Program & Project Update

South Florida Ecosystem Restoration Task Force

October 19, 2022

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Ecosystem Restoration & Capital Projects
SFWMD’s Role in Restoration

- Non-Federal Sponsor & Partner with USACE
  - CERP & Non-CERP Federal Projects
  - C&SF Section 216 Infrastructure Resiliency Plan
  - Operational Planning
  - C&SF System Operation and Maintenance

- Project planning, design, engineering, construction, operation, maintenance, and monitoring

- Technical and Regional expertise:
  - Interagency Modeling Center
  - RECOVER
  - Advancing ASR science and design
  - Monitoring
  - Water supply planning
  - Land management
  - Water quality

SFWMD Restoration projects
- CERP
- Restoration Strategies
- Northern Everglades and Estuaries Program
- Local Projects
- Dispersed Water Management
- Resiliency

Link to Projects Map
## SFWMD SFER & Restoration Strategies Projects

### Planning
- Lake Okeechobee Watershed Restoration Project (LOWRP)
- Western Everglades Restoration Project (WERP)
- Biscayne Bay & Southeastern Everglades Ecosystem Restoration (BBSEER)
- C&SF Section 216 Infrastructure Resiliency Plan
- Operational Planning

### Design
- IRL-S C-25 Reservoir and STA
- LOWRP ASR Wells and Treatment
- BBCW Phase 1 Cutler Flowway Contract 6B
- LRWRP Loxahatchee River Flowways 2 & 3
- CEPP EAA Conveyance Improvements
- CEPP North
- CEPP New Water Seepage Cutoff Wall
- WERP L-28S Culverts & Conveyance
- C-111SD Replacement Pump Stations

### Construction
- C-43 Reservoir
- CEPP EAA A2 STA & I/O Canal
- IRL-S C-23 to C-44 Interconnect
- BBCW Phase 1 Cutler Flowway S-701
- STA-1W Expansion #2
- C-139 FEB
- STA-1W Refurbishments
- STA-2 Refurbishments
- Bolles Canal Conveyance Seg. 5

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Restoration Strategies Project Updates
Continue to Meet Milestones:
- 8 of 13 projects completed.

Under construction (3):
- STA 1W Expansion #2
- G-341 Conveyance Imp./ Bolles Canal Seg. 5
- C-139 FEB

- All Restoration Strategies Projects will be completed in 2024
C-139 Flow Equalization Basin

- Construction began February 2021
- Completion 2023
C-139 Flow Equalization Basin
C-139 Flow Equalization Basin
CERP Project Updates
Indian River Lagoon-South C-44 Reservoir and STA

- **Operational Testing & Monitoring Phase**
  - STA complete – January 2021
  - Reservoir complete – September 2021
  - Start reservoir filling – January 2022
  - Operational Testing Start – May 2022
IRL-S C-23 to C-44 Estuary Diversion

- Diverts harmful C-23 Canal discharges away from the middle St. Lucie Estuary to C-44 Reservoir and STA
- Brings flows to estuary closer to natural patterns
- Improves water quality in the estuary

Current Status:
- Amendment to Project Partnership Agreement
- Governing Board Construction Contract Award – October 2022
Benefits:
- 5,100 acre-feet of storage
- Reduce nutrient loads to the Indian River Lagoon

Real Estate Acquired - December 2021

Current Status:
- Design
- Pending WRDA 2022
- Construction to begin 2024
Features
- 2-Cell Reservoir
- 10,500 Acres
- 170,000 ac-ft of storage
- Depth ranging from 15’ – 25’
- 60% Complete
C-43 West Basin Storage Reservoir

Dam embankment up to elevation 47 feet

S-477 Western Perimeter Canal Structure
C-43 West Basin Storage Reservoir - Inflow Pump Station

S-470 is Substantially Complete!

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Caloosahatchee Reservoir Water Quality Component

Feasibility Study and Siting Evaluation December 2020:

- In-reservoir alum treatment was the most cost-effective and could be applied at reservoir inflow pump station

- **Design & Construction**
  - Complete Design by the end of 2022
  - Procurement and installation in 2023
  - Obtain operations permit in 2024 concurrent with the C-43 reservoir operations permit

- **Northern Everglades & Estuaries Project** - not CERP
Lake Okeechobee Watershed Restoration Project

- Aquifer Storage and Recovery
  - Phased implementation and Science Plan to address uncertainties & reduce risk
  - Next step in design: 10MGD Pilot to further test treatment technologies

- Wetland Restoration
  - 5,900 acres
  - Land acquisition
LOWRP - Aquifer Storage and Recovery

Continuous Cores

Treatment Technology - Proof of Concept Testing
LOWRP ASR - Test/Exploratory Wells

2022 Aquifer Storage and Recovery
SCIENCE PLAN

DRAFT - JUNE 2022

Test/Exploratory Well Drilling at CI8S
Mechanical Integrity Test at Lt3N
Proof of Concept Testing Kissimmee River ASR Well

LoSBN Continuous Coring Program Samples

500 - 510 feet bgs
1,800 - 1,810 feet bgs
Loxahatchee River Watershed Restoration

- Authorized in WRDA 2020
- Pre-Project Credit Agreement executed July 2022
- Anticipating a Project Partnership Agreement in 2023

Flow Way 3
- Survey, Geotech, and Modeling
- Engineering & Design starting with Gulfstream East and Kitching Creek

Flow Way 2
- Developing a Design Scope
- Architectural rendering

Flow Way 3
1 - Kitching Creek
2 - Moonshine Creek/Gulfstream East
3 - Cypress Creek Canal
4 - Gulfstream West
5 - Palmar East

Flow Way 2
6 - C-18W Reservoir

Flow Way 1
7 - G-160 Structure
8 - G-161 Structure
9 - Grassy Waters Triangle
10 – M-1 Pump Station

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CEPP EAA: A-2 STA

A-2 STA Construction
- Completion December 2023
- Stormwater Treatment Area (STA)
  Inflow/Outflow Canal – nearly Complete

Canal Conveyance Improvements Design
- North New River Canal-Construction Award anticipated 2023
- Miami Canal-Construction in 2 phases beginning in 2024
CEPP EAA: A-2 STA

Inflow/Outflow Canal and Levee Construction

S647 Spillway Structure & S648 Seepage Pump Station

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CEPP EAA: A-2 STA

A-2 STA Construction

Inflow/Outflow works

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CEPP North

- Improves distribution of water to WCA 3A
- Features:
  - S-620 500 cfs gated culvert
  - S-621 2500 cfs gated spillway
  - S-622 500 cfs gated spillway
  - S-8A gated culvert and canal
  - S-630 360 cfs pump station
  - L-4 Levee Removal
  - Miami Canal Backfill with Tree Island Mounds
  - L-5 Remnant Canal
  - L-5 Canal

S-620: Construction Contract Award
November 2022
CEPP New Water Seepage Barrier

Allows for increased stages in Everglades National Park
• 5 Miles
• August 2022- Governing Board approved contract award

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Contract 6A - Awarded September 2022
- S-701: 400 CFS Pump Station

Contract 6B - 2024 Construction
- C-701: At-grade, concrete lined channel
- S-701A: Culvert under SW 97th Ave
- S-701B: Microtunnel under SW 87th Ave
- C-702: Spreader canal
- Berm breaches
- Drainage ditch blocks
- Recreation features

Biscayne Bay Coastal Wetlands Phase I
Cutler Wetlands

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Recreating the River of Grass

Average water depth on April 11 over the last 20 years

Water depth on April 11, 2022
Questions?

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