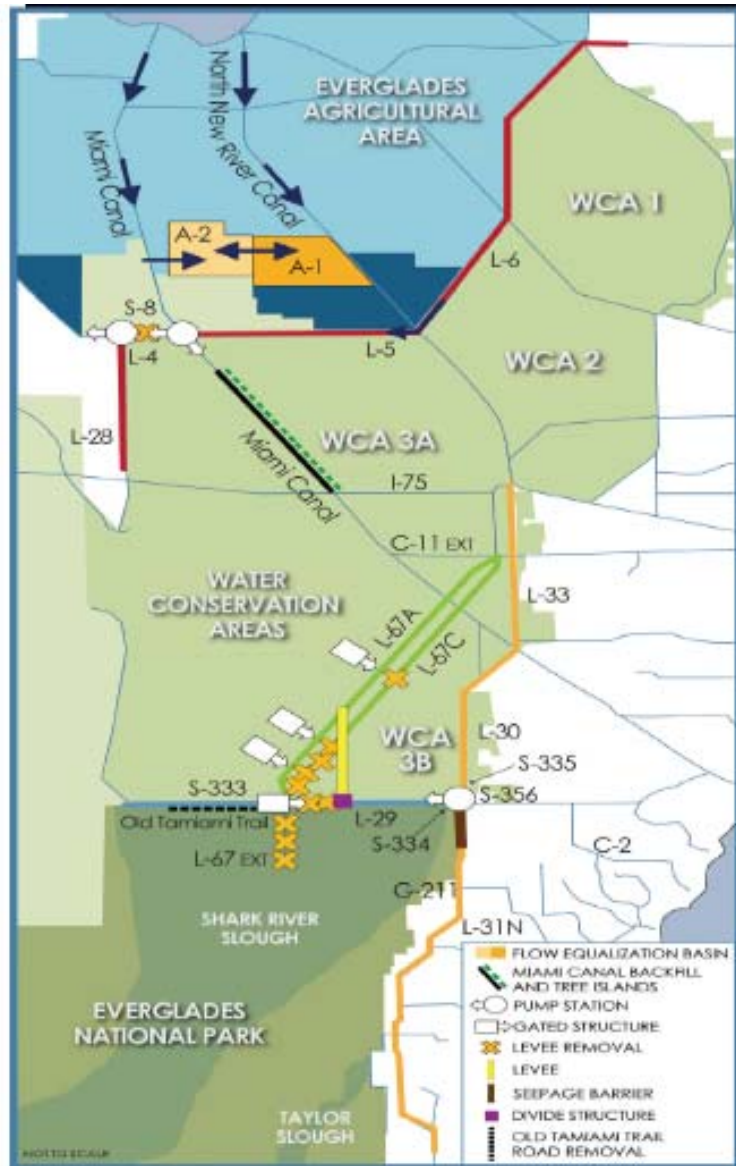


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CERP: Central Everglades Planning Project (CEPP)



CEPP identified the next increment of project components that focus restoration on more natural flows into and through the central and southern Everglades by:

- Increasing storage, treatment and conveyance of water south of Lake Okeechobee
- Removing canals and levees within the central Everglades
- Retaining water within Everglades National Park

Status:

- CEPP South Validation initiated in October 2017; Approved 31 May 2019
- SFWMD engaging design and construction of key CEPP South Features
- EAA Reservoir (Section 203) authorized by WRDA 2018 as a part of CEPP New Water



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Planning Studies (Project Implementation Reports)

Loxahatchee River Watershed Restoration Project

Restore and sustain the overall quantity, quality, timing, and distribution of fresh waters to the federally designated “National Wild and Scenic” Northwest Fork of the Loxahatchee River. This project also seeks to restore, sustain, and reconnect the wetlands and watersheds that form the historic headwaters for the river and its tributaries. Study completion = March 2020 (WRDA 2020)

Lake Okeechobee Watershed Restoration Project

Improve water levels in Lake Okeechobee; improve the quantity and timing of discharges to the St. Lucie and Caloosahatchee estuaries; restore degraded habitat for fish and wildlife throughout the study area; and increase the spatial extent and functionality of wetlands. Study completion = February 2020 (WRDA 2020)

Western Everglades Restoration Project

Improve the quantity, quality, timing, and distribution of water in the western Everglades. Reestablish sheetflow across the Big Cypress Seminole Indian Reservation and into Big Cypress National Preserve while maintaining existing levels of flood protection and water quality standards. Study completion = July 2020 (WRDA 2020/2022)



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FY19 & FY20 Budget Review

	FY19 PBUD	FY19 Work Plan	FY19 Additional	FY19 Total Available	FY20 PBUD
Construction	67,500,000	37,065,160	19,481,270	124,046,430	63,255,000
					200,000,000
O&M	0	6,537,000	364,000	6,901,000	5,454,000

SFER Construction (C)

- The ability for the Army to ADAPT and be FLEXIBLE to changes in the SFER Program is essential to implementing the Program efficiently
- The Corps has used its reallocation authority to reallocate funds within the SFER Program
- Reallocations are done to address changed conditions in project lead, changed conditions due to weather (Hurricane Irma), contract modifications, and differing site conditions

SFER Operation and Maintenance (O&M)

- Federal Government has a statutory requirement to pay its share of SFER O&M
- Current Work Plan allowance does not cover all SFER O&M requirements



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Integrated Delivery Schedule

Project	Yellow Book Components	FISCAL YEAR														
		2016	2017	2018 W	2019	2020 W	2021	2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W
Planning Estimates Federal Construction Cost (SFER)++		126	106	106	68	130	108	155	192	205	197	141	130	143	197	93
Planning Estimates Non-Federal Construction Cost (SFER)++		85	110	154	215	232	236	164	199	141	200	152	68	100	100	123
Planning Estimates Total Construction Cost (SFER)++		211	216	260	283	362	334	319	391	346	397	293	198	243	297	216
Modified Water Deliveries to Everglades National Park ^{1,2}		000000			000000	000000										
Herbert Hoover Dike ¹																
Restoration Strategies ¹																
Tamiami Trail Next Steps Phase 1 ¹																
Tamiami Trail Next Steps Phase 2 ¹																
Kissimmee River Restoration Construction (Contracts 282, 30, 12a)																
Kissimmee River Restoration Monitoring								000000	000000	000000	000000	000000	000000	000000	000000	000000
West Palm Beach Canal/STA-1E																
C-111 South Dade Construction ¹																
C-111 South Dade PACR																
Picayune Strand Restoration	OPE															
Faka Union Pump Station		000000	000000	000000												
Miller Pump Station				000000	000000											
Flood Protection Features																
Road removal																
Canal plugging																
Indian River Lagoon South																
C-44 Reservoir	B							000000	000000							
C-44 STA B Pump Station	B															
C-23/24 Reservoir North	LUP1															
C-23/24 Reservoir South	LUP1															
C-23/24 STA	LUP1															
C-25 Reservoir	LUP2															
C-25 STA	LUP2															
Decomp Physical Model	OOP 1															
Caloosahatchee River (C-43) West Basin Storage																
Pump Station and Reservoir	D															
Broward County Water Preserve Areas																
Mitigation Area A Berm	Q															
C-111 Impoundment	Q															
WCA-3A & 3B Seepage Management	O															
C-9 Impoundment ¹	R															
Biscayne Bay Coastal Wetlands Phase 1	FFF, OPE															
L-31 East Flowway - Federal																
L-31 East Flowway - Non-Federal																
Cutler Wetlands																
C-111 Spreader or Canal Western Project (Requires PPA)	WW															
Central Everglades Planning Project																
PPA South Validation Report	AA, FF, H, QQ															
Remove Old Tamiami Trail (ENPP repairing NPPA)																
L-67A Structure 1 & Gap in L-67C Levee																
Increase S-336																
L-29 Gated Spillway																
Increase S-33B (S33BN)																
L-67A Structures 2 & 3																
Removal L-67C & L-67B Bt, Constr L-67D Levee																
Removal L-29 Levee & Backfill L-67 Bt																
PPA North	QQ, II															
PPA New Water (See page Barrier Only) ¹	V															
Loxahatchee River Watershed Restoration Project	X, Y, K															
Lake Okeechobee Watershed Restoration Project	A, GG															
Western Everglades Restoration Project	CCC															
SA Storage Reservoir (564M/yr in State funding)	G															
ASR/Decomp Phase 2	GG, QQ															
C-111 Spreader or Canal Eastern	WW, FFF															
BBCW Phase 2	FFF															
Lake Okeechobee Regulation on Schedule Revision ¹																
++ Does not reflect budgetary development dollars or capability																
Blue = Non-Federal																
Black = Federal																
¹ Funded through other program authorities or by other entities																
² Biological Opinion: Completion satisfies BO mandate.																
³ Construction for this feature extends beyond 2030, although not reflected on this graph.																

INTEGRATED DELIVERY SCHEDULE (IDS) SFER PROGRAM SNAPSHOT THROUGH 2030 JULY 2018 UPDATE

Changes from the December 2016 IDS

- Shifted Modified Water Deliveries Project construction to FY18 and completion of the Combined Operating Plan to FY20.
- Completion of Tamiami Trail Next Steps Phase 1 accelerated to FY19. Phase 2 design in FY18-19 and construction in FY20-21 line item added.
- Kissimmee River Restoration added required 5-year monitoring from FY21-25 with fiscal closeout in FY26.
- West Palm Beach Canal/STA-1E physical construction extended into FY17 with fiscal closeout in FY18.
- C-111 South Dade Project added 2 years for development of Combined Operational Plan (COP).
- Picayune Strand Restoration Project Operations, Testing, Monitoring period (OTMP) for Faka Union pump station complete in FY18; Miller Pump Station construction complete in FY18 and OTMP shifted from FY18 to FY20; flood protection features shifted to Corps and extended from FY18 to FY22; canal plugging construction shifted to Corps and extended from FY19-20 to FY22-23. Road removal north of the Tieback levee shifted to Corps and accelerated from FY19-20 to FY18-19.
- Indian River Lagoon-South C-44 Reservoir construction completion extended from FY19 to FY20 and OTMP extended to FY22; C-23/24 Reservoir South initiation of design shifted from FY19 to FY22 to maintain federal \$200M/year funding cap. C-25 Reservoir shifted from FY21-22 to maintain State \$200M/year funding cap.
- Caloosahatchee River (C-43) West Basin Storage added OTMP.
- Broward County Water Preserve Area line item for Mitigation Area A Berm construction in FY17-18 added; WCA-3A Seepage Management design shifted from FY18-19 to FY24-25 and construction shifted from FY20-21 to FY26-27; C-9 Impoundment design shifted from FY24-25 to FY27-28 and construction shifted from FY26-29 to FY29-32 to maintain federal \$200M/year funding cap.
- Biscayne Bay Coastal Wetlands L-31 East Flow-way construction extended from FY21 to FY22; line item added for construction of culverts by SFWMD in FY18-19.
- Central Everglades Planning Project PPA South Validation Report completion extended from FY18 to FY20; SFWMD design and construction of S-333 added FY18-20; planning of EAA Reservoir (component G) added FY18.
- Lake Okeechobee Watershed Restoration study extended to FY19; Western Everglades Restoration study extended to FY20.
- Lake Okeechobee Regulation Schedule Revision accelerated to FY19-22 (to sync with accelerated schedule of HDD) dependent upon FY19 funding.

Modifications to the IDS include changes based on weather-related conditions, executions of contracts, and funding levels.

NOTE: The funding shown for FY19 and beyond is only notional, representing approximate funding levels that would be needed to sustain the work displayed in the IDS for any particular FY. The funding does not represent a commitment by the Administration to budget the amounts shown.

SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

Key Take Aways

Strong Federal Interest & Strategic Partnerships

Continued progress in all phases: planning, design, construction, operations & maintenance

Continued Administration and Congressional Funding

Next Task Force Meeting: Consultation on Project Implementation Reports; Program and Project Concerns; Integrated Delivery Schedule

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SFER Task Force

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26 April 2019



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