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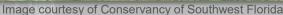
SOUTH FLORIDA ECOSYSTEM RESTORATION AND C&SF RESILIENCE PROGRAMS

SOUTH FLORIDA RESTORATION TASK FORCE

Presented by: Eva B. Vélez, P.E., Chief, Ecosystems Branch

15 November 2023







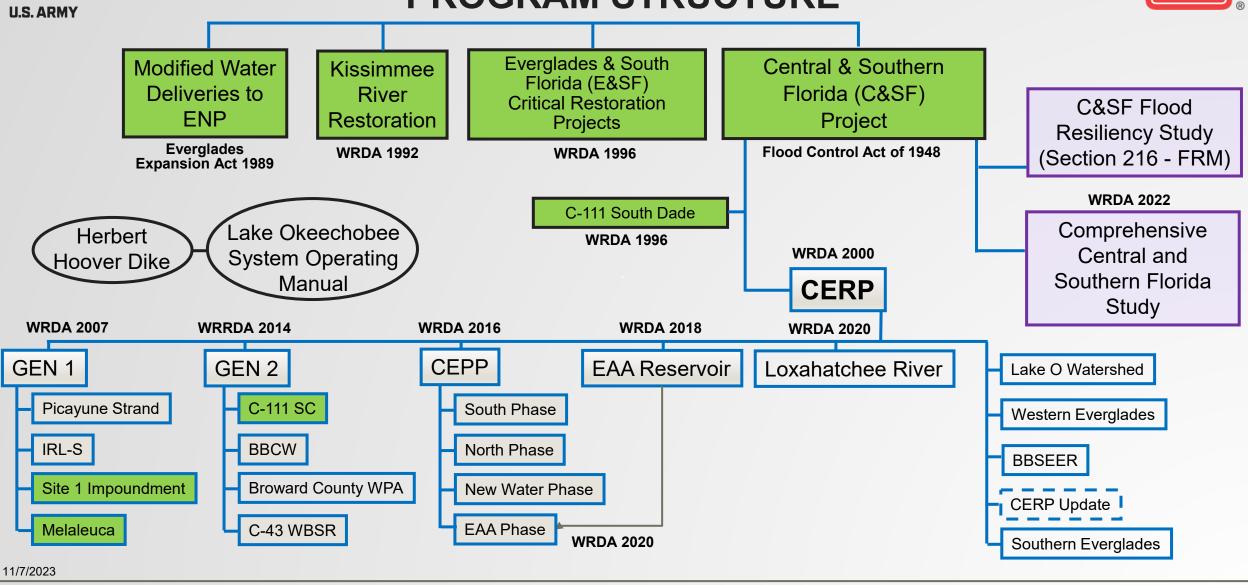


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SOUTH FLORIDA ECOSYSTEM RESTORATION AND C&SF RESILIENCE PROGRAMS

HAH

PROGRAM STRUCTURE



CONSTRUCTION

CONSTRUCTION COMPLETE, IN OPERATIONS

FOUNDATION PROJECTS

Non CERP INVESTIGATIONS

CERP: Comprehensive Everglades Restoration Plan

GEN: Generation; linked to Authorization

CEPP: Central Everglades Planning Project Legislation Dates = Original Authorization Date



FY24 EXECUTION FOCUS







VALIDATION/PACR/OTHER



JOINT OR SFWMD-LED CONSTRUCTION

Program-level Activities

- ▶ National Academies of Science Review (CISRERP)
- ► Interagency Modeling Center (IMC)
- ► Integrated Delivery Schedule (IDS)
- ► RECOVER (Restoration, Coordination, VERification)
- Adaptive Assessment and Monitoring
- ▶ CERP Update

Planning

- ▶ Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER)
- ▶ Lake Okeechobee Watershed Restoration Project (LOWRP)
- ▶ Western Everglades Restoration Project (WERP)
- ► Indian River Lagoon South (IRL-S)
- ► Central Everglades Planning Project (CEPP)
- ► C&SF Flood Resiliency (Section 216) Study
- ► Lake Okeechobee Component A Reservoir (LOCAR)

Design and Construction

- ▶ C-111 South Dade (C-111SD)
- ► Picayune Strand Restoration (PSRP)
- ► Indian River Lagoon South (IRL-S)
- ► Biscayne Bay Coastal Wetlands (BBCW)
- ► Central Everglades Planning Project (CEPP)
- ▶ Broward County Water Preserve Areas (BCWPA)
- ► C-43 West Basin Storage Reservoir
- ► Loxahatchee River Watershed Restoration Project (LRWRP)

■ Water Management and Operations and Maintenance

- Kissimmee River Restoration (KRR)
- ► Indian River Lagoon South (IRL-S)
- ► Modified Water Deliveries, Combined Operational Plan (COP)
- ► Lake Okeechobee System Operating Manual (LOSOM)
- ► Central Everglades Planning Project Operational Plan CEPP 1.0
- ► Central Everglades Planning Project Operational Plan A-2 STA
- ► C-43/C-44 Reservoirs Operational Plan
- ▶ Operations, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R)



FY24 BUDGET OVERVIEW





	INVESTIGATIONS	CONSTRUCTION	OPERATIONS & MAINTENANCE	
South Florida Ecosystem Restoration (Annual)	\$0	\$415M*	\$12.897M	FY24 President's Budget
South Florida Ecosystem Restoration (Supplemental)	\$0	\$1.097B	\$0	Bipartisan Infrastructure Law (2022)

FY24 J Sheet, Total Estimated SFER Programmed Construction Cost \$ 23,617,006,000

Central and Southern Florida Resiliency Study (Section 216)	\$425*	\$0	\$0	FY24 President's Budget
Comprehensive Central and Southern Florida Resilience Study (WRDA22)	\$0	\$0	\$0	New authority in WRDA22

^{*}FY24 budget will be adjusted to add FY23 carryover. May also be adjusted to +\$10M in Community Project Funding pending congressional action.







SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM PROGRAM-LEVEL ACTIVITIES

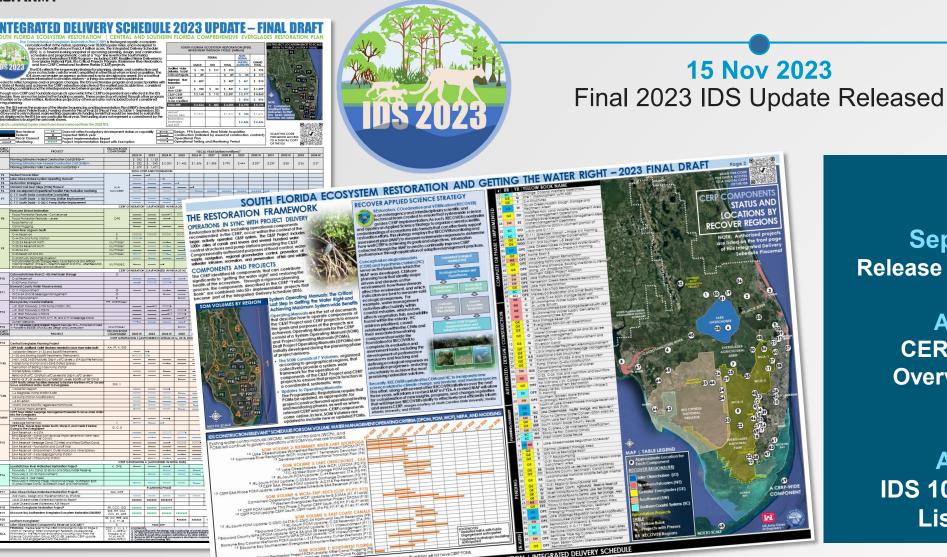
Today's Highlights:

- Integrated Delivery Schedule (IDS)
- Periodic CERP Update



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | PROGRAM LEVEL ACTIVITIES

INTEGRATED DELIVERY SCHEDULE



Completed

September 6, 2023 Release draft 2023 IDS Update

August 18, 2023
CERP 68 Components
Overview and Listening
Session

August 4, 2023
IDS 101 and Stakeholder
Listening Session

PAGE 1

PAGE 2



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | PROGRAM LEVEL ACTIVITIES

PERIODIC CERP UPDATE



- A Periodic CERP Update is an evaluation of "the Plan" that is conducted periodically, to ensure that the goals and purposes of the Plan are achieved, with new or updated modeling that includes the latest available scientific, technical, and planning information, as defined in 33 CFR, Part 385, Section 385.3 (Definitions).
- The first periodic CERP update was conducted in 2005. We have a lot of new information since then. We are conducting the Second Periodic CERP Update.
- The Second Periodic CERP Update (SPCU) will not modify the authorization for CERP.
- Corps and SFWMD program managers, planners, engineers, and scientists have been coordinating with the Interagency Modeling Center to update the Regional Simulation Model to represent all CERP components (previously included in the South Florida Water Management Model (SFWMM)).
- Once the modeling information is available, the RECOVER team will conduct an evaluation using RECOVER Performance Measures and other relevant information.
- Coordination with the SFER Task Force, Working Group and Science Coordination Group.
- Tribal Government to Government Technical Staff.









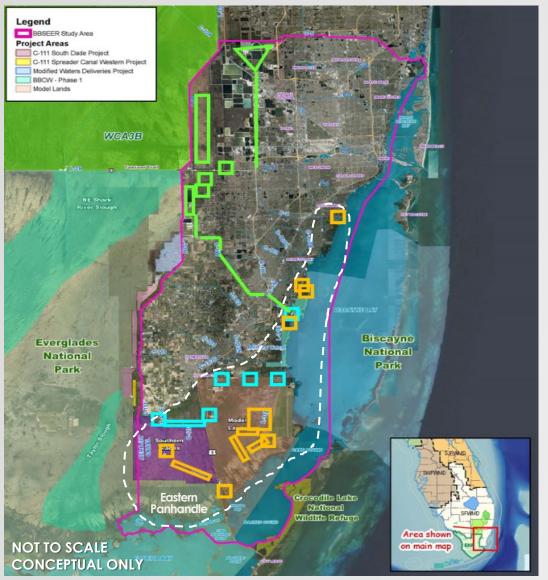
Today's Highlights:

- Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER)
- Lake Okeechobee Watershed Restoration Project (LOWRP)
- Western Everglades Restoration Project (WERP)
- C&SF Flood Resiliency (Section 216) Study
- Comprehensive C&SF Study



BISCAYNE BAY AND SOUTHEASTERN EVERGLADES ECOSYSTEM RESTORATION (BBSEER)





STUDY OBJECTIVES:

- Improve quantity, timing and distribution of freshwater to estuarine and nearshore subtidal areas, including mangrove and seagrass areas
- Restore freshwater depths, hydroperiods, and flows for dry and wet seasons in **terrestrial wetlands**
- Restore **connectivity and habitat gradients** in areas compartmentalized by the C&SF system in the Southern Everglades, Model Lands, and Biscayne Bay Coastal Wetlands
- Increase and restore ecological resilience in coastal habitats in southeastern Miami Dade County

STATUS:

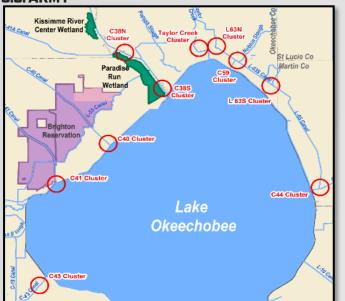
- Continued engagement with Project Delivery Team (PDT)
- Completed synthesis of Round 2 Modeling results and screening
- Round 3 Alternatives formulated with PDT
- Modeling of Round 3, Interagency Modeling Center, Ongoing

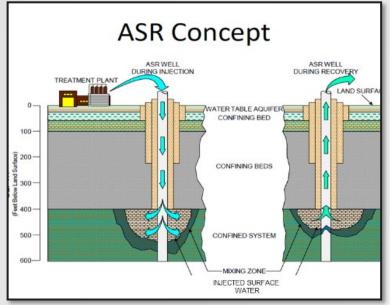


LAKE OKEECHOBEE WATERSHED RESTORATION (LOWRP) PROJECT



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COMPONENTS:

Aquifer Storage and Recovery (ASR) Wells

WETLAND RESTORATION SITES

- Restore hydrology of isolated, riverine wetlands
- Paradise Run: ~ 4,700 acres
- Kissimmee River Center: ~ 1,200 acres
- Recreational facilities

STATUS:

- Waiver Package for additional study time and budget under review
- First Report: LOWRP Wetlands Restoration Report
 Target WRDA 2024
- Release of Final PIR/EIS: Target Early Spring 2024
- Second Report: LOWRP ASR Pending additional science from USACE Engineering and Research Development Center (ERDC)





WESTERN EVERGLADES RESTORATION PROJECT (WERP)









- Restore freshwater flow paths, flow volumes and timing, seasonal hydroperiods, and historic distributions of sheetflow to reestablish ecological connectivity and ecological resilience of the historic wetland/upland mosaic
- Restore water levels to reduce wildfires associated with altered hydrology, which damage the underlying geomorphology and associated ecological conditions of the western Everglades
- Restore aquatic low nutrient (oligotrophic) conditions to reestablish and sustain native flora and fauna





Images Courtesy of Big Cypress National Preserve

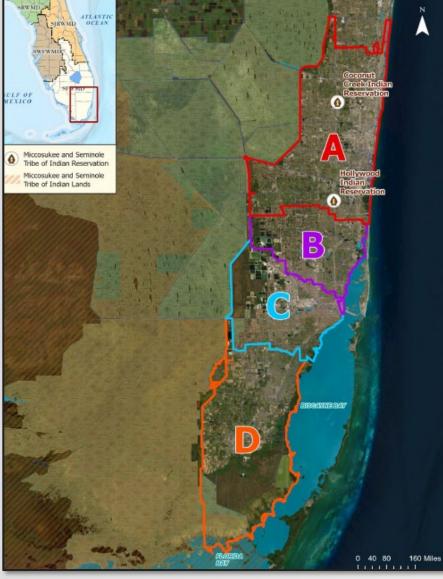
SCHEDULE:

- Complete the Draft Project Implementation Report and Environmental Impact Statement (Draft Report)
- Release the Draft Report for Public Review December 2023
- Open House Meetings December 2023
- NEPA Review Meeting January 2024
- Public Comments due February 2024
- Complete Final Report June 2024
- Chief's Report signed September 2024
- Project Authorization Water Resources Development Act 2024



C&SF FLOOD RESILIENCY (SECTION 216) STUDY





STUDY OBJECTIVES:

- Reduce flood risks and damages in Palm Beach, Broward, and Miami-Dade counties
 resulting from the combination of rainfall runoff, storm surge, high tide and/or high-water
 table to residences, businesses, and critical infrastructure
- Reduce potential life safety risk in Palm Beach, Broward, and Miami-Dade counties due to flooding as a result of the combination of rainfall runoff, storm surge, high tides and/or water table

STATUS:

Four (4) planning focus areas were identified for the study:

Reach A: Broward and Hillsboro Basins

Reach B: Little River and Nearby Basins

Reach C: Miami River and Nearby Basins

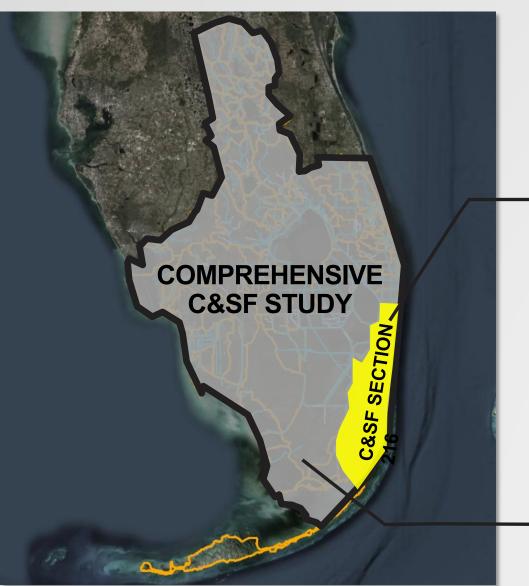
Reach D: South Miami Basins

- July 2023 Final recommended study scope to focus on enhancing the capacity of vulnerable coastal water/salinity control structures and adjacent primary canals
- Study schedule 4-years and budget of \$11.3M; study target completion for WRDA 2026
- Workshop held with stakeholders in October 2023
- Ongoing: engagement with stakeholders, plan formulation and modeling



C&SF FLOOD RESILIENCE PROGRAM





Section 216 C&SF Flood Resiliency Study

- Focus: <u>Coastal salinity structures for flood resilience</u>
- 4 Planning Reaches / 3 Counties
- Many municipalities
- > 5 million population
- > 1,100 square miles

WRDA22, SECTION 8214 Status: Pending COMPREHENSIVE C&SF STUDY

- Multipurpose project focus on short-term and long-term solutions for community resiliency
- Focus: Flood Risk Management; Water Supply; Ecosystem Restoration; Saltwater Intrusion; Recreation
- 18 counties, inland and coastal areas
- ~9 million population
- ~18,000 square miles
- Multiple federal projects including CERP





Today's Highlights:

- Picayune Strand Restoration (PSRP)
- Indian River Lagoon South (IRL-S)
- Biscayne Bay Coastal Wetlands (BBCW)
- Central Everglades Planning Project (CEPP)
- Broward County Water Preserve Areas (BCWPA)



PICAYUNE STRAND RESTORATION PROJECT





Levee Construction - Southwest Protection Feature October 2023

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

TOTAL PROJECT BENEFITS:

- Conveyance of water will restore natural habitat
- Three pump stations: Merritt, Faka Union, and Miller
- Plugging 48 miles of canals and removing/degrading 260 miles of roads

UNDER CONSTRUCTION:

- Miller Tram and Road Removal construction completed September 29, 2023
- Southwest Conveyance Feature
- Southwest Protection Feature
- Miller Canal Clearing



INDIAN RIVER LAGOON – SOUTH PROJECT





C-23/C-24 Stormwater Treatment Area, view west across Cell 5 (excavation underway for outlet structures S-439B and S-439A), October 2023

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

IN DESIGN:

 C-23/C-24 North Reservoir: Anticipated award of the first increment of the C-23/24 North Reservoir in FY24

UNDER CONSTRUCTION:

C-23/C-24 Stormwater Treatment Area



BISCAYNE BAY COASTAL WETLANDS





S-703 Pump Station, September 2023

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; improve the ecology of Biscayne Bay

UNDER CONSTRUCTION:

- Pump stations S-705, S-703, S-710, and S-711
- Pump station S-709 completed and is in operational testing and monitoring phase (OTMP)
- Pump station S-705 completed final inspection



CENTRAL EVERGLADES PLANNING PROJECT





Everglades Agricultural Area (EAA) Reservoir - Foundation Preparation and Cutoff Wall, October 2023

The Central Everglades Planning Project (CEPP) increases storage, treatment and conveyance of water south of Lake Okeechobee; removing canals and levees within the central Everglades and retaining water within Everglades National Park.

STATUS:

CEPP - South

- L-67A structures, under construction
- Gated Spillway S-355W: final design complete; procurement process underway; anticipated contract award in FY24
- Pump Station S-356: final design complete; procurement process underway; anticipated contract award in FY24

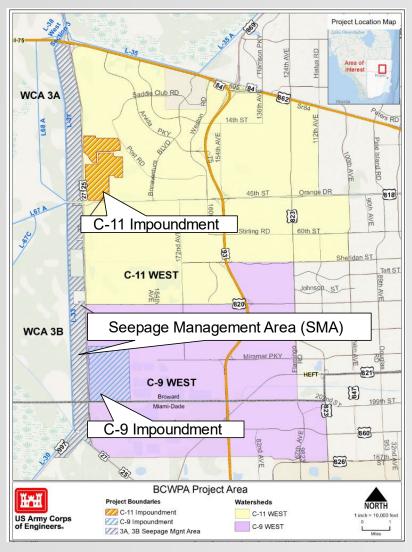
CEPP - EAA

- Seepage and Inflow/Outflow Canal under construction
- Reservoir Foundation and Cut-off Wall under construction
- Reservoir Embankment: design nearly complete; transitioning to procurement; anticipated contract award Q4 FY24



BROWARD COUNTY WATER PRESERVE AREAS | C-11 IMPOUNDMENT





PURPOSE:

- Reduce runoff from developed areas in western Broward County into Water Conservation Area 3 (WCA 3) which flows to the Everglades National Park
- C-11 Impoundment is key to full operation of CEPP South
- Reduce seepage of water out of the Everglades to developed areas in western Broward County
- The project will improve fish and wildlife habitat including that of 5 federally-listed species
- 563,000 acres in WCA 3 and 200,000 acres in the greater Everglades will benefit from project implementation

FEATURES:

■ Final Design of C-11 Impoundment underway; anticipated award of first increment of construction of C-11 feature in FY24





SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM OPERATIONS

Today's Highlights:

- Indian River Lagoon South (IRL-S)
- Lake Okeechobee System Operating Manual (LOSOM)
- Combined Operational Plan (COP)
- Central Everglades Planning Project (CEPP) Operational Plan



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | OPERATIONS INDIAN RIVER LAGOON - SOUTH





C-44 Reservoir

C-44 RESERVOIR STATUS

- Operational monitoring and testing period, extended
- In use: Operating up to 10-feet; target is a 15-foot holding pool
- Current operations in accordance with Preliminary Project Operating Manual
- Addressing seepage in outside canal bank on southwest corner
- Overall conditions remain normal with no dam safety concerns



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | OPERATIONS



LOSOM SCHEDULE OVERVIEW

THROUGH THE RECORD OF DECISION (ROD)

DRAFT EIS
AND WCP
DEVELOPMENT

DRAFT EIS AND WCP
REVIEWS

FINAL SOM, 10 FWS BO, AND NMFS BO

FINAL EIS AND ROD

10

WE ARE HERE

ACTIVITIES

- Draft NEPA documentation of the effects of the alternatives and how the preferred alternative was chosen
- Draft water control plan (WCP) documentation including regulation schedule and operational guidance
- Endangered Species Act (ESA) consultation initiated, and Biological Assessments (BA) transmitted

February – July 2022 COMPLETE

- NEPA public, agency, and tribal review and comment on the Draft LOSOM Environmental Impact Statement (EIS) and Water Control Plan
- Corps Agency Technical Review (ATR) and Independent External Peer Review (IEPR)
- Draft Fish and Wildlife Service (FWS) Biological Opinion (BO)

July - September 2022 COMPLETE

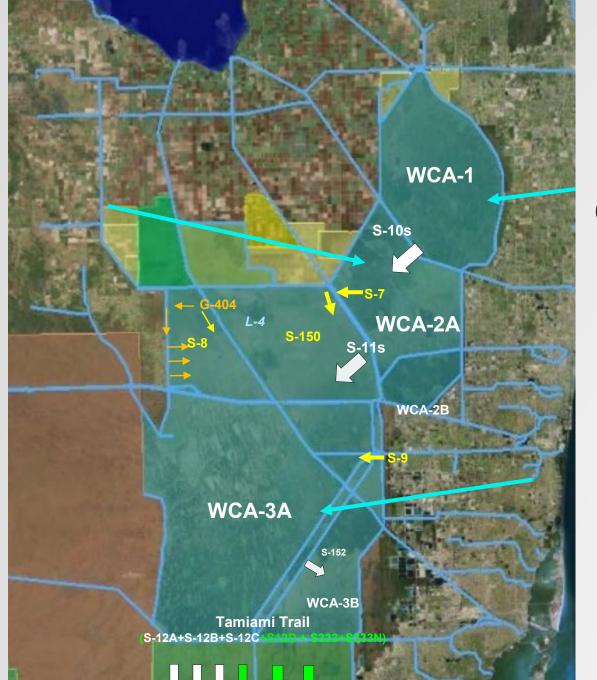
- Final EIS and System
 Operating Manual (SOM)
 completed to address review
 comments (January 2023)
- Final FWS Biological Opinion (BO) (COMPLETE)
- IEPR Completion, ATR Certification, South Atlantic Division (SAD) Review (September 2022– March 2023)
- Final National Marine Fisheries Service (NMFS) BO (September 29, 2023)

Remaining Activities

- NMFS Consultation ongoing
- NEPA public, agency, and tribal review of Final EIS and SOM
- Corps SAD review and approval of Record of Decision (ROD)

DOCUMENTATION PROCESS







SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM OPERATIONS COMBINED OPERATIONAL PLAN

Water Conservation Areas (WCAs), South Dade Conveyance System and Everglades National Park

- Deliver Tamiami Trail Flow Formula target flow –maximum
- S-343A and S-343B closed on Oct 1
- S-12 A closed 1 November
- S-12B partially closed 1 November, remaining gates will close ASAP
- Temporary deviation out for agency and public review



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

OPERATIONS COMBINED OPERATIONAL PLAN



WATER DELIVERIES (AC-FT) ACROSS TAMIAMI TRAIL (S-12s + S-333 + S-333N + S-356 - S-334)										1				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov	Dec	Total	
Min. Del. Thru S-12s (PL 91-282 June 1970)	22,000	9,000	4,000	1,700	1,700	5,000	7,400	12,200	39,000	67,000	59,000	32,000	260,000	
2012	32,700	13,300	5,900	700	25,600	44,900	71,500	87,000	115,000	177,900	123,900	105,600	804,000	
2013	40,200	14,600	3,900	700	47,900	63,800	112,600	149,300	133,800	122,700	88,000	40,800	818,300	
2014	6,400	43,000	55,200	600	100	12,300	61,700	75,500	101,600	100,500	91,200	23,700	571,800	
2015	13,100	15,100	8,900	0	0	0	0	0	14,500	122,500	56,700	108,900	339,700	
2016	108,500	180,800	203,100	127,400	61,600	44,300	66,900	79,400	110,700	120,100	76,100	8,000	1,186,900	Į
2017	2,900	5,300	1,400	400	200	109,700	191,400	183,200	240,700	323,400	253,800	196,800	1,509,200	
2018	97,000	37,400	3,100	900	31,100	105,700	149,300	157,500	163,100	127,100	1,400	900	874,500	
2019	1,000	21,100	27,900	16,300	24,700	53,600	104,000	127,200	147,600	109,400	25,800	100	658,700	
2020	160	250	360	410	9,700	113,600	181,700	198,900	159,600	181,200	360,800	366,300	1,572,980	
2021	233,860	140,070	120,630	70,970	23,000	31,200	70,600	100,700	116,600	186,400	150,032	145,993	1,390,055	
2022	119,286	85,296	68,924	26,614	8,453	91,964	166,719	135,833	105,547	208,375	173,758	146,350	1,337,118	
2023	115,477	79,869	54,672	51,472	63,929	98,634	145,097	158,969	172,580	196,770			1,137,469	
Note: All data is provis	ional.													
*The latest monthly value may include an Incomplete Monthly Period of Record								4						

LEGEND

Minimum Water Delivery

IOP

ERTP

Increment 1

2016 Emergency Deviation

Increment 1.1/1.2

2017 Temporary Deviations

Increment 2

COP



SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | OPERATIONS

CENTRAL EVERGLADES PLANNING PROJECT OPERATIONAL PLAN (INCREMENTAL)



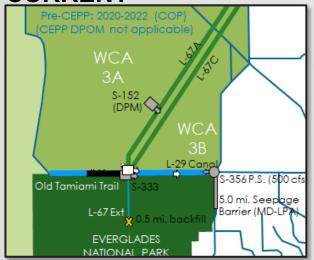
PROJECT PURPOSE:

- Redistribute Water Conservation Area 3A (WCA 3A) inflows to enhance flows into Everglades National Park (ENP).
- Make incremental changes to the Combined Operations Plan (COP) to include Central Everglades Restoration Projects (CERP) and non-CERP implementation.

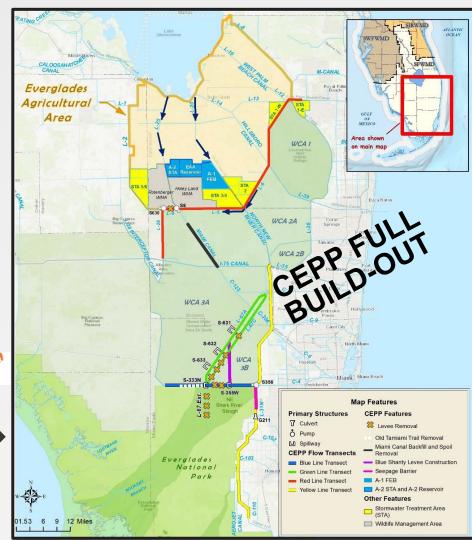
STATUS:

- Public scoping meetings held in April 2023. Scoping period concluded May 2023. Project Delivery Team meeting held September 2023 focused on Pre-Formulation Informational Runs (Round 1 Modeling) and plan concepts.
- Three operational increments scoped to align with timing of construction completion.

CURRENT









SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM | OPERATIONS



CENTRAL EVERGLADES PLANNING PROJECT OPERATIONAL PLAN (INCREMENTAL)

Increment 1

 $(\sim 2025 - 2027)$

Primary Rationale for updating operations in 2026

- Tamiami Trail Next Steps
 Phase 2 comes online
 in 2026
- New Lake Okeechobee Regulation Schedule (LOSOM)
- Lessons learned from COP implementation

Current Plan

Increment 2

(~2028-2030)

Primary Rationale for updating operations in 2028

 Blue Shanty Flowway and CEPP North features completed

Increment 3

 $(\sim 2030 +)$

Primary Rationale for updating operations in 2030+

 IDS projected completion of EAA Reservoir

Next Step:

For Increment 1: Project delivery team to establish an array of operational plan alternatives





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