Martin County
Board of County Commissioners

Everglades Restoration Update

October 08, 2019

- C-44 Progress Video
- 2019 Integrated Delivery Schedule Update
- State and Federal Budgets
- Lake Okeechobee Watershed Restoration Plan
- Loxahatchee River Watershed Restoration Plan

HISTORY OF THE INTEGRATED DELIVERY SCHEDULE

Yellow Book (1999)

- Contained implementation plan with GANTT chart showing sequencing of CERP projects
- 35+ Year implementation period
- Coordinated with stakeholders prior to inclusion in Yellow Book
- Based on annual funding level of $200M Federal and $200M non-Federal

Master Implementation Sequencing Plan (MISP)

- Required by Programmatic Regulations
- To maximize the achievement of the goals and purposes of the plan at earliest possible time and in the most cost-effective way
- Completed in 2005, projects sequenced within 5-year bands
- Integrated foundation projects and other projects CERP depends upon to create an "**Integrated Delivery Schedule**" in 2008

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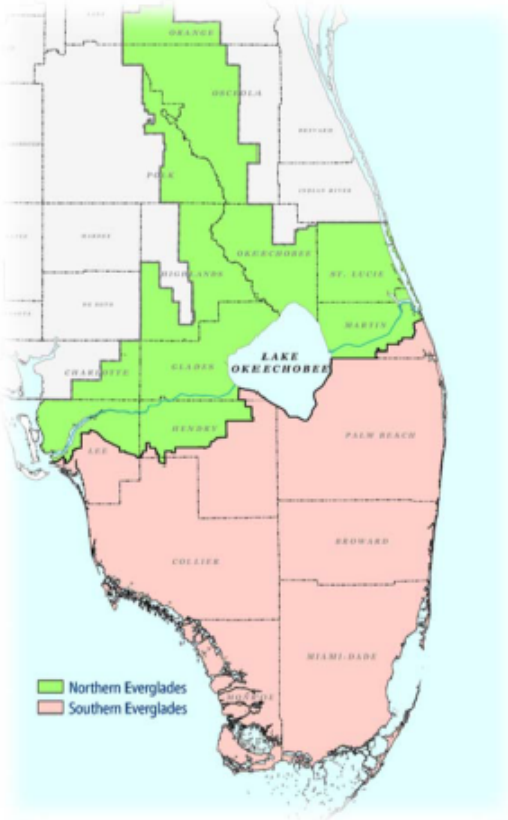
PURPOSE OF THE INTEGRATED DELIVERY SCHEDULE (IDS)

Provides schedule and sequencing plan for achieving restoration benefits as soon as possible consistent with state and federal authorizations and funding

- Not an agency action or decision document
- Tool to provide guidance to decision-makers for scheduling, staffing, and budgeting
- Regular updates required in consultation with the South Florida Ecosystem Restoration Task Force and stakeholder input
- Living document, updated as needed to reflect progress and/or program changes



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HIGHLIGHTS OF FY19 ACTIVITIES

Construction :

- Kissimmee River Restoration
- West Palm Beach Canal/STA1E
- C-111 South Dade
- Picayune Strand Restoration
- Indian River Lagoon South C-44 Reservoir
- Caloosahatchee River (C-43) Pump Station & Reservoir
- Biscayne Bay Coastal Wetlands Phase 1
- Broward County Water Preserve Area
- Increase S-333 (S333N)

Design efforts:

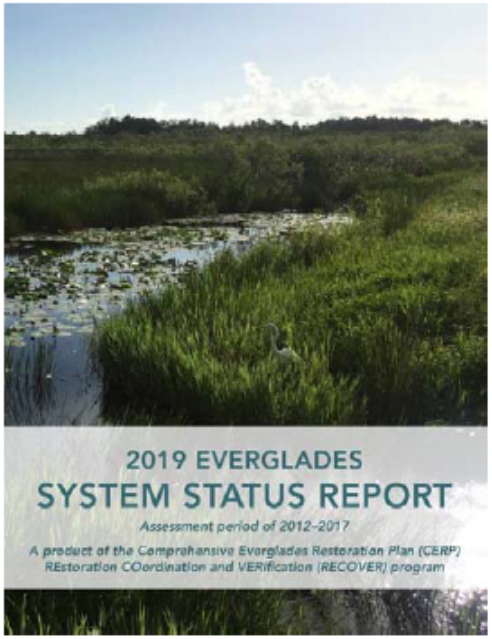
- Indian River Lagoon-South C-23/24 North Reservoir
- Removal of Old Tamiami Trail

Project Implementation Reports:

- CEPP South Validation Report
- Loxahatchee River Watershed Restoration Project
- Lake Okeechobee Watershed Restoration Project
- Western Everglades Restoration Project
- Completed the EAA Storage Reservoir Report (Section 203) – Authorized by Congress
- C-111 South Dade Post Authorization Change Report

Funded through other program authorities or by other entities:

- Modified Water Deliveries to Everglades Park (DOI)
- Herbert Hoover Dike (Corps)
- Restoration Strategies (SFWMD)
- Tamiami Trail Next Steps Phase 2 (DOI & State)



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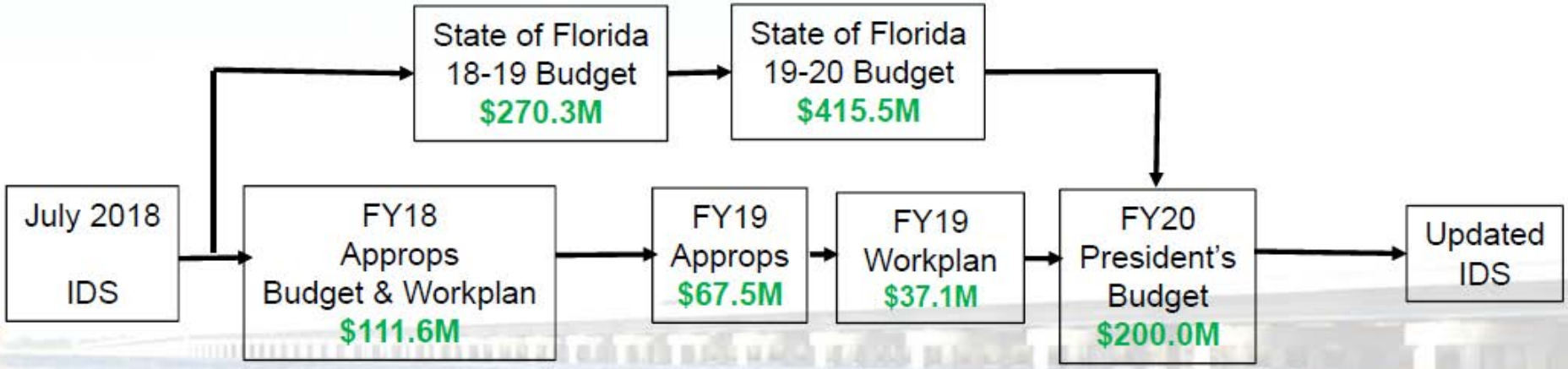
FY20 Budget Update



Related efforts funded through other program authorities or by other entities

- Herbert Hoover Dike (Corps) **$1.8B Fed** **$100M State**
- Modified Water Deliveries to Everglades National Park (DOI) **$329M DoI** **$77.5M Corps**
- Tamiami Trail Next Steps (DOI & State) **$114M DoI** **$96M State**
- Restoration Strategies (State) **$880M**
- Cooperative Funding Agreements (State) **$9.1M**
- Northern Everglades and Estuaries Protection Program including Public Private Partnerships (State) **$1.1B**

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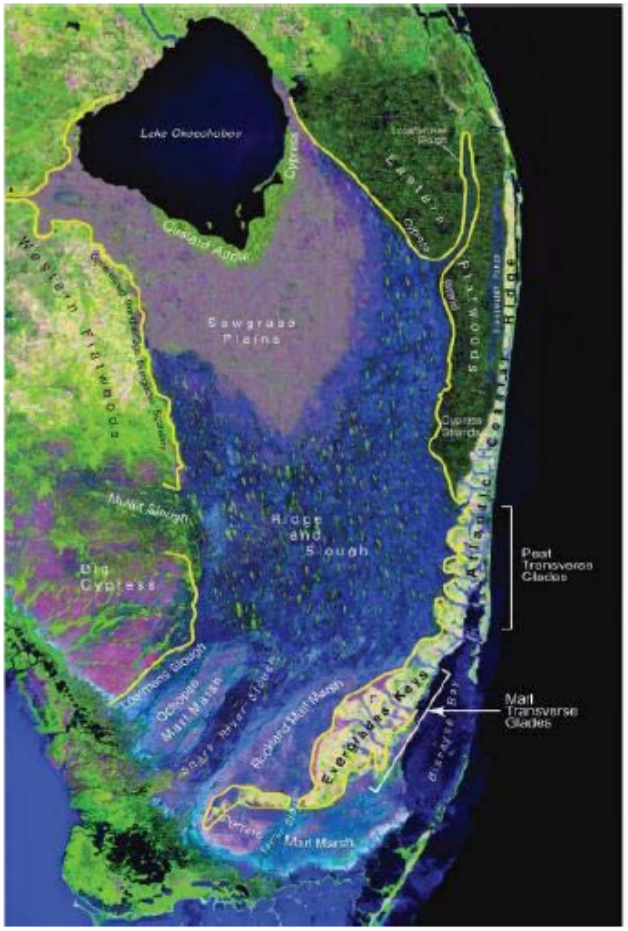
2019 IDS Update Path Forward

- September 19, 2019 – Task Force hosted IDS public workshop – discuss working version of 2019 IDS update and engage the public in the process

- October 29, 2019 - SFER Task Force Meeting and presentation of Final IDS Update



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INTEGRATED DELIVERY SCHEDULE – A RESTORATION PROGRAM SNAPSHOT THROUGH 2030

SEPTEMBER 2019 UPDATE

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. CERP is a part of the South Florida Ecosystem Restoration (SFER) program, which also includes Modified Water Deliveries to Everglades National Park, Critical Projects, Kissimmee River Restoration, and non-CERP Central and Southern Flood (C&SF) projects.

The Integrated Delivery Schedule (IDS) is a forward-looking snapshot of upcoming design and construction schedules and programmatic costs at a "top" line level—it does not include costs for completed work or land acquisition. The IDS reflects the sequencing strategy for planning, design, and construction. The IDS does not require an agency action or a decision document. It is a tool that provides guidance 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) 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	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Planning Estimates Total Construction Cost (SFER)++			$ 263	$ 403	$ 456	$ 493	$ 814	$ 801	$ 777	$ 729	$ 729	$ 522	$ 134	$ 184	$ 184
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															
C-111 South Dade Construction[2]															
C-111 South Dade PACR															
Picayune Strand Restoration	OPE	CERP Generation 1 (authorized in 2007 WRDA)													
Faka Union Pump Station															
Miller Pump Station															
Flood Protection Features															
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[4]	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													
Lake Okeechobee Watershed Restoration Project	A, GG														
Western Everglades Restoration Project	RR, CCC														
BBCW Phase 2	FFF, OPE, Phase 2														
C-111 Spreader Canal Eastern	WW, Phase 2														
Lake Okeechobee System Operating Manual[3]															
ASR/Decomp Phase 2	GG, QQ, Phase 2														

Anticipate Authorization in WRDA 2020. Construction and funding TBD.

Anticipate Authorization in WRDA 2022. Construction and funding TBD.

Anticipate Authorization in WRDA 2024. Construction & funding TBD.

Anticipate Authorization in WRDA 2026. Construction & funding TBD.

Anticipate Authorization in WRDA 2028. Construction and funding TBD.

SFER INVESTMENT THRU FY2018	FEDERAL USACE	FEDERAL DOI	FEDERAL TOTAL	NONFEDERAL MULTIPLE AGENCIES	GRAND TOTAL
Mod Waters	77.5	117.3	$ 194.8		$ 194.8
Critical Projects	88.4	0	$ 88.4	88.7	$ 177.1
Kissimmee	177.3		$ 177.3	202.2	$ 379.7
C&SF Non-CERP	$ 771.8	$ 51.8	$ 823.6	$ 215.6	$ 1,039.2
C&SF CERP	$1,199.9	$ 112.9	$1,312.8	$ 1,467.0	$ 2,779.8
C&SF CERP, to be credited	$ -	$ -	$ -	$ 712.0	$ 712.0
TOTAL	$2,314.7	$ 481.8	$2,796.5	$ 2,885.5	$ 5,681.8

This table includes creditable investments in SFER.

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] Construction for this feature extends beyond 2030, although not reflected on this graph.

xxxx• Project Implementation Report with Approved Waiver

xxxx• Project Implementation Report

•••• Design, PPA Execution, Real Estate Acquisition

—• Construction

0000• Operational Testing and Monitoring Period

□□□□• Fiscal Closeout

ΔΔΔΔ• Monitoring

oooo• 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

Planning Phase - Authorized in 2016

Planning Phase - Initiated and Proposed

Project	Yellow Book Components	Design & Construction Costs in Millions	FISCAL YEAR (dollars in millions) 2018 W	2019	2020 W	2021	2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W
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Planning Estimates Non-Federal Construction Cost (SFER)++			$ 154	$ 293	$ 256	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Planning Estimates Total Construction Cost (SFER)++			$ 263	$ 403	$ 456	$ 493	$ 814	$ 801	$ 777	$ 729	$ 729	$ 522	$ 134	$ 184	$ 184
Indian River Lagoon-South		CERP Generation 1 (authoriz													
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															

SFER INVESTMENT THRU FY2018

	FEDERAL			NONFEDERAL	
	USACE	DOI	TOTAL	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	$2,514.7	$ 481.6	$2,996.3	$ 2,885.5	$ 5,881.8

South Florida Ecosystem Restoration (SFER) Program Overview

JUNE 2018

RESTORING AMERICA'S EVERGLADES

HISTORY

1800s	Agricultural Development & Settlements
1850	Swamp Land Act
1926	Catastrophic Hurricane
1928	Catastrophic Hurricane
1930	Muck Fires
1947	Extensive Flooding
1948	Central & Southern Flood (C&SF) Project Authorized
1969	National Environmental Policy Act (NEPA)
1972	Clean Water Act (CWA)
1973	Endangered Species Act (ESA)
1986	Water Resource Development Act (WRDA)

EFFECTS

- Increase in population
- Increase in economic development
- Disruption in quantity, timing, and distribution of water
- Degradation of water quality
- Declining estuary health
- Oxidation of peat soils
- 90% decline in wading bird populations
- Impacts to 67 federally listed threatened and endangered species

LEGISLATIVE ACTION

1989	Modified Water Deliveries to ENP *First legislation targeting ecosystem restoration*
1992	Kissimmee River Restoration Project
1996	WRDA - Critical Projects Authorized C-111 South Dade Project Authorized
1999	Central & Southern Florida Comprehensive Review Study (Yellow Book)
2000	WRDA - Comprehensive Everglades Restoration Plan (CERP) Authorized
2007	WRDA - Generation 1 CERP Projects Authorized
2014	WRRDA - Generation 2 CERP Projects Authorized
2016	Water Infrastructure Improvements for the Nation (WIIN) Act - Central Everglades Planning Project (CEPP) Authorized

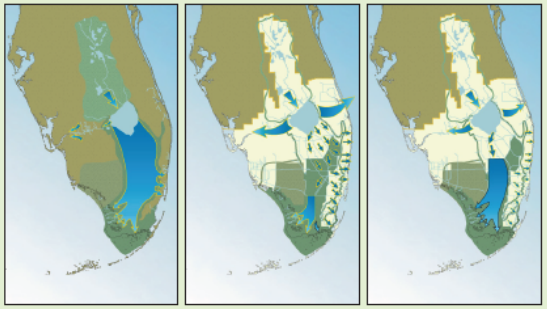
BACKGROUND

- As a result of the engineering performed as early as the 1880s to make south Florida more inhabitable, the natural flow of water to, and through, the Everglades was severely altered. The construction of roads, canals and levees created barriers that now interrupt the natural flow of water that's necessary for the Everglades to survive.
- Upon congressional authorization in 2000, the Federal Government and the State of Florida entered into a programmatic 50/50 partnership to restore, protect and preserve water resources in central and southern Florida, including the Everglades.
- The Comprehensive Everglades Restoration Plan (CERP) is the largest environmental restoration program in history.
- CERP is composed of a series of projects designed to address four major characteristics of water flow: quantity, quality, timing, and distribution.
- Ongoing CERP projects are broken down into Generation 1 and Generation 2 projects. These projects work in concert with the Foundation Projects, authorized prior to CERP.
- Together, these actions will not only provide significant lasting environmental benefits, but will also enhance water supplies and maintain flood mitigation for the region.
- Through congressional appropriations, the U.S. Army Corps of Engineers has invested $2.4 billion to date into the South Florida Ecosystem Restoration program, which includes Central and Southern Florida (C&SF) and CERP projects.
- This includes costs for planning, designing and constructing CERP and Foundation projects as part of the SFER Program, along with science and monitoring programs.

DESIRED OUTCOME

Ultimately, Everglades restoration will:

- Improve the health of over 2.4 million acres of the south Florida ecosystem, including Everglades National Park.
- Improve the health of Lake Okeechobee.
- Significantly reduce damaging freshwater releases to the estuaries.
- Improve water deliveries to Florida Bay and Biscayne Bay.
- Improve water quality.
- Enhance water supply and maintain flood mitigation.



PAST FLOW | CURRENT FLOW | FUTURE FLOW

CURRENT ENVIRONMENTAL CONDITIONS

Limited outlet capacity
Canals south of lake do not have as much capacity to move water like the St. Lucie Canal & Caloosahatchee River; limited capacity in state's stormwater treatment areas (STAs).

Declining estuary health
Estuaries receive too much or too little water, impacting salinity balance.

Soil oxidation, muck fires, loss of sawgrass ridges, tree islands & sloughs
Interior canals overdrain areas and interior levees hold water too deep for too long in southern Water Conservation Area-3A (WCA-3A).

Declining Everglades & Florida Bay habitat
Too little water sent to Everglades National Park and Florida Bay; too much water seeps out of Everglades.

SOLUTION

Everglades restoration will enable the right quantity of water, at the right quality, to be distributed to the right place, at the right time throughout south Florida.

This will be accomplished through the implementation of multiple projects that will work together to provide:

- Water Storage
- Water Treatment
- Water Conveyance
- Water Distribution

The Kissimmee River Restoration project will restore the channelized river back to its natural meandering flow pattern. This will provide natural floodplain storage and slow down the flow of water from the Kissimmee Basin into Lake Okeechobee, thereby slowing down the rise in the lake that often results in high-volume discharges to the Caloosahatchee and St. Lucie estuaries.

South Florida Ecosystem Restoration (SFER) Program Overview

Foundation Projects	QQTD	Federal Investment through FY2017	Construction Completion	Benefits To Date	Total Benefits
1 - Seminole Big Cypress	Quantity	$30 million	FY 2017	• Approximately 1,500 acres of wetlands restored in Basins 1, 2, and 4. • East conveyance system completed.	**Storage** *47,000 acre-feet of storage provides water to Big Cypress Basin Reservation to rehydrate wetlands, improve water quality, and provide stormwater protection for agriculture.*
2 - C-51/Stormwater Treatment Area (STA)-1E	Quantity Quality	$338.9 million	FY 2017	• 6,000 acres of storage and treatment.	**Storage & Treatment** *6,000 acres of storage detains and treats stormwater runoff from the C-51 canal. Treated water discharges into Water Conservation Area (WCA) -1.*
3 - Modified Water Deliveries (Everglades National Park)	Quantity Distribution	$398.5 million	FY 2018	• Increment 1 of G-3273 and S-356 Pump Station Field Test began 15 October 2015. • Gage-3273 Relaxation and S-356 Pump Station under Increment 1 and Increment 1.1 operations have produced a small increase in the net flow of water into Northeast Shark River Slough.	**Storage, Conveyance, and Seepage Management** *Improve natural water flow to Everglades National Park (ENP), provide flood mitigation for residential areas, reconnect freshwater flows, reduce seepage losses out of ENP, and develop an integrated water control plan to refine operations.*
4 - Kissimmee River Restoration	Timing Distribution	$347.2 million	FY 2020	• Continuous flow restored to 22 miles of the Kissimmee River. • The area of wetland vegetation in the Phase I area has surpassed the predicted 80% of floodplain area (up from 37% prior to restoration). • Aquatic wading bird population in restored river and floodplain region is more than five times greater than before restoration.	**Conveyance** *130,000 acre-feet of natural floodplain storage to slow the flow of water into Lake Okeechobee and reduce the impacts of high-volume discharges into the St. Lucie & Caloosahatchee estuaries. Return flow to 44 miles of historic river channel. Restore 25,000 acres of wetland.*
5 - C-111 South Dade	Quantity	$153.9 million	FY 2018	• C-111 South Dade combined with Interim Operations Plan operations moved 70% of flow at S-176 into South Dade detention areas. • Hydroperiods in ENP are on average 60 days longer near detention areas.	**Storage and Seepage Management** *9,500 acre-feet of storage will reduce damaging canal discharges to Barnes Sound, reduce seepage losses from ENP, and maintain flood protection for commercial, residential, and agricultural properties located east of the project.*
Generation 1 Projects	**QQTD**	**Federal Investment through FY2017**	**Construction Completion**	**Benefits To Date**	**Total Benefits**
6 - Melaleuca Eradication	Invasive Species Control	$4.4 million	Complete	• As of March 2018, more than 5 million biocontrol agents have been released: 0.3 million air potato beetles, 1.99 million water hyacinth plant hoppers, 1.88 million Lygodium moths, and 0.87 million Lygodium mites. All agents are proving effective.	**Invasive Species Control** *Facility constructed to rear insects that will serve as a biocontrol agent for invasive plants. The introduction of biocontrol agents to the mix of traditional methodologies (i.e., chemical herbicides and physical removal) is proving successful.*
7 - Site 1 Impoundment	Distribution	$75 million	FY 2016 (Phase 1)	• L-40 Levee Rehabilitation (Phase 1) provided approximately 16% reduction in seepage loss.	**Seepage Management** *Phase 2 - 1,660 acres of storage will provide groundwater recharge and reduce seepage losses from WCA-1, enabling additional water to remain in the natural system.*
8 - Picayune Strand Restoration	Timing Distribution	$330.8 million	FY 2023	• Approximately 20,000 acres restored with Merritt Canal project phase. • Approximately 600 acres restored with Faka Union Canal project phase. • Manatee Refugia feature will provide manatees a connection to the warm groundwater in the winter months.	**Conveyance** *Restore more than 55,000 acres of natural habitat and the region's historic sheetflow, while maintaining flood protection for neighboring communities.*
9 - Indian River Lagoon-South C-44 Reservoir & STA	Quantity Quality	$226.9 million	FY 2020	• Intake canal completed to provide the water supply source for the reservoir.	**Storage & Treatment** *60,500 acre-feet of new water storage to capture, store, and treat local basin runoff prior to it flowing into the St. Lucie Estuary; 3,600 acres of new wetlands.*
Generation 2 Projects	**QQTD**	**Federal Investment through FY2017**	**Construction Completion**	**Benefits To Date**	**Total Benefits**
10 - C-111 Spreader Canal Western Project	Timing Distribution	$12.7 million	Complete	• State of Florida completed most project features to adjust water flow into Frog Pond Detention Areas containing 590 acres of storage. • Early results indicate flow has increased by 25% into Taylor Slough.	**Conveyance & Storage** *590 acres of storage will reduce seepage losses from ENP, provide increased flows to Florida Bay, and restore near-shore habitat conditions for colonies of wading birds.*
11 - Biscayne Bay Coastal Wetlands - Phase One	Timing Distribution	$15.3 million	FY 2022	• State of Florida completed Deering Estate and portions of the L-31 East culverts that distribute freshwater flow to coastal wetlands. • Sawgrass has expanded eastward toward the bay near L-31 culverts, which indicates more consistent freshwater flows.	**Conveyance & Distribution** *Rehydrate coastal wetlands, reduce point-source discharges, and redistribute surface water to improve the ecology of Biscayne Bay.*
12 - C-43 Western Basin Storage Reservoir	Quantity Timing Distribution	$9.2 million	FY 2022	• Design and construction by SFWMD on Phase 1 began in 2015. • Site has been used to test reservoir designs and store 14,000 acre-feet of water that would have entered the Caloosahatchee River Estuary.	**Storage** *170,000 acre-feet of storage will capture and store basin stormwater runoff, along with a portion of water discharged from Lake Okeechobee, and release water into the Caloosahatchee River and Estuary, as needed.*
13 - Broward County Water Preserve Areas	Quantity	$22.6 million	Beyond FY 2023	• C-11 Impoundment design has begun, with scheduled completion in 2021.	**Storage & Seepage Management** *10,800 acre-feet of storage will reduce seepage losses from WCA-3 and capture stormwater that would be lost to tide and redistribute it for urban and natural system water deliveries.*
Planning Studies	**QQTD**	**Federal Investment through FY2017**	**Construction Completion**	**Benefits To Date**	**Total Benefits**
14 - Central Everglades Planning Project	Quantity Quality Timing Distribution	$9.8 million	TBD	• Project authorized in WIIN 2016. • Validation Report on southern components initiated in October 2017.	**Storage, Treatment, Conveyance & Seepage Management** *Convey 200,000 acre-feet of water south from Lake Okeechobee using new infrastructure & state water treatment facilities.*
15 - Loxahatchee River Watershed Restoration	Distribution	$8.3 million	TBD	• Planning efforts have resulted in tools and assessments to help focus the new SMART planning effort to be implemented in 2016-2019.	**Conveyance** *Improve water deliveries to National Wild and Scenic Northwest Fork of Loxahatchee River, restoring and reconnect hydrology in 8 major natural areas covering 146,000 acres.*
16 - Lake Okeechobee Watershed	Quantity Timing Distribution	$1.8 million	TBD	• Study initated in summer 2016.	**Storage, Conveyance & Distribution** *Improve conditions north of Lake Okeechobee and enhance system-wide operational flexibility.*
17 - Western Everglades Restoration	Quantity Quality Timing Distribution	$1.2 million	TBD	• Study initated in summer 2016.	**Storage, Treatment, Conveyance & Distribution** *Restore the quantity, quality, timing, and distribution of water within the western Everglades.*

PATH FORWARD

Restoration progress is contingent on maintaining momentum and continuing to work alongside partnering agencies and stakeholders to align project priorities and move restoration efforts forward. There are many ongoing efforts, including:

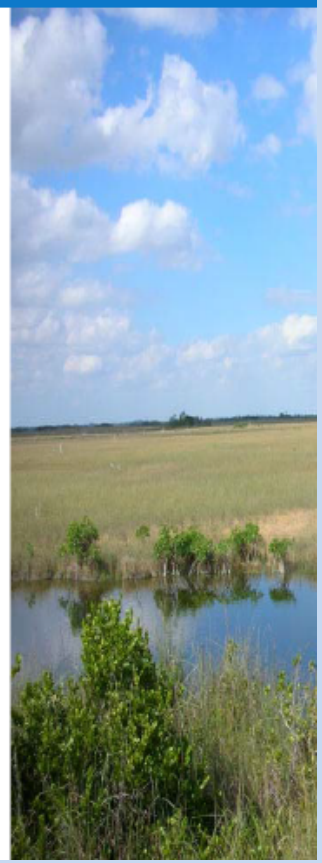
- **Completing construction on Foundation & Generation 1 projects:** Construction of Foundation and Generation 1 projects are nearing completion.
- **Making construction progress on Generation 2 projects:** Following execution of partnership agreements in 2016, construction is ongoing for 3 Generation 2 projects. The fourth (C-111 Spreader Canal) was constructed by the State of Florida.
- **Synchronizing priorities:** The IDS provides the sequencing strategy for planning, designing, and constructing federal projects cost-shared with local sponsors as part of the South Florida Ecosystem Restoration Program, based on ecosystem needs, benefits, costs, and available funding.
- **Refining operations to achieve operational & ecological benefits:** Increment 1 of the G-3273 & S-356 Pump Station Field Test began 15 October 2015; Increment 1 Plus began in spring 2017. Increment 2 is under development and was implemented 1 March 2018. Increment 3, the Combined Operational Plan, is also under development and will be implemented 31 December 2019. The results of this field test will be used to develop a comprehensive, integrated water control plan for the operations of infrastructure associated with the Modified Water Deliveries to Everglades National Park and C-111 South Dade projects, while balancing the ecological restoration objectives for these projects.

State Budget Highlights FY19-20

South Florida Ecosystem Restoration Budget Highlights – Fiscal Year 2019-2020

- $423.8M South Florida Ecosystem Restoration
  - $415.5M CERP
  - $ 8.3M OMRR&R
- $415.5M CERP Major Highlights:

Central Everglades Project	$168.8M
❖ EAA STA & Conveyance Improvements	
❖ Old Tamiami Trail Road Removal	
❖ S-333N	
C-43 Reservoir	$141.2M
Lake Okeechobee Watershed	$ 50.3M
CERP Planning and Program Support	$ 43.0M
❖ Debt Service, Future Land Acquisition, CERP Indirect Costs and Program Support	
❖ CERP Project Planning	
IRL South	$5.7M
Biscayne Bay Coastal Wetlands	$4.0M
WCA 3 Decomp & Sheetflow Enhancement	$1.4M
Adaptive Assessment & Monitoring Program	$1.1M



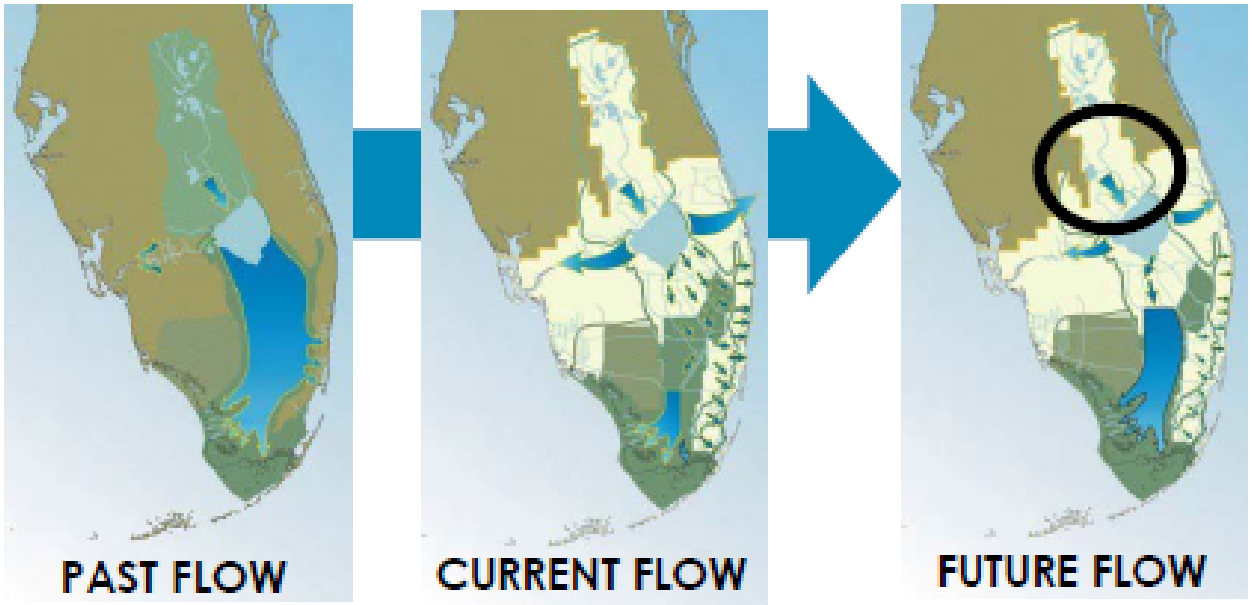
Federal Budget Highlights FY20

SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM
FY2020 President's Budget

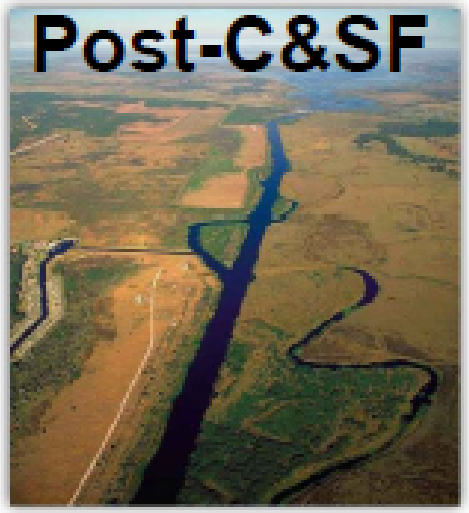
SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM
FOUNDATION PROJECTS
COMPREHENSIVE EVERGLADES RESTORATION PLAN

Non-CERP		
Canal 111 (C-111) South Dade	$	200,000
Kissimmee River Restoration (KRR)	$	1,000,000
Non-CERP Subtotal	**$**	**1,200,000**
CERP		
CERP - Caloosahatchee River (C-43) West Basin Storage Reservoir	$	1,800,000
CERP - Indian River Lagoon South (IRL-S)	$	27,500,000
CERP - Picayune Strand Restoration Project (PSRP)	$	38,100,000
CERP - Biscayne Bay Coastal Wetlands (BBCW)	$	38,600,000
CERP - Broward County Water Preserve Areas (BCWPA)	$	11,000,000
CERP - Central Everglades Planning Project (CEPP)	$	70,845,000
CERP - CERP Design: BBCW Phase 2	$	2,500,000
CERP - CERP Program Management	$	8,455,000
CERP Subtotal	**$**	**198,800,000**
TOTAL	**$**	**200,000,000**

LOWRP AND CERP OVERVIEW



- C&SF eliminated much of the floodplain storage and changed conveyance from slow overland flow to rapid canal flow.
- CERP components are intended to restore those functions.
- LOWRP is the only CERP project that influences the timing and distribution of water entering Lake Okeechobee, which is key to Everglades restoration, estuary protection, and water supply.



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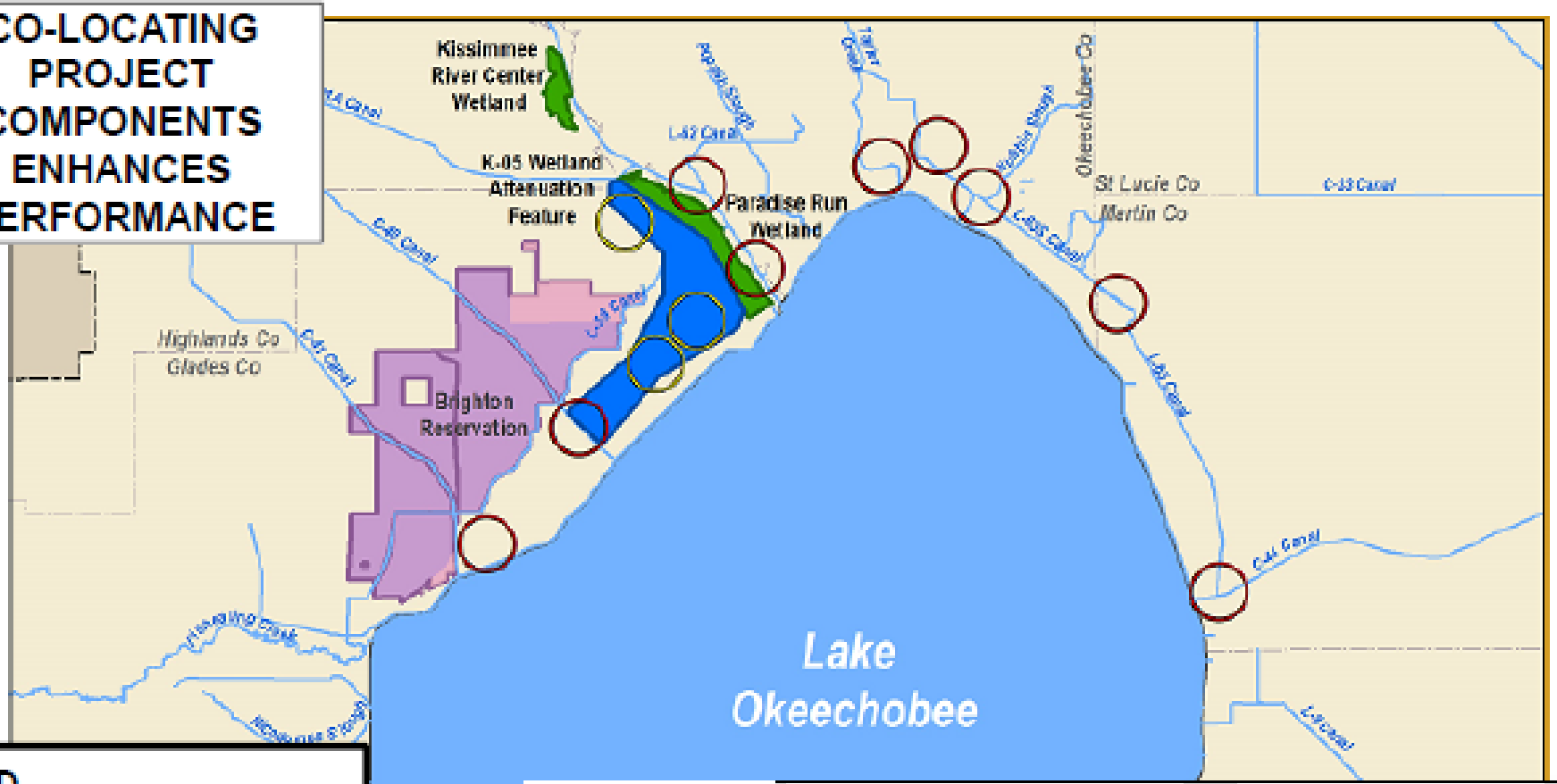
LAKE OKEECHOBEE WATERSHED RESTORATION PROJECT (LOWRP)

TENTATIVELY SELECTED PLAN (TSP) - ALTERNATIVE 1BWR

CO-LOCATING PROJECT COMPONENTS ENHANCES PERFORMANCE



LEGEND

- Wetland Attenuation Feature
- Wetland Restoration
- Tribal Trust Lands
- Tribal Owned Lands
- ASR Well Cluster
- Wetland Attenuation ASR Well Cluster

SHALLOW STORAGE	AQUIFER, STORAGE & RECOVERY	WETLAND RESTORATION
▪ K-05 WAF ~ 13,600 acres ▪ 46,000 acre-feet storage	▪ 80 ASR wells ▪ 448,000 acre-feet of storage per year (400 MG/Day)	▪ KRC: ~1,200 acres ▪ PR: ~3,500 acres

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LAKE OKEECHOBEE WATERSHED RESTORATION PROJECT (LOWRP)

SCHEDULE

SMART PLANNING PROCESS

LOWRP IS HERE

SCOPING → ALTERNATIVE FORMULATION & ANALYSIS → FEASIBILITY-LEVEL ANALYSIS → CHIEF'S REPORT

Kickoff

1 **ALTERNATIVES MILESTONE**
Vertical Team concurrence on Focused Array of Alternatives

2 **TENTATIVELY SELECTED PLAN (TSP) MILESTONE**
Vertical Team concurrence on TSP

3 **AGENCY DECISION MILESTONE**
Agency Endorses Recommended Plan

4 **SENIOR LDR PANEL**
Approve release for State & Agency Review

5 **CHIEF's REPORT**

MILESTONE DESCRIPTION	BASELINE APPROVED MILESTONE DATES	PROJECTED MILESTONE SCHEDULE
Study Initiation	25 JUL 2016	25 JUL 2016 [A]
Alternatives Milestone	03 NOV 2016	03 NOV 2016 [A]
Tentatively Selected Plan Milestone	25 JAN 2018	04 MAY 2018 [A]
Release Draft Report	23 FEB 2018	06 JUL 2018 [A]
Agency Decision Milestone	16 JUN 2018	14 MAR 2019 (A)
Senior Leaders Panel	19 APR 2019	6 FEB 2020
Chief's Report	25 JUL 2019	25 MAY 2020

LOWRP IS HERE

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LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT (LRWRP)

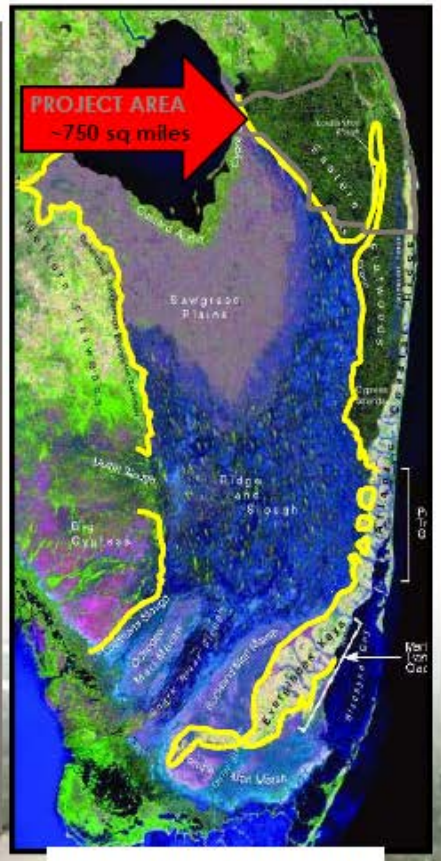
PURPOSE & LOCATION

To restore and sustain the overall Quality, Quantity, Timing, and Distribution of freshwater to the federally designated National Wild and Scenic Northwest Fork of the Loxahatchee River, while maintaining levels of flood risk and water supply.

This project also seeks to restore, sustain, and reconnect the area's wetlands and watersheds that form the historic headwaters for the river.

LRWRP is part of CERP and includes 3 of the 68 components

Existing



Pre-development

Existing, showing basins & natural areas

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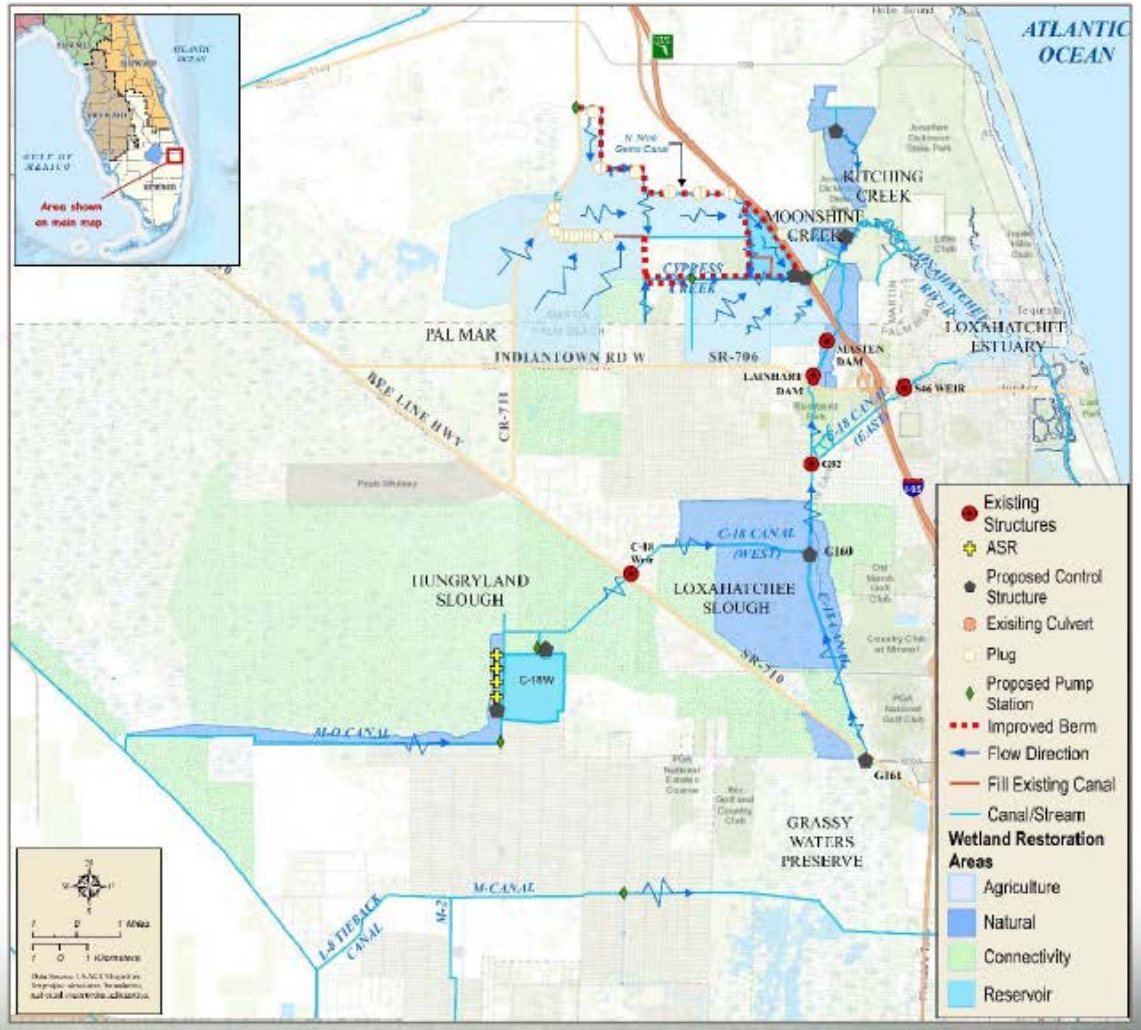
LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT (LRWRP)

GETTING THE WATER RIGHT – ALTERNATIVE 5R

- QUANTITY
  - ✓ Reducing amount of water rapidly discharged to tide through the C&SF System
- QUALITY
  - ✓ Using lower nutrient water sources, and gaining ancillary WQ benefits (restored and enhanced wetland areas)
- TIMING
  - ✓ Reservoir and ASR storage captures high flows and maintains water for release during dry periods
- DISTRIBUTION
  - ✓ Redirecting existing diverted water back into former sloughs, wetlands and Loxahatchee River



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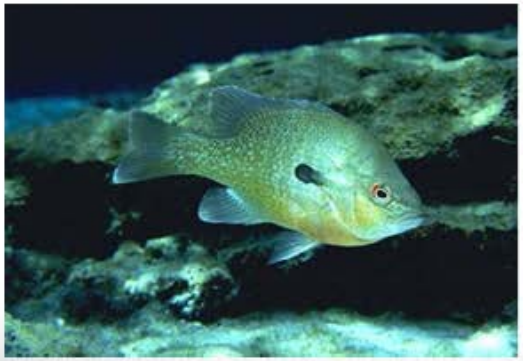
LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT (LRWRP)

RECOMMENDED PLAN – ENVIRONMENTAL BENEFITS




Restores flows: 91% of target for dry season, 98% for wet season (47% if no project)

Restores 27,000 acres of wetlands, reconnects an additional 51,000 acres





Improves habitat for fish and wildlife

Improves habitat for listed species, including Everglade snail kite & manatee

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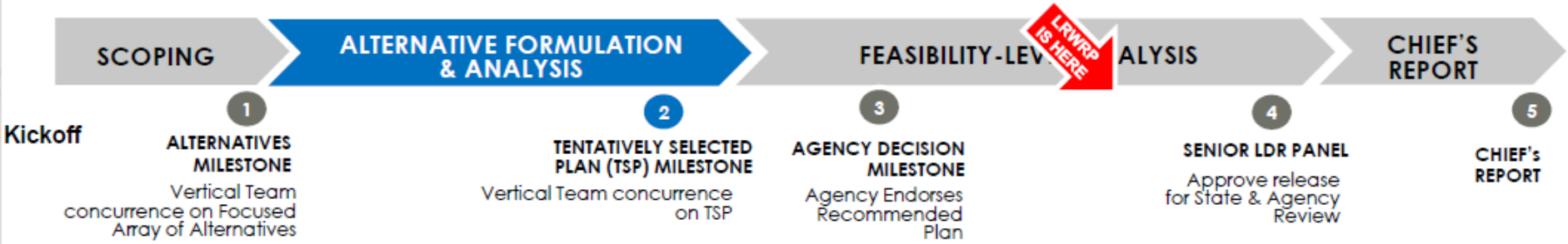
LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT (LRWRP)

SCHEDULE

SMART PLANNING PROCESS



ACTIVITY	BASELINE	SCHEDULE
Kickoff	21 Jan 2016	21 Jan 2016 (A)
1 - Alternatives Briefing	25 Apr 2016	25 Apr 2016 (A)
2 - Tentative Selected Plan Briefing	31 Jul 2018	31 Jul 2018 (A)
LRWRP IS HERE 3 - Agency Decision Briefing	25 Jun 2019	27 Jul 2019 (A)
4 - Senior Leaders Panel Briefing	13 Dec 2019	13 Dec 2019
5 - Chief's Report	16 Mar 2020	16 Mar 2020

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Martin County
Board of County Commissioners

Everglades Restoration Update

October 22, 2019