SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER) PROGRAM

2023 Update Integrated Delivery Schedule Working Draft

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TODAY'S WORKING DRAFT IDS BRIEF





- Schedule
- Public Engagement
- Overview 2022 IDS Highlights
- IDS Purpose, Investments, Project Locator
- Project Schedule Updates
- System Operations
- RECOVER Footprint
- Status of Yellow Book Components





2023 INTEGRATED DELIVERY SCHEDULE







- **2023**: Integrated Delivery Schedule 101 and Stakeholder Listening Session
- 18 August 2023: Integrated Delivery Schedule,
 68 CERP Components Overview and Listening
 Session with Stakeholders
- **2023** IDS Update at SFER Task Force WG/SCG
- 15 November 2023: Release of Final 2023 IDS Update at SFER Task Force Meeting



RECAP OF LISTENING SESSIONS





- IDS 101 and Listening Session: 4 August 2023
- 68 Components Overview and Listening Session: 18 August 2023
 - ▶ Both were well attended and included a variety of stakeholders and public participants
 - ▶ Feedback: Appreciation expressed for the webinar series, and depth of information represented in the IDS from participants



2023 IDS UPDATE







Highlights of FY23 and FY24:

- Herbert Hoover Dike Complete
- Picayune Strand Restoration Project
 - ► Flood Protection Features Conveyance
 - ► Flood Protection Features Levee
 - Road Removal
- Indian River Lagoon South
 - ► C-23/24 Reservoir North
 - ► C-23/24 Reservoir South
 - ► C-25 Reservoir and STA
 - ► C-23 Estuary Discharge Diversion



2023 IDS UPDATE CONTINUED







Highlights of FY23 and FY24:

- Biscayne Bay Coastal Wetlands
 - ▶ L-31 East Flow-way S-709 Pump Station
 - ▶ L-31 East Flow-way S-705 Pump Station
 - ▶ L-31 East Flow-way S-703 Pump Station
- Central Everglades Planning Project South
 - S-631, S-632, S-633 Structures; Gap in L-67C Levee; L-67A Spoil Pile Removal
 - S-356E Pump Station and S-334E Gated Spillway
 - ► Gated Spillway S-355W
- Central Everglades Planning Project North
 - ► L-4 Degrade, Pump Station S-630
 - ► L-6 Diversion
 - ▶ Miami Canal Backfill/Vegetated Hammocks
 - ► L-5 Canal Improvements



2023 IDS UPDATE CONTINUED







Highlights of FY23 and FY24:

- Central Everglades Planning Project New Water
 - ▶ Seepage Barrier Wall
- Central Everglades Planning Project EAA
 - ► EAA Reservoir A-2 STA
 - EAA Reservoir Canal Conveyance Improvements to North New River and Miami River Canals
 - EAA Reservoir Seepage Canal (7.2 miles) and Inflow/Outflow Canal
 - EAA Reservoir Foundation and Cutoff Wall
 - EAA Reservoir Embankment, Outlet Works and Inline Spillway
 - EAA Reservoir Inflow Pump Station



2023 IDS UPDATE CONTINUED







Additional Highlights for FY23 and FY24

- Lake Okeechobee Watershed Wetlands Report, Western Everglades Restoration Project, and Lake Okeechobee Component A Reservoir Section 203 Study – Anticipate Authorization in WRDA 2024
- In FY23 and FY24 operational planning efforts will be underway across all regions of the system
- CERP 68 Components updated to reflect completion of Yellow Book Component OO
- RECOVER Updated Conceptual Ecological Models and Hypothesis Clusters



PURPOSE, INVESTMENTS, PROJECT LOCATOR AND LEGEND





INTEGRATED DELIVERY SCHEDULE 2023 UPDATE – WORKING DRAFT

SOUTH FLORIDA ECOSYSTEM RESTORATION | CENTRAL AND SOUTHERN FLORIDA COMPREHENSIVE EVERGLADES RESTORATION PLAN

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

The IDS reflects the sequencing strategy for planning, design, and construction and does not include costs for work completed in other fiscal years 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.

Although non-CERP and Foundation projects upon which the CERP is dependent are reflected in the IDS schedule, they 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.

Note: The IDS serves the purpose of the Master Sequencing and Implementation Plan (MISP) described in the original CERP plan (Yellow Book). Funding shown for Fiscal Year 25 (Fiscal Year, October 1 - September 30) and beyond is only notional, representing approximate funding levels that would be needed to sustain the work displayed in the IDS for any particular fiscal year. The funding does not represent a commitment by the Administration to budget the amounts shown.

Projects completed in prior years have been removed from the 2023 IDS.

	Non-federal Federal	++ Does not reflect budgetary development dollars or capability W Expected WRDA year
□□□□●	Fiscal Closeout	●XXXX● Project Implementation Report
$\Delta\Delta\Delta\Delta\Delta$	Monitoring	•xxxx• Project Implementation Report with Exemption

Dollar values ar	e pending a				023 IDS.
		FEDERAL		NON- FEDERAL	
	USACE	DOI	TOTAL	MULTIPLE AGENCIES	GRAND TOTAL
Modified Water Deliveries to ENP	\$	\$	\$	-	\$
Critical Projects	\$	-	\$	\$	\$
Kissimmee River Restoration	\$	-	\$	\$	\$
C&SF Non-CERP	\$	\$	\$	\$	\$
C&SF CERP	\$	\$	\$	\$	\$
C&SF CERP, to be credited	-	-	-	\$	\$
TOTAL SFER	\$	\$	\$	\$	\$
Herbert Hoover Dike	\$	-	\$	\$	\$
Restoration Strategies and ECP	-	-	-	\$	\$

SOUTH FLORIDA ECOSYSTEM RESTORATION (SFER)

INVESTMENT THROUGH FY2021 (Millions)

Design, PP Constructi Operation	A Executi on (Initiat al Plan	on, Real E	state Acc ard of cor	uisition struction	contract)
storation ategies d ECP	1	1	1	\$	\$
over Dike	\$	-	\$	\$	\$



SCAN THIS CODE FOR QUICK ACCESS TO A DIGITAL COPY OF THE IDS





IDS 2023: PLANNING ESTIMATES OF TOTAL SFER CONSTRUCTION COST





NOTE BLUE OR BLACK NOTE FISCAL YEARS NOTE "W" FOR ANTICIPATED WRDAS

PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	llars in milli	ions) ¹						
			2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
	Planning Estimates Federal Construction Cost (SFER)++2		\$ 352	\$ 1,128												
	Planning Estimates Non-Federal Construction Cost (SFER)++		\$ 332	\$ 343	\$ 1,386		Dollar v	values are	pending o	and will be	provided	with the Fir	nal 2023 ID:	S.		
	Planning Estimates Total Construction Cost (SFER)++		\$ 679	\$ 1,471												





IDS 2023: NON-CERP AND FOUNDATION PROJECTS





PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	llars in mill	ions) ¹						
		_	2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
		-	NON-CER	P AND FOL	INDATION											
P2	Herbert Hoover Dike ³			i												
P3	Lake Okeechobee System Operating Manual ³		00000	00000	000											
P4	Restoration Strategies ³		I	I	I	-										
P5	Tamiami Trail Next Steps (TTNS) Phase 2 ³	N/A		I			•									
P6	KRR-Development of Operational Transition Plan/Evaluation Monitoring	Non-CERP	00000	00000	00000	00000	000●∆∆∆	ΔΛΛΛΛ	ΔΛΛΛΛ	ΔΛΛΛΛ	ΔΛΛΛΛ	$\Delta\Delta \bullet$				
	C-111 South Dade Construction (complete)										●□□□□●					
P7	C-111 South Dade - S-332 B Pump Station Replacement		•	••••	-		-	00000●								
	C-111 South Dade - S-332 C Pump Station Replacement								-• ‱	◊◊•						









IDS 2023: CERP GENERATION 1, WRDA 2007





PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	llars in mill	ions) ¹						
			2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
		CERP GE	NERATION	1 (AUTHOR	IZED IN WR	DA 2007)					•					
	Picayune Strand Restoration						•=====	00000								
	Flood Protection Features - Conveyance					00000●										
P8	Flood Protection Features - Levee	OPE			•											
	Road Removal			-												
	Canal Plugging		•			•										
	Indian River Lagoon-South															
	C-44 Reservoir	В	000000	000000	000000	000000	∞•									
	C-44 STA and Pump Station	В	00000●													
	C-23/24 Reservoir North	UU Phase 1									•	000000	000000●			
	C-23/24 Reservoir South	UU Phase 1									•	000000	00000●			
P9	C-23/24 STA	UU Phase 1				•	00000●									
	C-25 Reservoir and STA	UU Phase 1	•						-	000000●						
	C-23 Estuary Discharge Diversion			•—		—•◊◊	◇◇●									
	Natural Water Quality Storage Areas, Muck Removal and Artiticial Habitat Creation (Phase 2) - Director's Report and PPA - After Execution, SFWMD Leading Design and Construction	UU Phase 2	•		•											











IDS 2023: CERP GENERATION 2, WRDA 2014





PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	ellars in milli	ons)1						
			2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
		CERP GE	NERATION	2 (AUTHOR	IZED IN WR	DA 2014)										
	Caloosahatchee River (C-43) West Basin Storage	D						•======	00000							
P10	C-43 Reservoir					i	000000	00000								
	C-43 Pump Station		-	000000	00000●											
	Broward County Water Preserve Areas															
P11	C-11 Impoundment	Q	•••••	•••••	:							•	0000000	000000●		
PII	WCA 3A and 3B Seepage Management	0			•	••••	•••••	ļ				•	0000000	000000●		
	C-9 Impoundment	R				•				_					•	●000000
	Biscayne Bay Coastal Wetlands	FFF, OPE Phase 1					•=====	00000								
	L-31 East Flow-way S-709 Pump Station (PS)			•◊◊	00000●											
P12	L-31 East Flow-way S-705 PS				•◊◊	00000●										
P12	L-31 East Flow-way S-703 PS				•◊◊	00000●										
	L-31 East Flow-way S-710 PS, S-711 PS, and C-711W Seepage Canal					•◊◊	00000●									
	Cutler Wetlands						00000									
P13	C-111 Spreader Canal Western Project (Requires PPA – to be Reconciled In Parallel to BBSEER) SFWMD Led Design and Construction	WW Phase 1				•	•======	00000								_









IDS 2023: CENTRAL EVERGLADES PLANNING PROJECT, WRDA 2016





PROJECT		YELLOW BOOK														
LOCATOR	PROJECT	COMPONENT	2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
		CERP GENERAT	ION 3 (AUI	HORIZED II	WRDAS 20	16, 2018, 2	2020)									<u> </u>
P14	Central Everglades Planning Project															
	CEPP South: Additional Outlet Structures Needed to Move More Water South	AA, FF, H, QQ														
	Validation Report - S-152 and Backfill Treatments															
	S-152 and Existing Backfill Treatments (Permanent)		•00000	◊◊•												
	S-631, S-632, S-633 Structures; Gap in L-67C Levee; L- 67A Spoil Pile Removal			•				•≪	000000●							
P14S	S-356E Pump Station and S-334E Gated Spillway										-	000000	000000●			
	Demolition of Existing S-356 Pump Station								•	•••••			i	•		
	Gated Spillway S-355W		•	•••••	•	l			000000	00000●						
	Removal of L-67C, Construct L-67D Levee and Gap in L-67C Levee N		•			••••		•		l	-	00000●				
	Removal of L-29 Levee and L-67 Extension Levee, Backfill L-67 Ext Canal					•				ļ		•⊗	00000●			
	CEPP North: Inflow Facilities Needed to Restore Northern WCA-3A and Move Additional Water South to Everglades	ଦ୍ୱଦ୍ଦ, ॥														
	Validation Report		•													
	L-4 Degrade, Pump Station S-630		•••••	•••••				i	00000●							
P14N	S-8 Pump Station Modifications					•			-	000000	00000●					
	L-6 Diversion			•—				000000	00000●							
	Miami Canal Backfill/Vegetated Hammocks			•••••	•—						•	000000	00000●			
	L-5 Canal Improvements		•••••	•••••	•—							000000	00000●			
	CEPP New Water: Seepage Management Needed to Move More Water into the Everglades															
P14NW	Validation Report		•													
	Seepage Barrier Wall	V	•	•—	- •											
	CEPP EAA: Moves New Water South, Stores it, and Treats it Before Going to the Everglades ⁴	G, C, E														
	EAA Reservoir - A-2 STA			•	000000	00000●										
	EAA Reservoir - Canal Conveyance Improvements to North New River and Miami River Canals								00000●							
P15	EAA Reservoir - Seepage Canal (7.2 miles) and Inflow/Outflow Canal				—•	000000	00000●									
	EAA Reservoir - Foundation and Cutoff Wall		•••••	•—					—•							
	EAA Reservoir - Embankment, Outlet Works and Inline Spillway										-	000000	00000●			
	EAA Reservoir - S-636 Seepage Pump Station		•		•••••				_	000000	◊◊◊◊◊•					
	EAA Reservoir - Inflow Pump Station			•••••						•	000000	00000●				



IDS 2023: CERP GENERATION 4, WRDA 2020





PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	lars in mill	ions) ¹						
			2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
		CERP GE	NERATION 4	4 (AUTHOR	IZED IN WR	DA 2020)										
	Loxahatchee River Watershed Restoration Project	K, OPE	•													
	Flow-way 1 (M-1 Canal, G160/161 and Grassy Water Preserve)				•		•			00000•						
P16	Flow-way 2 (C-18 Impoundment)			•									000000	00000•		
	Flow-way 2 (ASR Wells)							•			•—		-	00000•		
	Flow-way 3 Kitching Creek, Moonshine Creek, Gulfstream East, Cypress Creek Canal, Gulfstream West, and Palmar East)		•				•					_		000000	00000•	









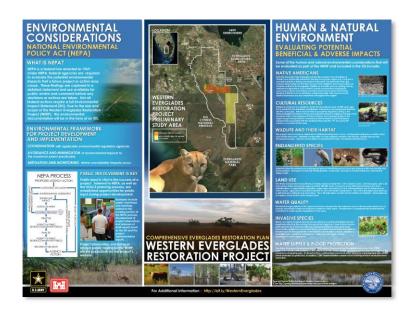
IDS 2023: PLANNING PROJECTS

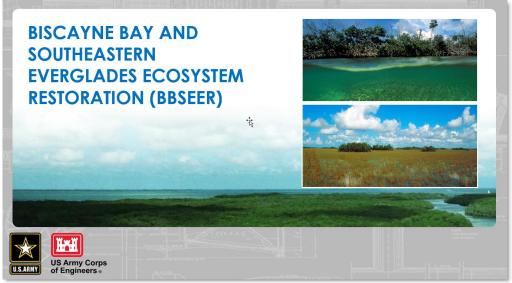




DDZ II Z2	 	VELLOW BOOK														
PROJECT LOCATOR	PROJECT	YELLOW BOOK COMPONENT					FISCA	L YEAR (do	ollars in mill	ions) ¹						
			2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032 W	2033	2034 W	2035
				PLA	NNING PH	ASE										
P17	Lake Okeechobee Watershed Restoration Project ⁵	GG, OPE								Depender	nt on Future	WRDA Au	thorization.	Constructi	on and Fur	nding TBD.
	ASR Wells - Design and Implementation by SFWMD															
	Lake Okeechobee Watershed Wetlands Report		XXXXXX	XXXXXX	xxxxxx•					Anticip	ate Authori	zation in V	VRDA 2024.	Construct	ion and Fu	nding TBD.
	Lake Okeechobee Watershed ASR Report					Schedule Pending Additional Investigations										
P18	Western Everglades Restoration Project⁵	RR, CCC, QQ	XXXXXX	XXXXXX	xxxxxx*	Anticipate Authorization in WRDA 2024. Construction and Funding IBD.										
P19	Biscayne Bay Southeastern Everglades Ecosystem Restoration (BBSEER) ⁵	BBB, FFF, HHH, WW, XX, OPE	xxxxxx	xxxxxx	xxxxxx	xxxxxx•				Antic	ipate Autho	rization in	WRDA 2026	. Construct	tion and Fu	nding TBD.
P20	Southern Everglades ⁵	BB, CC, EEE, QQ, S, U, YY, ZZ				•xxxxx	xxxxxx	xxxxxx	xxxxx∙				Anticipa	ite Authori Construct	zation in W ion and Fu	RDA 2028. nding TBD.
	Lake Okeechobee Component A Reservoir (LOCAR) ^{3,5}	Α		•xxx	XX●							Section 20)3 Feasibilit	y Study of	CERP Com	ponent A.
N/A	PENDING: Please refer to the CERP Components Map on Page 2 (Start of "Pending" CERP Component Feasibility Studies will be informed by the technical evaluations including input from the Science Coordination Group, RECOVER, periodic CERP update analysis, and engagement with the public.)	DDD, F, VV, X, Y, KK, LL,OPE(4); Phased: D,H, M,W,AA,FF, GGG,OPE(1)	FOOTNOTES 1: Once au 2: FY 2022 (3: Funded t 4: Requires 5: Construc	thorized, the and beyond through othe WCA-3 out tion and fur	e design and includes all er program o et and conv nding TBD.	l constructio ocation for E outhorities or eyance stru	n of current plipartisan Infr by other enti ctures to ma	olanning pro astructure La ties, ximize opera	ojects will inc aw funds. ational flexib	rease annu ility.	al estimates o	and extend	beyond FY20	025.		





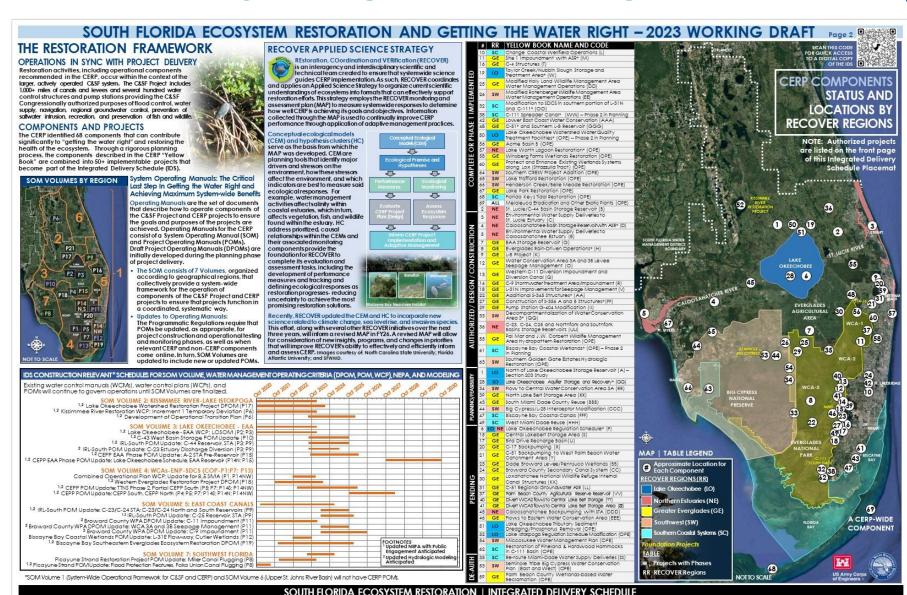




IDS PLACEMAT – PAGE 2









IDS 2023: GETTING THE WATER RIGHT







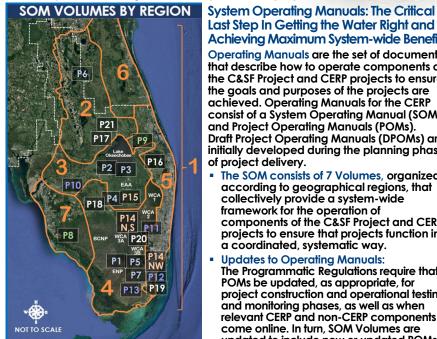
THE RESTORATION FRAMEWORK

OPERATIONS IN SYNC WITH PROJECT DELIVERY

Restoration activities, including operational components recommended in the CERP, occur within the context of the larger, actively operated C&SF system. The C&SF Project includes 1,000+ miles of canals and levees and several hundred water control structures and pump stations providing the C&SF Congressionally authorized purposes of flood control, water supply, navigation, regional groundwater control, prevention of saltwater intrusion, recreation, and preservation of fish and wildlife.

COMPONENTS AND PROJECTS

The CERP identified 68 components that can contribute significantly to "getting the water right" and restoring the health of the ecosystem. Through a rigorous planning process, the components described in the CERP "Yellow Book" are combined into 50+ implementable projects that become part of the Integrated Delivery Schedule (IDS).



Last Step In Getting the Water Right and **Achieving Maximum System-wide Benefits**

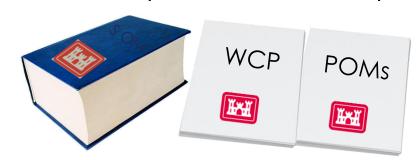
Operating Manuals are the set of documents that describe how to operate components of the C&SF Project and CERP projects to ensure the goals and purposes of the projects are achieved. Operating Manuals for the CERP consist of a System Operating Manual (SOM) and Project Operating Manuals (POMs). Draft Project Operating Manuals (DPOMs) are initially developed during the planning phase of project delivery.

- The SOM consists of 7 Volumes, organized according to geographical regions, that collectively provide a system-wide framework for the operation of components of the C&SF Project and CERP projects to ensure that projects function in a coordinated, systematic way.
- Updates to Operating Manuals:
 The Programmatic Regulations require that POMs be updated, as appropriate, for project construction and operational testing and monitoring phases, as well as when relevant CERP and non-CERP components come online. In turn, SOM Volumes are updated to include new or updated POMs.





System Operating Manual

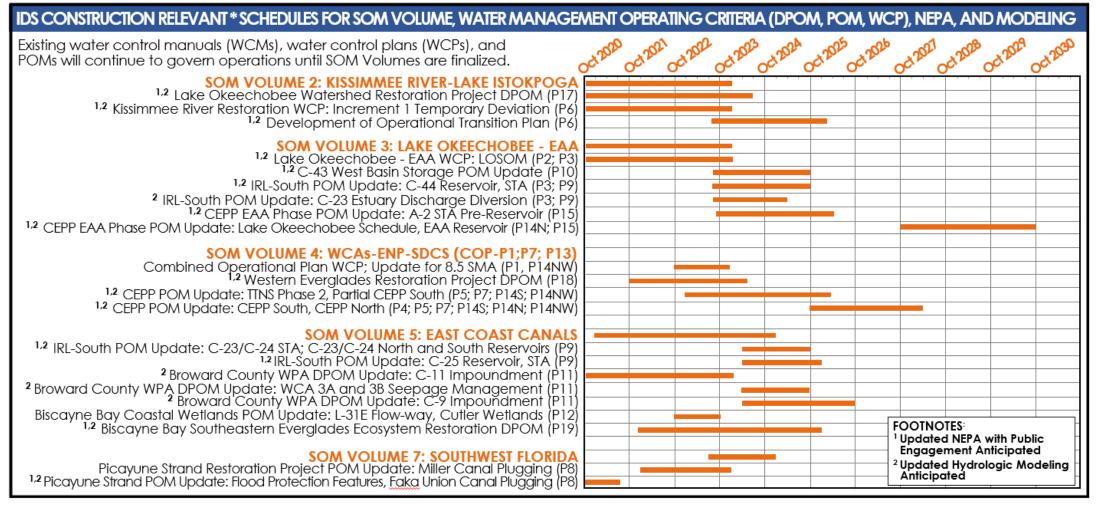




IDS 2023: GETTING THE WATER RIGHT







*SOM Volume 1 (System-Wide Operational Framework for C&SF and CERP) and SOM Volume 6 (Upper St. Johns River Basin) will not have CERP POMs.

System Operating Manuals: the Critical Last Step in Getting the Water Right and Achieving Maximum System-wide Benefits



IDS 2023: RECOVER APPLIED SCIENCE STRATEGY









RECOVER APPLIED SCIENCE STRATEGY

REstoration, COordination and VERification (RECOVER) is an intergaency and interdisciplinary scientific and technical team created to ensure that systemwide science guides CERP implementation. As such, RECOVER coordinates

and applies an Applied Science Strategy to organize current scientific understandings of ecosystems into formats that can effectively support restoration efforts. This strategy employs the RECOVER monitoring and assessment plan (MAP) to measure systemwide responses to determine how well CERP is achieving its goals and objectives. Information collected through the MAP is used to continually improve CERP performance through application of adaptive management practices.

Conceptual ecological models (CEM) and hypothesis clusters (HC)

serve as the basis from which the MAP was developed. CEM are planning tools that identify major drivers and stressors on the environment, how these stressors affect the environment, and which indicators are best to measure said ecological responses. For example, water management activities affect salinity within coastal estuaries, which in turn, affects vegetation, fish, and wildlife found within the estuary. HC address prioritized, causal relationships within the CEMs and their associated monitoring components provide the foundation for RECOVER to complete its evaluation and assessment tasks, including the development of performance measures and tracking and defining ecological responses as restoration progresses-reducing uncertainty to achieve the most

promising restoration solutions.



Recently, RECOVER updated the CEM and HC to incorporate new science related to climate change, sea level rise, and invasives species. This effort, along with several other RECOVER initiatives over the next three years, will inform a revised MAP in FY26. A revised MAP will allow

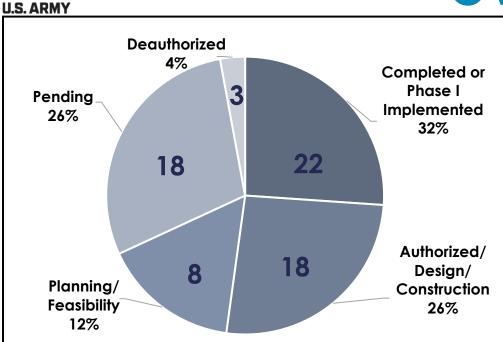
for consideration of new insights, programs, and changes in priorities that will improve RECOVER's ability to effectively and efficiently inform and assess CERP. Images courtesy of: North Carolina State University; Florida Atlantic University: and SFWMD.



IDS 2023: 68 COMPONENTS OVERALL STATUS







68 components + Melaleuca Eradication = 100%

Terminology Overview: -

- Completed or Phase I implemented: partially or completely constructed and operational
- Authorized/Design/Construction: project approved by WRDA. Start or continue implementation activities
- Planning/Feasibility: currently evaluated for future implementation
- Deauthorized: due to lack of funding and activity. May be considered in a future PIR
- Pending: to be considered in an upcoming study

Note: The category of "Complete" includes components where at least one separable feature of the component has been completed/implemented. May include instances where there is a Phase II that has not yet been implemented.

- The Yellow Book continues to be our roadmap
- RECOVER Regions







USACE | JACKSONVILLE DISTRICT

SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM

