INTEGRATED DELIVERY SCHEDULE – A SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM SNAPSHOT THROUGH 2030

OCTOBER 2019 UPDATE

The Integrated Delivery Schedule (IDS) is a forward-looking snapshot of upcoming design and construction schedules and programmatic costs at a "top" line level for the South Florida Ecosystem Restoration (SFER) Program. It includes Modified Water Deliveries to Everglades National Park, Critical Projects, Kissimmee River Restoration, non-Comprehensive Everglades Restoration Plan (CERP) Central and Southern Flood (C&SF), and CERP projects. The Comprehensive Everglades Restoration Plan (CERP) focuses on the "getting the water right." CERP—the largest aquatic ecosystem restoration effort in the nation, spanning over 18,000 square miles—is designed to improve the health of more than 2.4 million acres.

The IDS reflects the sequencing strategy for planning, design, and construction and does not include costs for completed work or land acquisition. The IDS does not require an agency action and is not a decision document. It is a tool that provides information to decision-makers—a living document that is updated as needed to reflect progress and/or program changes. The IDS synchronizes program and project priorities with the State of Florida and achieves the CERP restoration objectives at the earliest practicable time, consistent with funding constraints and the interdependencies between project components. All Everglades restoration-related projects upon which the CERP is dependent—such as the Herbert Hoover Dike, the Modified Water Deliveries to Everglades National Park, Tamiami Trail Next Steps bridging, and the Restoration Strategies projects—are reflected in the IDS schedule, but are not included in the funding scenario. These projects are funded through other program authorities or by other entities. Restoration projects by others are also not included but are considered during planning.

Project	Yellow Book Components	Design & Construction Costs in Millions	FISCAL YEAR (dollars in millions)[3] 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)++			$ 109	$ 110	$ 200										
Planning Estimates Non-Federal Construction Cost (SFER)++			$ 154	$ 293	$ 256	$ 558	$ 850	$ 957	$ 895	$ 829	$ 686	$ 545	$ 99	$ 129	$ 129
Planning Estimates Total Construction Cost (SFER)++			$ 263	$ 403	$ 456										
Modified Water Deliveries to Everglades National Park[1,2]		Non-CERP & Foundation	—●	●○○○○	○○○○●										
Herbert Hoover Dike[1]			——	——	——	——	—●								
Restoration Strategies[1]			——	——	——	——	——	——	——	——	—●				
Tamiami Trail Next Steps Phase 2[1]				●┅┅	┅┅●	●——	—●								
Kissimmee River Restoration Construction (Contracts 2B2, 10, 12a)			——	——	——	——									
Kissimmee River Restoration Monitoring						●ΔΔΔΔ	ΔΔΔΔΔ	ΔΔΔΔΔ	ΔΔΔΔΔ	ΔΔΔΔΔ●	●□□□□●				
C-111 South Dade Construction[2]			——	—●	●○○○○●										
C-111 South Dade PACR				●xxxxx	xxxxxx●	●┅┅	┅┅	┅┅●	●——	——	—●				
Picayune Strand Restoration	OPE	CERP Generation 1 (authorized in 2007 WRDA)													
Faka Union Pump Station			◇◇◇◇◇●												
Miller Pump Station			—●◇◇	◇◇◇◇◇◇	◇◇◇◇◇●										
Flood Protection Features - Conveyance				●┅┅	┅┅●—	●——	——	——●							
Flood Protection Features - Levee				●┅┅	┅┅	┅┅●—	——	——	——●						
Road removal				●——	——	——●									
Canal plugging						●┅┅●	●——	——●							
Indian River Lagoon-South															
C-44 Reservoir	B		——	——	——	——●	●◇◇◇◇◇	◇◇◇◇◇●							
C-44 STA & Pump Station	B		——	——	——●	●◇◇◇◇◇	◇◇◇◇◇	◇◇◇◇◇●							
C-23/24 Reservoir North	UU Phase 1		●┅┅	┅┅	┅┅	┅┅●	┅┅●—	——	——	——	——	——	——●		
C-23/24 Reservoir South	UU Phase 1				●┅┅	┅┅	┅┅	┅┅●	●——	——	——	——	——●		
C-23/24 STA	UU Phase 1				●┅┅	┅┅●	┅┅●—	——	——	——●					
C-25 Reservoir	UU Phase 2					●┅┅	┅┅●	●——	——	——	——	——●			
C-25 STA	UU Phase 2							●┅┅	┅┅●	●——	——	——	——	——●	
C-23/C-44 Interconnect					●┅┅●	●——	——	——●	●◇◇◇◇●						
Caloosahatchee River (C-43) West Basin Storage		CERP Generation 2 (Authorized in 2014 WRDA)													
Pump Station and Reservoir	D		——	——	——	——	——	——●	●◇◇◇◇◇	◇◇◇◇◇●					
Broward County Water Preserve Areas															
Mitigation Area A Berm	Q		——	——●											
C-11 Impoundment	Q		┅┅	┅┅	┅┅	┅┅	┅┅●—	——	——	——	——●				
WCA 3A & 3B Seepage Management	O								●┅┅	┅┅●	●——	┅┅●			
C-9 Impoundment	R											┅┅●	┅┅●	●——	——
Biscayne Bay Coastal Wetlands Phase 1	FFF, OPE, Phase 1														
L-31 East Flow-way - Federal			●┅┅	┅┅●	●——	——	——●								
Cutler Wetlands				●┅┅●	●——	——●									
C-111 Spreader Canal Western Project (Requires PPA)	WW, Phase 1					●┅┅●	●——	——●							
Central Everglades Planning Project (2016 WRDA) See back for details.	AA, FF, H, QQ. P1, G														
Loxahatchee River Watershed Restoration Project	K, OPE	Planning Phase	xxxxxx	xxxxxx	xxxxxx●	Anticipate Authorization in WRDA 2020. Construction and funding TBD.									
Lake Okeechobee Watershed Restoration Project	A, GG		xxxxxx	xxxxxx	xxxxxx●	Anticipate Authorization in WRDA 2020. Construction and funding TBD.									
Western Everglades Restoration Project	RR, CCC		xxxxxx	xxxxxx	~~xxxxxx●~~										
BBCW Phase 2	FFF, OPE, Phase 2				●xx	xxxxxx	xxxxxx	xxxxxx●	Anticipate Authorization in WRDA 2024. Construction & funding TBD.						
C-111 Spreader Canal Eastern	WW, Phase 2					●xxxxx	xxxxxx	xxxxxx●	Anticipate Authorization in WRDA 2024. Construction & funding TBD.						
Lake Okeechobee System Operating Manual[1]				●○○○○	○○○○○	○○○○○	○○○○○	○○○○●							
ASR/Decomp Phase 2	GG, QQ, Phase 2							●xxxxx	xxxxxx	xxxxxx●	Anticipate Authorization in WRDA 2026. Construction and funding TBD.				

NOTE: The funding shown for FY20 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.

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

++ 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] Once authorized, the design and construction of current planning projects will increase annual estimates and extend beyond FY2030

xxxx● Project Implementation Report with Approved Waiver
xxxx● Project Implementation Report
┅┅● Design, PPA Execution, Real Estate Acquisition
——● Construction
◇◇◇◇● Operational Testing and Monitoring Period
□□□□● Fiscal Closeout
ΔΔΔΔ● Monitoring
○○○○● Operational Plan
W = Expected WRDA year

Non-CERP & Foundation Projects
CERP Generation 1 Projects - Authorized, Project Partnership Agreement (PPA) Executed
CERP Generation 2 Projects - Authorized, PPA Executed Except Where Noted
CEPP - Authorized in 2016, Features added in WRDA 2018, PPA in 2020
Planning Phase - Initiated and Proposed

SFER INVESTMENT THRU FY2018 (Millions)

	FEDERAL USACE	FEDERAL DOI	FEDERAL TOTAL	NONFEDERAL MULTIPLE AGENCIES	GRAND TOTAL
Mod Waters	77.5	317.3	$ 394.8		$ 394.8
Critical Projects	88.4	0	$ 88.4	88.7	$ 177.1
Kissimmee	377.5		$ 377.5	202.2	$ 579.7
C&SF Non-CERP	$ 771.8	$ 51.8	$ 823.6	$ 215.6	$ 1,039.2
C&SF CERP	$ 1,199.5	$ 112.5	$ 1,312.0	$ 1,667.0	$ 2,979.0
C&SF CERP, To be credited	$ -	$ -	$ -	$ 712.0	$ 712.0
TOTAL SFER	$ 2,514.7	$ 481.6	$ 2,996.3	$ 2,885.5	$ 5,881.8
Restoration Strategies & ECP	$ -	$ -	$ -	$ 1,627.8	$ 1,627.8
Herbert Hoover Dike	$ 1,023.0	$ -	$ 1,023.0	$ 50.0	$ 1,073.0

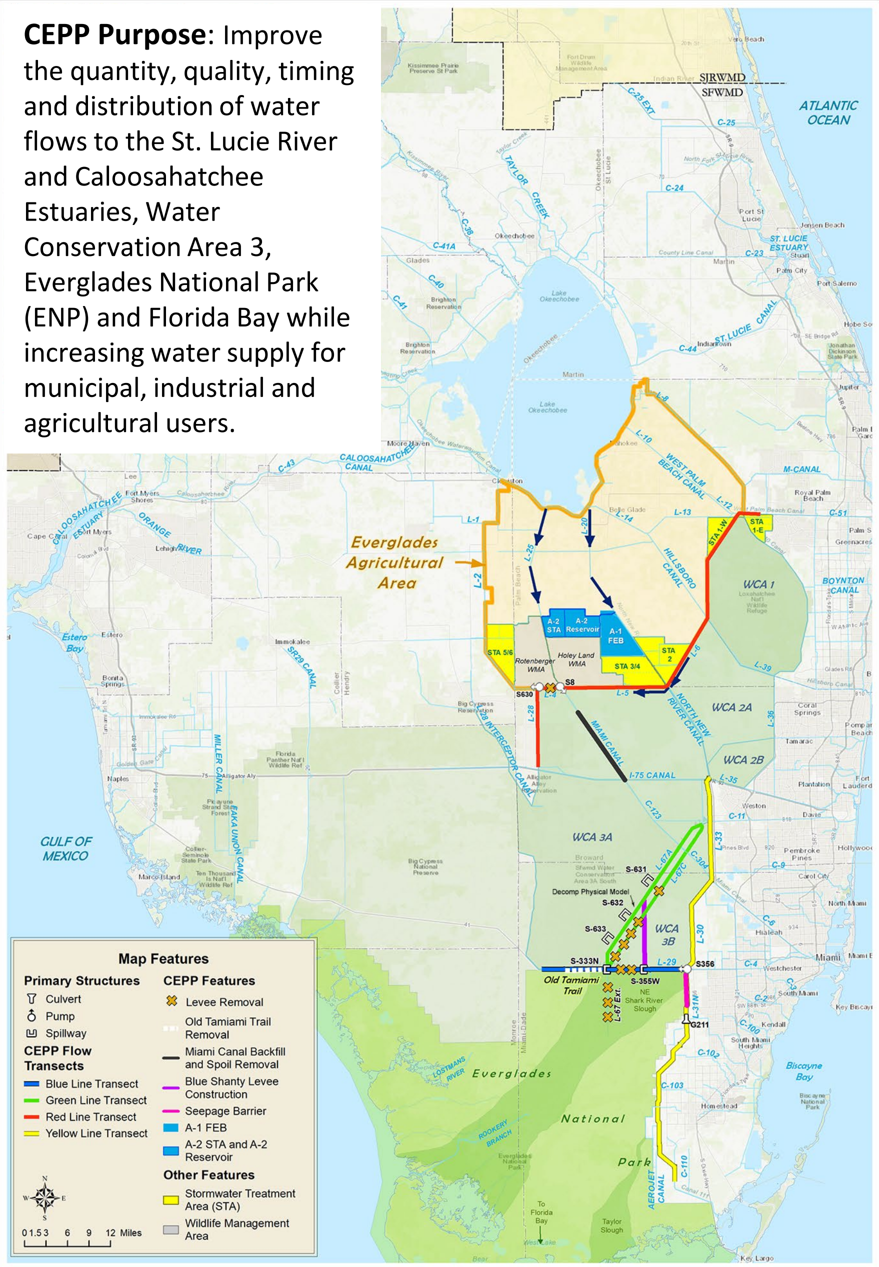
This table includes creditable investments in SFER.

BUILDING ON HISTORIC MOMENTUM — EVERGLADES SCIENCE HOLDS THE KEY TO DELIVERING CERP GOALS

CENTRAL EVERGLADES PLANNING PROJECT BENEFITS

- Fewer Lake Okeechobee releases helps restore resilient Northern Estuaries.
- More operational flexibility means a healthier Lake Okeechobee.
- More flow at the right time to the Everglades Water Conservation Areas makes a healthier ridge and slough habitat in the Everglades.
- More flow at the right place to Shark River and Taylor Sloughs protects and restores Everglades National Park and Florida Bay.

CEPP Purpose: Improve the quantity, quality, timing and distribution of water flows to the St. Lucie River and Caloosahatchee Estuaries, Water Conservation Area 3, Everglades National Park (ENP) and Florida Bay while increasing water supply for municipal, industrial and agricultural users.



Project	Yellow Book Components	FISCAL YEAR (dollars in millions)												
		2018 W $7	2019 $24	2020 W $165	2021 $290	2022 W $517	2023 $605	2024 W $604	2025 $571	2026 W $402	2027 $275	2028 W $0	2029 $0	2030 W $0
Central Everglades Planning Project	AA, FF, H, QQ, P1, G													
Decomp Physical Model	QQ	········	········	········	·······●									
CEPP South: Additional outlet structures needed to move more water south	AA, FF, H, QQ													
Validation Report			●·····●											
Remove Old Tamiami Trail (ENP Preparing NEPA)			●·····●	●——	——●									
Structure S-631 & gap in L-67C Levee and Structure S-633 with gap in L-67C			●·······	····●—	———	——●	●◊◊◊◊◊	◊◊◊◊◊●						
Increase S-356 Pump Station				●·······	·······●	····●—	———	———	——●	——●	●◊◊◊◊◊	◊◊◊◊◊●		
Spillway S-355W					●·······	·······●	●——	——●	●◊◊◊◊◊	◊◊◊◊◊●				
Structure S-333N		●·····●	●——	——●	●◊◊◊◊●									
Structure S-632				●·····●	●——	●——●	●◊◊◊◊◊	◊◊◊◊◊●						
Removal L-67C & L-67 Ext, Constr L-67D Levee						●·······	·······●	●——	———	——●				
Removal L-29 Levee & Backfill L-67 Ext							●·······	·······●	●——	———	——●			
CEPP North: Inflow facilities needed to restore northern WCA-3A and move additional water south to Everglades	QQ, II													
Validation Report					●·······	·······●								
L-4 Degrade & Pump Station S-630					●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●			
S-8 Pump Station Modifications					●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●			
Miami Canal Backfill/Tree Islands						●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●		
L-5 Canal Improvements						●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●		
L-6 Diversion					●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●			
CEPP New Water: Moves New Water South, Stores It, and Treats It Before Going to the Everglades	G, V, C, E													
Validation Report			●·······	·······●										
Seepage Barrier L-31N				●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●				
Canal Conveyance Improvements - Miami and North New River			●·······	·······●	●——	———	——●	●◊◊◊◊◊	◊◊◊◊◊●					
EAA Reservoir - A-2 STA, Inflow-Outflow Canal, and Bridge			●·······	·······●	●——	——●	●◊◊◊◊◊	◊◊◊◊◊●						
EAA Reservoir - A-2 STA			●·····●	●——	———	———	——●	●◊◊◊◊◊	◊◊◊◊◊●					
EAA Reservoir - Inflow-Outflow Canal, Bridges, Spillway				●·····●	····●—	———	———	●◊◊◊◊◊	◊◊◊◊◊●					
EAA Reservoir - Inflow Pump Station ●				●·······	·······●	····●—	———	———	———	———	——●	●◊◊◊◊◊	◊◊◊◊◊●	
EAA Reservoir: Cutoff Wall, Culverts &Embankment ●				●·······	·······●	····●—	———	———	———	———	——●	●◊◊◊◊◊	◊◊◊◊◊●	

● Requires WCA-3 outlet and conveyance structures to maximize operational flexibility.

See legend on reverse

INCREMENTAL RESTORATION IS A FUNDAMENTAL TENET OF SFER

Advancing construction and receiving ecosystem benefits from the Central Everglades Planning Project is possible and achievable because several key projects have reached important milestones through 2019. These Non-CERP and Foundation Projects (in the blue section of the IDS) are CEPP predecessors and interdependencies. Improvements to the system since 2012 are estimated to provide significant benefits in 2020, including these:

- Improve water deliveries into Everglades National Park and take steps to restore natural hydrologic conditions in ENP, resulting in restored ecological diversity.
  - Increased ENP average annual inflow by ~63%
  - Increased distribution at Tamiami Trail to North East Shark River Slough from 19% to 77%
  - Increased annual flow to Taylor Slough by ~37%
- Minimize the damaging freshwater flows to Manatee Bay/Barnes Sound and increase overland flow to Eastern Panhandle.
- Increase flows through Taylor Slough and coastal creeks to help restore native habitats and species.

EVERGLADES SCIENCE

The defining characteristics of the original Everglades include sheetflow, low levels of nutrients in freshwater wetlands, healthy and productive estuaries, resilient plant communities, and an abundance of native wildlife. The scientific community has been monitoring the overall health of the Everglades for many years. They have collected data that shows the ecosystems of the Everglades are struggling to support the plants and animals that live there and the natural resources they provide to all. Without healthy ecosystems, the economy, tourism, and recreational activities of south Florida suffer. However, many restoration projects scheduled for operation and construction in the next ten years are designed to help improve and protect this unique ecosystem.

As an example, the most important process affecting wading bird nesting in the Everglades is the availability of prey (fishes and aquatic invertebrates), which is controlled by the duration and frequency of wetland flooding and drying. The historic 2018 wading bird nesting season (+466% above 2017) let Everglades scientists see in real time how small prey fishes can rapidly respond to the longer hydroperiods. These hydrologic conditions are anticipated to occur more often during the incremental implementation of the SFER.

Learn more at evergladesecohealth.org.