SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER) PROGRAM

Program & Project Update
SFER Task Force

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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
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
SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER) PROGRAM

Program Structure

- Modified Water Deliveries to ENP
  - Everglades Expansion Act 1989
- Kissimmee River Restoration
  - WRDA 1992
- Everglades & South Florida (E&SF) Critical Restoration Projects
  - WRDA 1996
  - Seminole Big Cypress
- Central & Southern Florida (C&SF) Project
  - Flood Control Act of 1948 + Multiple
    - C-111 South Dade
      - WRDA 1996

**CERP**
- WRDA 2000

**GEN 1**
- Picayune Strand
- IRL-S
- Site 1 Impoundment
- Melaleuca

**GEN 2**
- C-111 SC
- BBCW
- Broward County WPA
- C-43 WBSR

**CEPP**
- PPA South
- PPA North
- PPA New Water
- EAA Reservoir

- Foundation Projects

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

WRDA 2007
WRDA 2014
WRDA 2016
WRDA 2018

US Army Corps of Engineers
U.S. Army

Everglades Expansion Act 1989
WRDA 2000
WRDA 2007
WRDA 2008
WRDA 2014
WRDA 2016
WRDA 2018
SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM
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
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
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
SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM
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
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
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:

<table>
<thead>
<tr>
<th>Contract</th>
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<tbody>
<tr>
<td>CNT-1 (USACE) – Intake Canal</td>
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<td>CNT-2 (USACE) – Reservoir</td>
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<td>CNT-3 (SFWMD)</td>
<td>System Discharge Complete</td>
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<td>STA Ongoing</td>
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<td>Pump Station Complete</td>
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<td>OTMP (2-years) – Operational Testing and</td>
<td>Following Construction Completion</td>
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<td>Monitoring</td>
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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
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
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
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
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.
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; Approval in 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
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

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

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
SOUTHWEST FLORIDA ECOSYSTEM RESTORATION PROGRAM
FY19 & FY20 Budget Review

<table>
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<tr>
<th></th>
<th>FY19 PBUD</th>
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<th>FY19 Additional</th>
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SFER Construction (C)
- SFER Construction budgets have declined from FY2017 to FY2020
- 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
### Integrated Delivery Schedule

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

**Challenges 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 Step phase 1 accelerated to FY19. Phase 2 design to FY19-20 and construction to FY22-23.
- West Palm Beach Conduit STA-TE physical construction extended into FY17 with fiscal closeout in FY16.
- C-111 South Dade Project added 2 years for development of Combined Operational Plan (COP).
- Plobunnel Strand Restoration Project Operations, Testing, Monitoring period (CPMT) for Fakahatchee pump start completion in FY16, PFS pump station construction complete in FY18 and OMPF shifted from FY18 to FY20. Flood protection features shifted to Corps and extended from FY18 to FY22. Canal plugging construction shifted to Corps from extended from FY21 to FY22-23.
- Red tide south of the Tibeau levee shifted to Corps and accelerated from FY19-20 to FY19-20.
- Indian River Lagoon South C-44 Reservoir construction completed, extended from FY19 to FY20 and CDFP extended to FY22. C-23/24 Reservoir South initiation of design shifted from FY19 to FY22 to maintain federal $200M/year funding cap.
- Caloosahatchee River WC-4 West Basin Storage added OMPF.
- Broward County Water Preserve Area (BCWP) for Mitigation Area A Farm construction in FY17-18 added. WCA-3A Seepage Management design shifted from FY18-19 to FY21-25 and construction shifted from FY20-21 to FY22-23.
- C-9 improvement design shifted from FY21-25 to FY22-25 and construction shifted from FY24-25 to FY29-25 to maintain federal $200M/year funding cap.
- Biscayne Bay Coastal Wetlands CST East Flowway construction extended from FY21 to FY22. Line item added for construction of outfall by SRPMD in FY21-22.
- Central Everglades Planning Project PPA South Valdada Report completion extended from FY19 to FY23. SRPMD design and construction of S-333 added to FY18-22 planning of REA Reservoir construction.
- Lake Okeechobee Watershed Restoration study extended to FY20. Western Everglades Restoration study extended to FY20.
- Lake Okeechobee Regulation Schedule Revision accelerated to FY19-22 (to sync with accelerated schedule of HRO) dependent upon FY19 funding.

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

**NOTE:** The funding shown for FY19 and beyond is only national, 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; Integrated Delivery Schedule

www.evergladesrestoration.gov
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