U.S. ARMY CORPS OF ENGINEERS (USACE)
JACKSONVILLE DISTRICT

HERBERT HOOVER DIKE

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US Army Corps of Engineers ®

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HERBERT HOOVER DIKE
REHABILITATION PROJECT GOALS

Purpose: Herbert Hoover Dike (HHD) Rehabilitation Project update briefing including background, ongoing work and path forward to project completion.

Project Goals: Safeguarding human life while reducing the intolerable risk of social, economic and environmental impacts to areas around Lake Okeechobee and impacts to the nationally and internationally significant Everglades ecosystem.

- Dam Safety Action Classification (DSAC) Level 1 was assigned 2006: High hazard dam; highest risk rating and required action in the Corps portfolio of dams
- $1.80B Total Project Cost (TPC): Completion of all repairs with the implementation of the 2016 Dam Safety Modification Report (DSMR) approved plan
- Lake Okeechobee System Operating Manual (LOSOM): Implementation after construction
- Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP): HHD accreditation
- State and local interest in HHD: State of Florida contributed $100M to accelerate the rehabilitation of Herbert Hoover Dike
- Supplemental Long-Term Disaster Recovery Investment Plan included $514,208,000 for Herbert Hoover Dike to fully fund construction beyond FY19

HERBERT HOOVER DIKE
IMPLEMENTATION PROGRESS

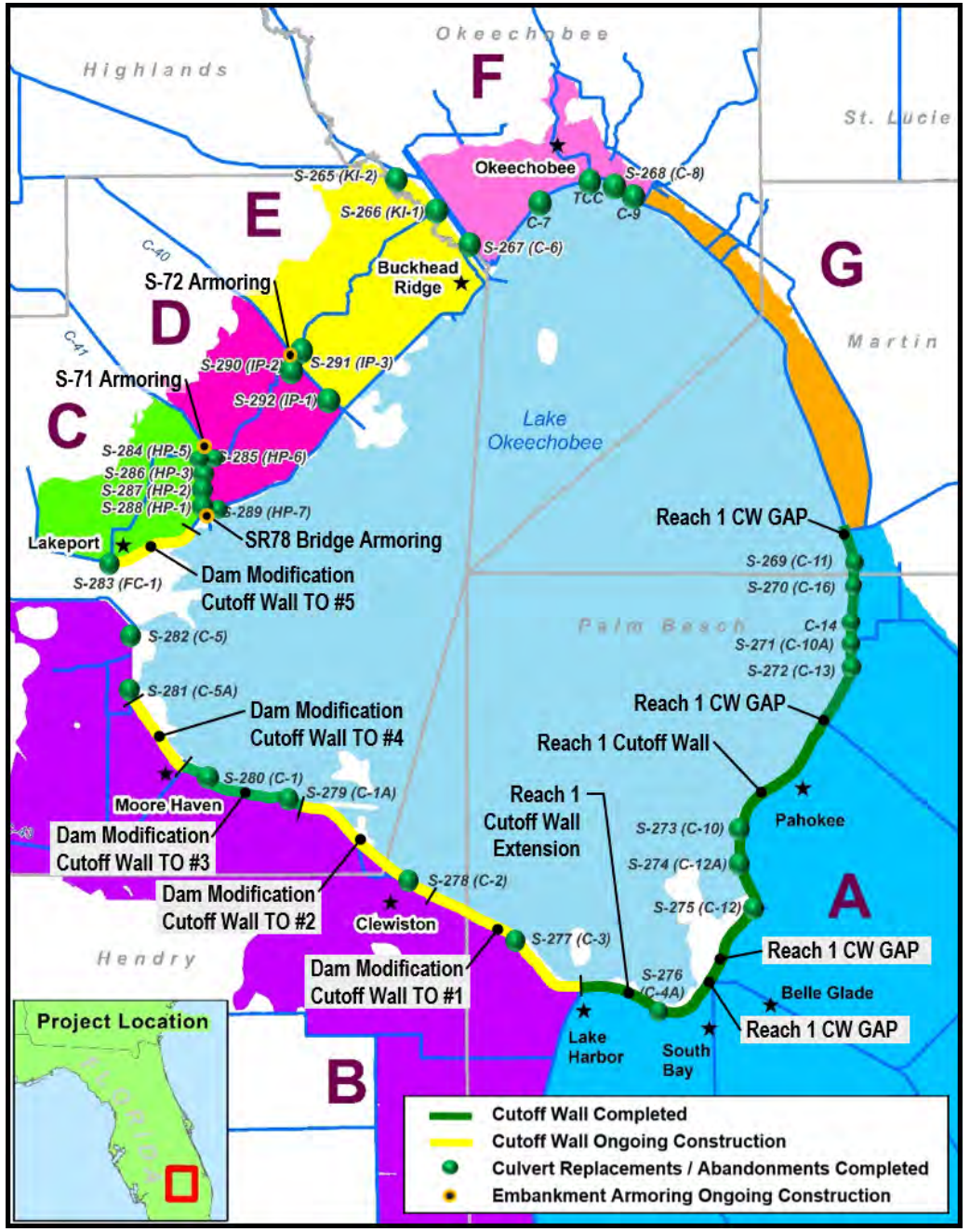
Completed Risk Reduction Work

- 33.1 miles of cutoff wall to complete in Common Inundation Zones A and B
- 28 culvert replacements (all planned replacements complete)
- 4 culvert removal / abandonments (all planned removal/ abandonments complete)

Ongoing Risk Reduction Construction Contracts

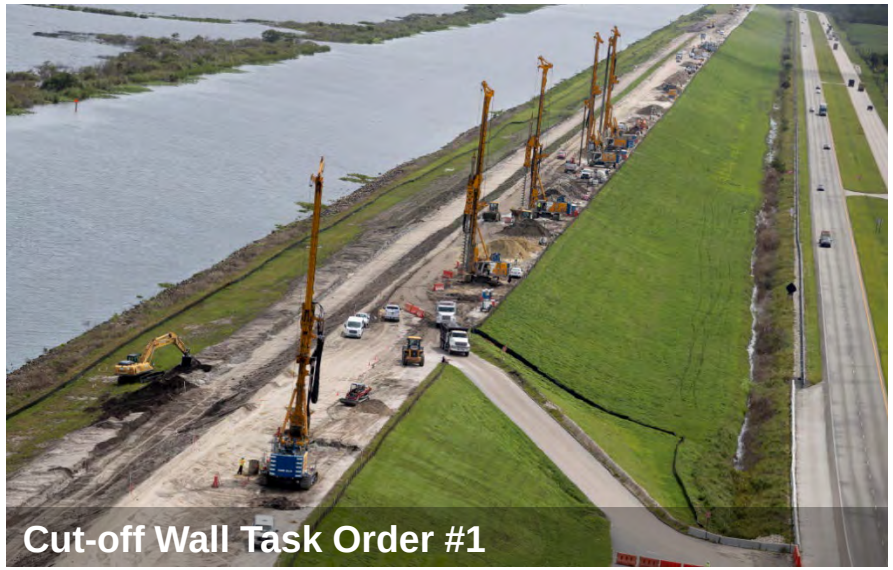
- Cutoff Wall MATOC Task Order #1 (8.3 miles)
- Cutoff Wall MATOC Task Order #2 (6.9 miles)
- Cutoff Wall MATOC Task Order #4 (3.7 miles)
- Cutoff Wall MATOC Task Order #5 (4.1 miles)
- SR78 Bridge & S-71 Embankment Armoring
- S-72 Embankment Armoring

****Construction is 97% complete for all Risk Reduction Work****



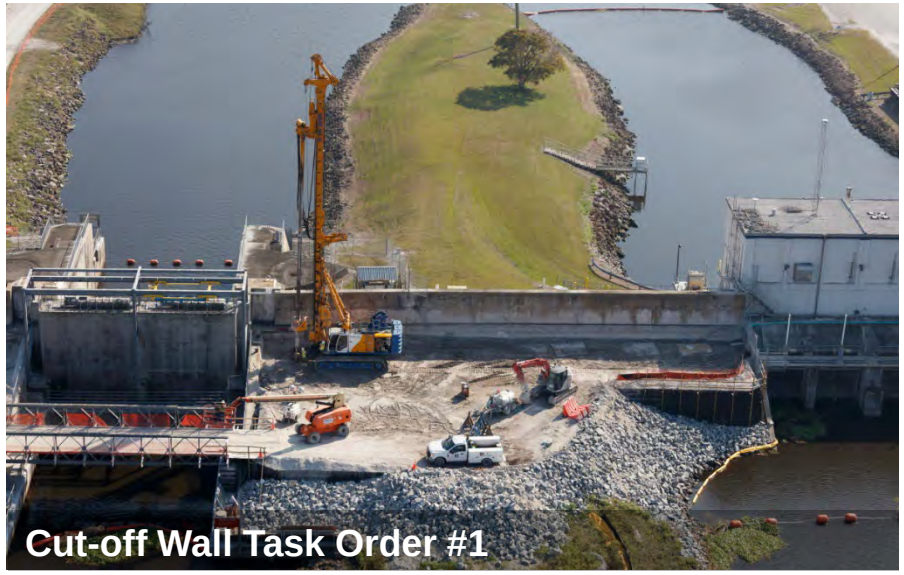
HERBERT HOOVER DIKE CONSTRUCTION OVER 15 YEARS

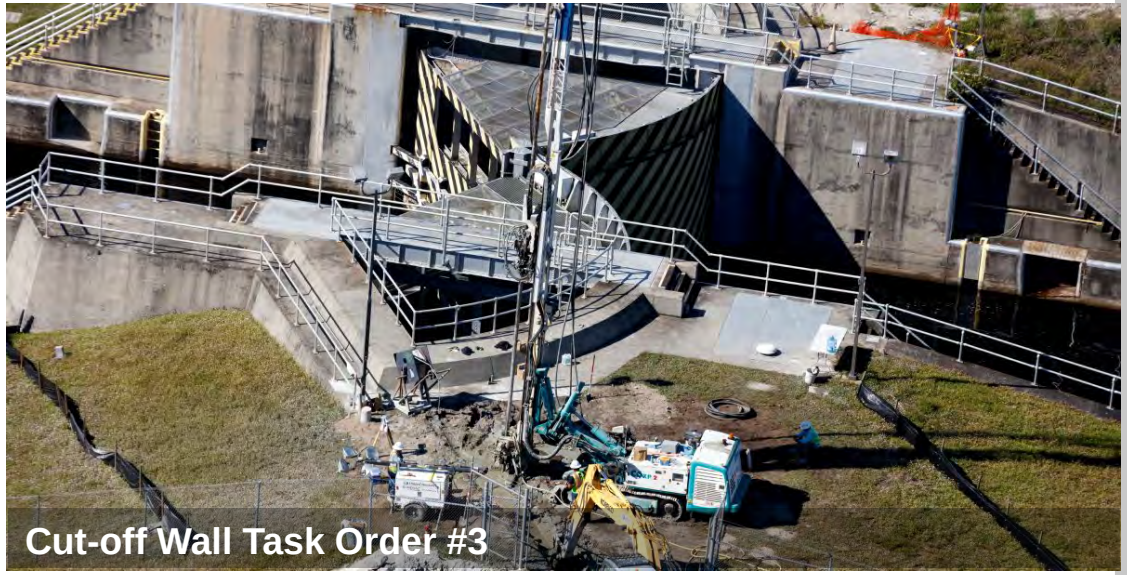

Culvert S-271 (C-10A)


Cut-off Wall Task Order #1


Reach 1 Cut-off Wall Extension


Cut-off Wall Task Order #2


Cut-off Wall Task Order #1


Cut-off Wall Task Order #3

HERBERT HOOVER DIKE
RISK REDUCTION

DAM SAFETY ACTION CLASSIFICATION (DSAC)

DSAC 1: Dam is almost certain to fail
DSAC 4: Likelihood of failure is low

Final DSAC Rating for HHD: Will be determined after all evaluations are complete

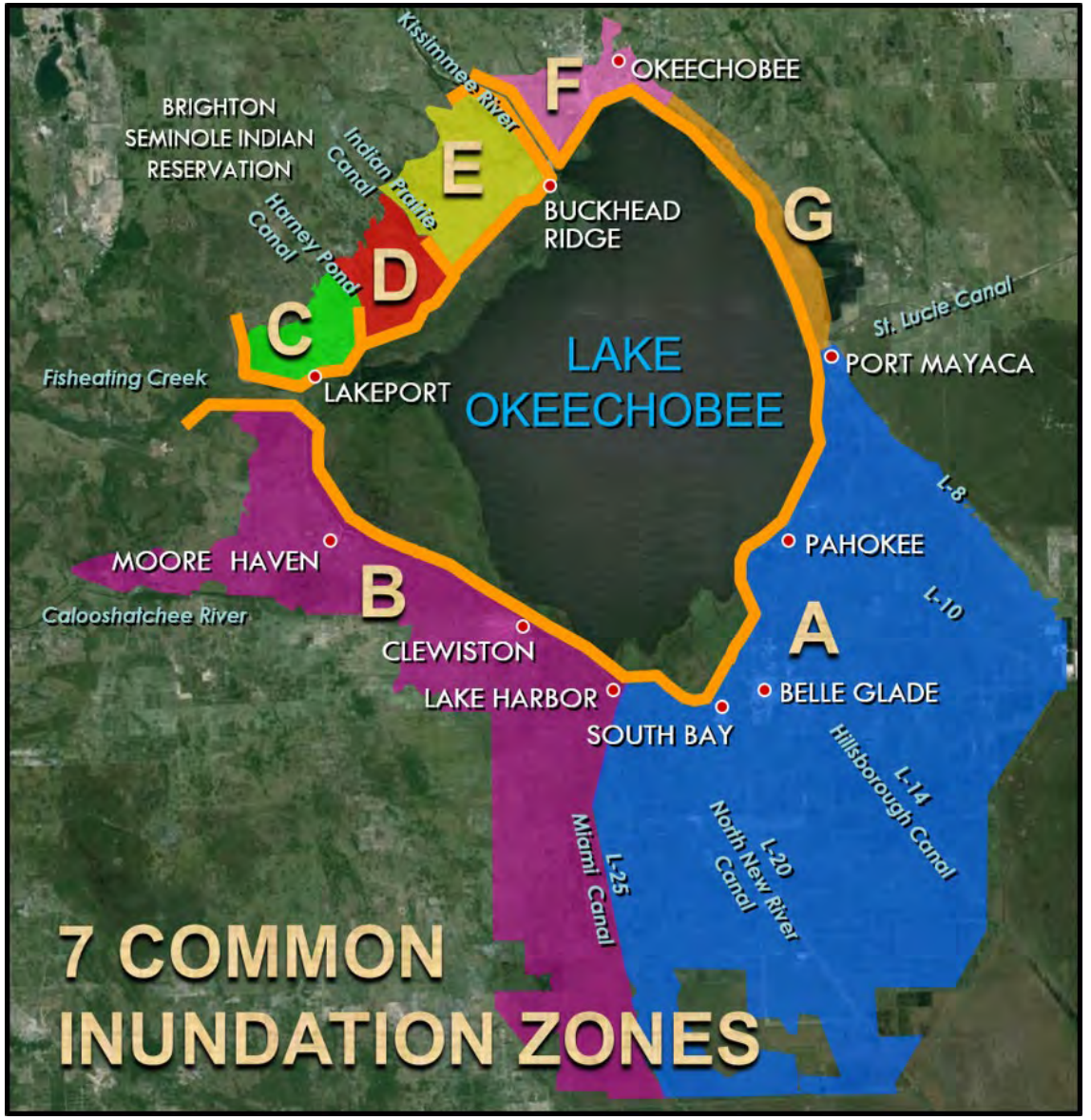
Common Inundation Zone A: DSAC 4 rating pending

Common Inundation Zone B, C, D and E: Evaluations ongoing; DSOG* briefing in January 2023

Common Inundation Zone F: DSAC 4 rating pending

Common Inundation Zone G: Evaluations complete; DSOG* briefing in October 2022.

* **DSOG: Dam Safety Oversight Group**



HERBERT HOOVER DIKE
REHABILITATION PROJECT GOALS

Safeguard human life while reducing the intolerable risk of social, economic and environmental impacts to areas around Lake Okeechobee and impacts to the nationally and internationally significant Everglades ecosystem.

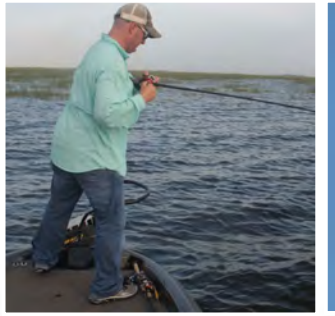
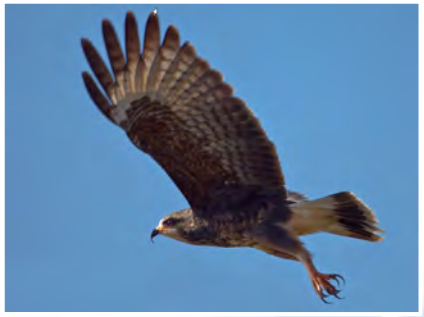
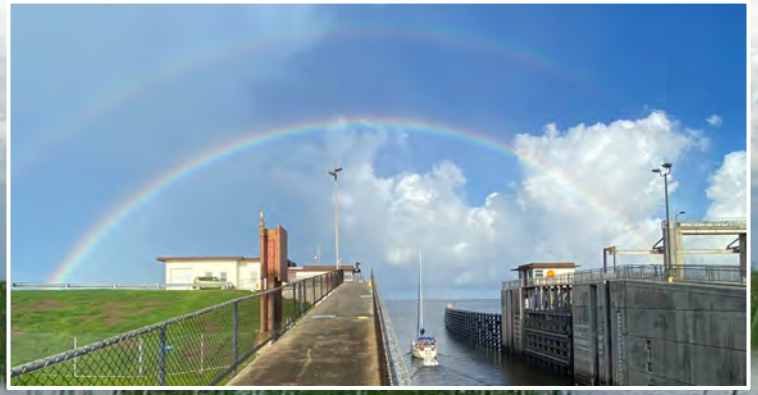





HERBERT HOOVER DIKE TEAM

Thank You for the Opportunity to Serve

LAKE OKEECHOBEE SYSTEM OPERATING MANUAL (LOSOM)

South Florida Ecosystem Restoration Task Force Meeting

October 19, 2022

E. Timothy Gysan, P.E., PMP
U.S. Army Corps of Engineers
Jacksonville District

US Army Corps of Engineers®

LOSOM GOALS AND OBJECTIVES

STUDY GOAL

Incorporate flexibility in Lake Okeechobee operations while balancing congressionally authorized project purposes.

STUDY OBJECTIVES

There are four study objectives, each with their own sub-objectives:

Objective 1:

Manage risk to public health and safety, life and property

1A: Dam safety

1B: Algal bloom risk in Lake Okeechobee

1C: Algal bloom risk in Caloosahatchee Estuary

1D: Algal bloom risk in St. Lucie Estuary

Objective 2:

Continue to meet authorized purposes for navigation, recreation, and flood control

2A: Navigation

2B: Recreation

2C: Flood control

Objective 3:

Improve water supply performance

3A: Lake Okeechobee Service Area

3B: Seminole Tribe of Florida

3C: Lower East Coast Service Area

Objective 4:

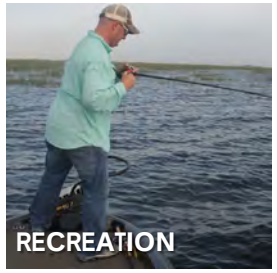
Enhance ecology in Lake Okeechobee, northern estuaries and across the south Florida ecosystem.

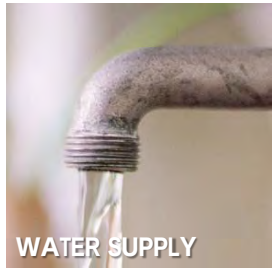
4A: Lake Okeechobee

4B: Caloosahatchee Estuary

4C: St. Lucie Estuary

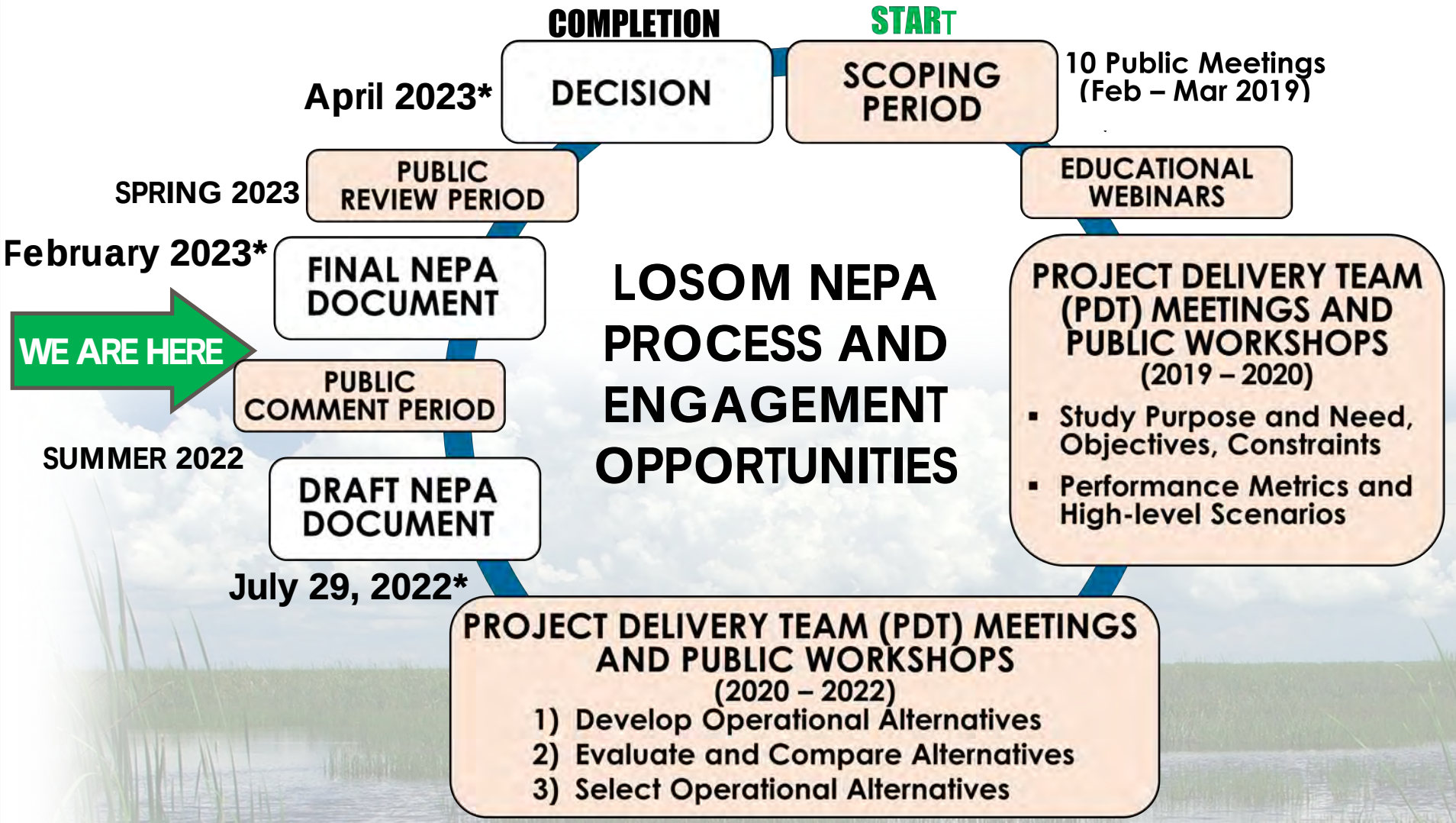
4D: South Florida





LOSOM PLANNING AND COMMUNICATION

PROCESS OVERVIEW

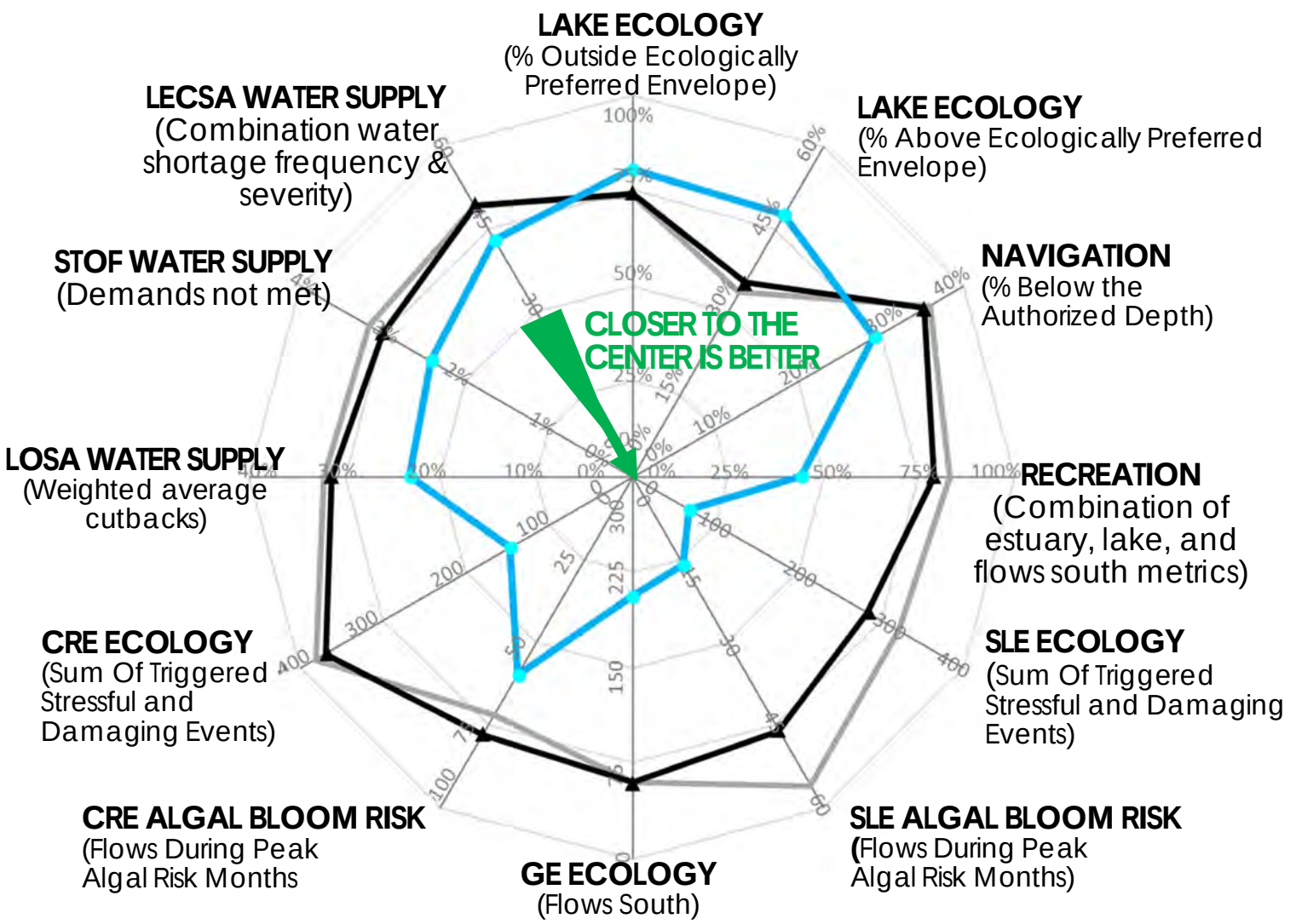


- 10 NEPA Scoping meetings in 2019 (> 22,000 total comments received)
- 6 educational webinars and two water management workshops in 2019
- 24 full PDT meetings held since August 2019; dozens more sub-team and technical meetings
- Formal Government to Government coordination with the Seminole Tribe of Florida; consultation and coordination with the Seminole Tribe of Florida staff and Miccosukee Tribe of Indians of Florida beginning in Feb 2019; monthly water supply meetings with Seminole Tribe of Florida staff beginning in May 2020

LOSOM BENEFITS AND EFFECTS

PREFERRED ALTERNATIVE PERFORMANCE OVERVIEW

MULTI-OBJECTIVE PERFORMANCE COMPARISON



LEGEND:

- **LOSOM PREFERRED ALTERNATIVE**
- **NO ACTION ALTERNATIVE** (LORS08 in 2025)
- **EXISTING CONDITION BASELINE** (LORS08 in 2019)

CRE: Caloosahatchee River Estuary

SLE: St. Lucie River Estuary

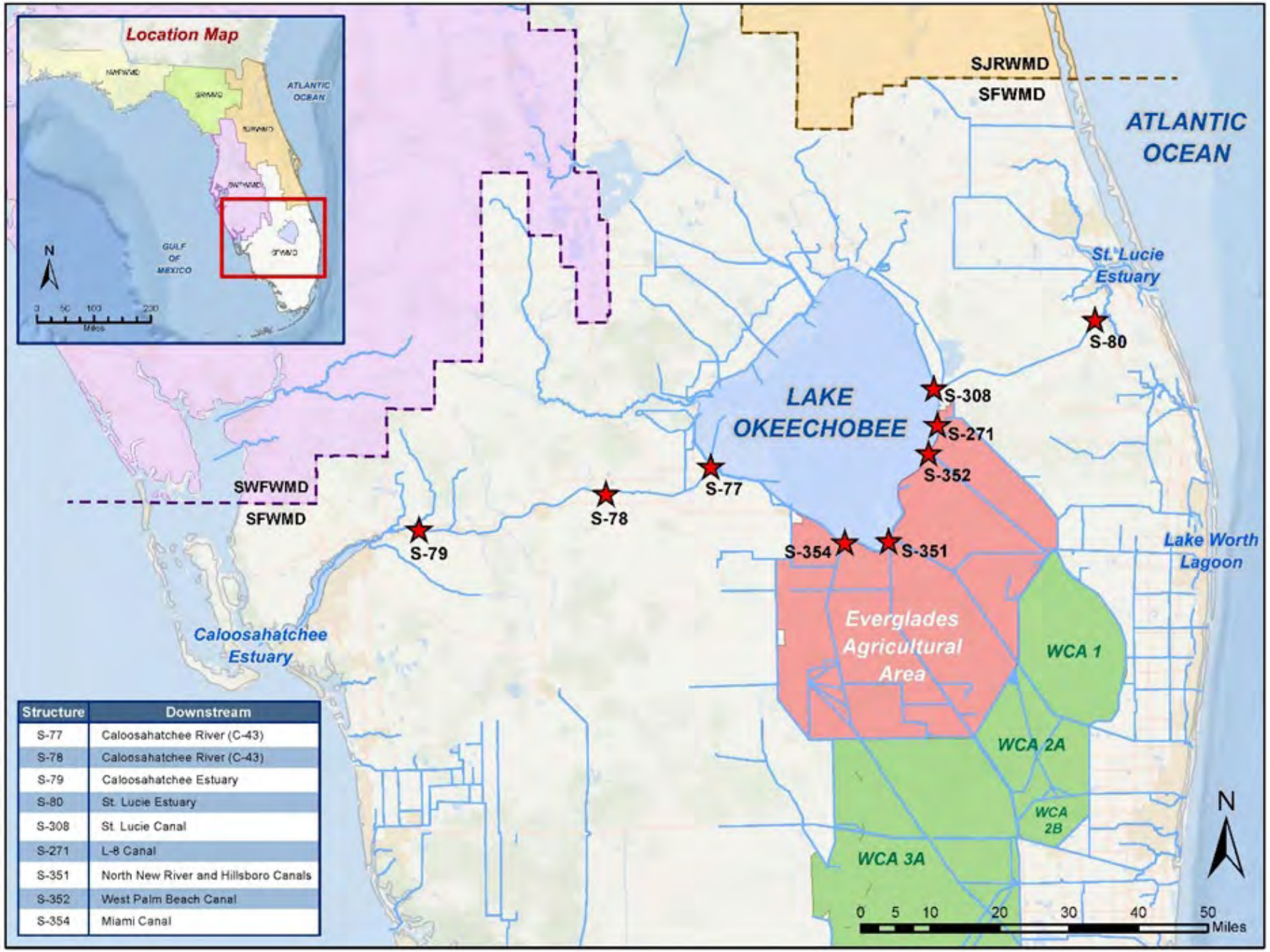
GE: Greater Everglades

LOSA: Lake Okeechobee Service Area

STOF: Seminole Tribe of Florida

LECSA: Lower East Coast Service Area

For more information, see Section 5 and Appendix C in LOSOM Draft EIS



Structure	Downstream
S-77	Caloosahatchee River (C-43)
S-78	Caloosahatchee River (C-43)
S-79	Caloosahatchee Estuary
S-80	St. Lucie Estuary
S-308	St. Lucie Canal
S-271	L-8 Canal
S-351	North New River and Hillsboro Canals
S-352	West Palm Beach Canal
S-354	Miami Canal

WATER CONTROL PLAN
APPENDIX A
KEY STRUCTURES

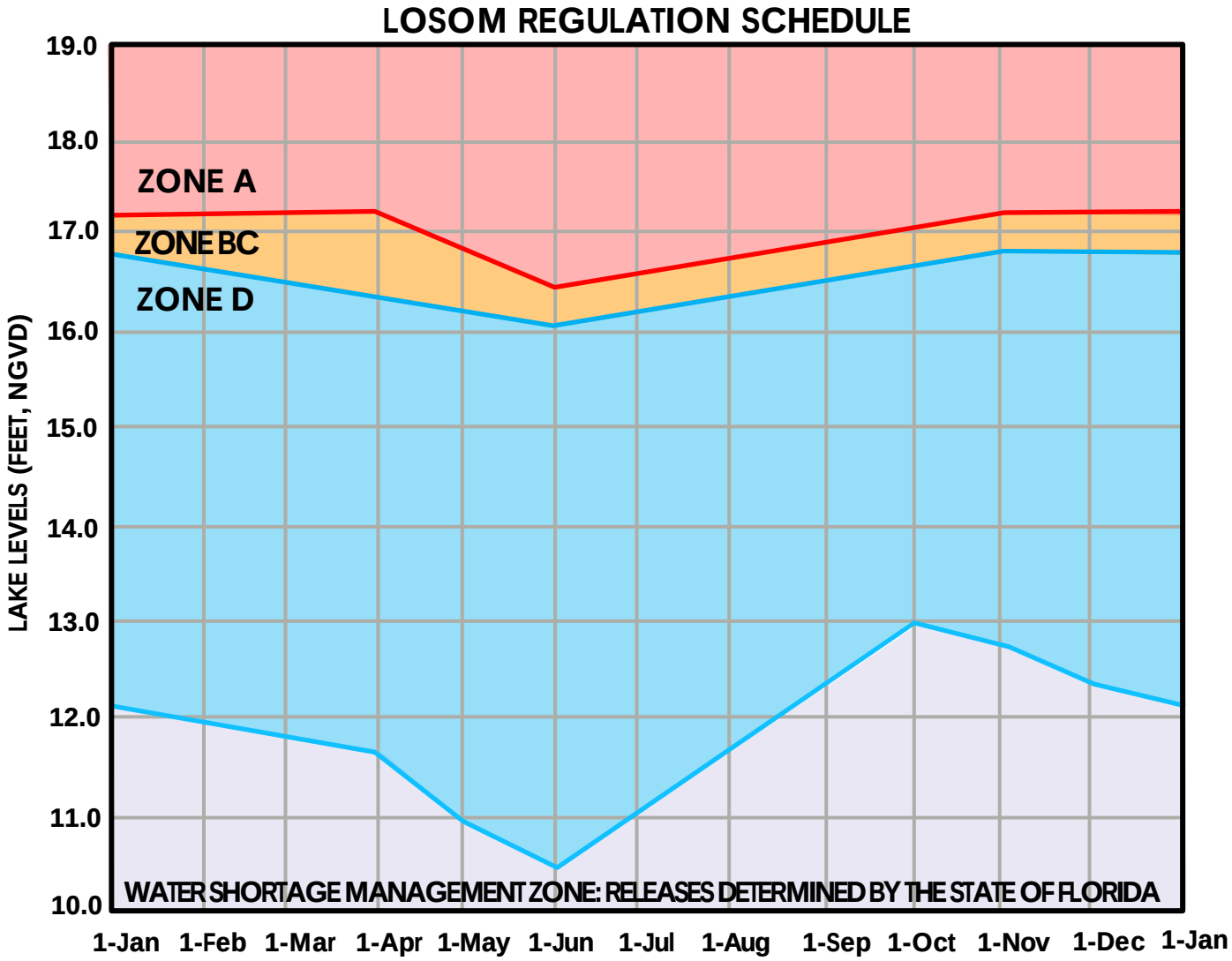
WATER CONTROL PLAN AND LOSOM REGULATION SCHEDULE

OVERALL PLAN FOR WATER MANAGEMENT

Intent: Balance of LOSOM aims to achieve synergy with project purposes and maximize system-wide benefits with available water with flexible water management operations.

Utilize all available information to make informed decisions.

- Current climate conditions
- Climate and weather forecasts
- Hydrologic and tropical outlooks
- Water-supply conditions
- Estuary conditions
- Lake Okeechobee stage and ecological conditions
- Navigation and recreation conditions
- Seminole Tribe of Florida (STOF) water supply conditions
- HAB conditions
- Stormwater Treatment Area (STA) conditions
- Water Conservation Area (WCA) conditions
- Everglades National Park (ENP) conditions
- Minimum Flows and Levels (MFLs)



Appendix A, Section 7.5.1

WATER CONTROL PLAN AND REGULATION SCHEDULE

OVERALL PLAN FOR FLOWS SOUTH

- **OPERATIONAL INTENT:** Promoting water south during the dry season creates synergy between lake management objectives, notably water supply, and beneficial timing of water release to the Everglades and to the Caloosahatchee River Estuary (CRE).

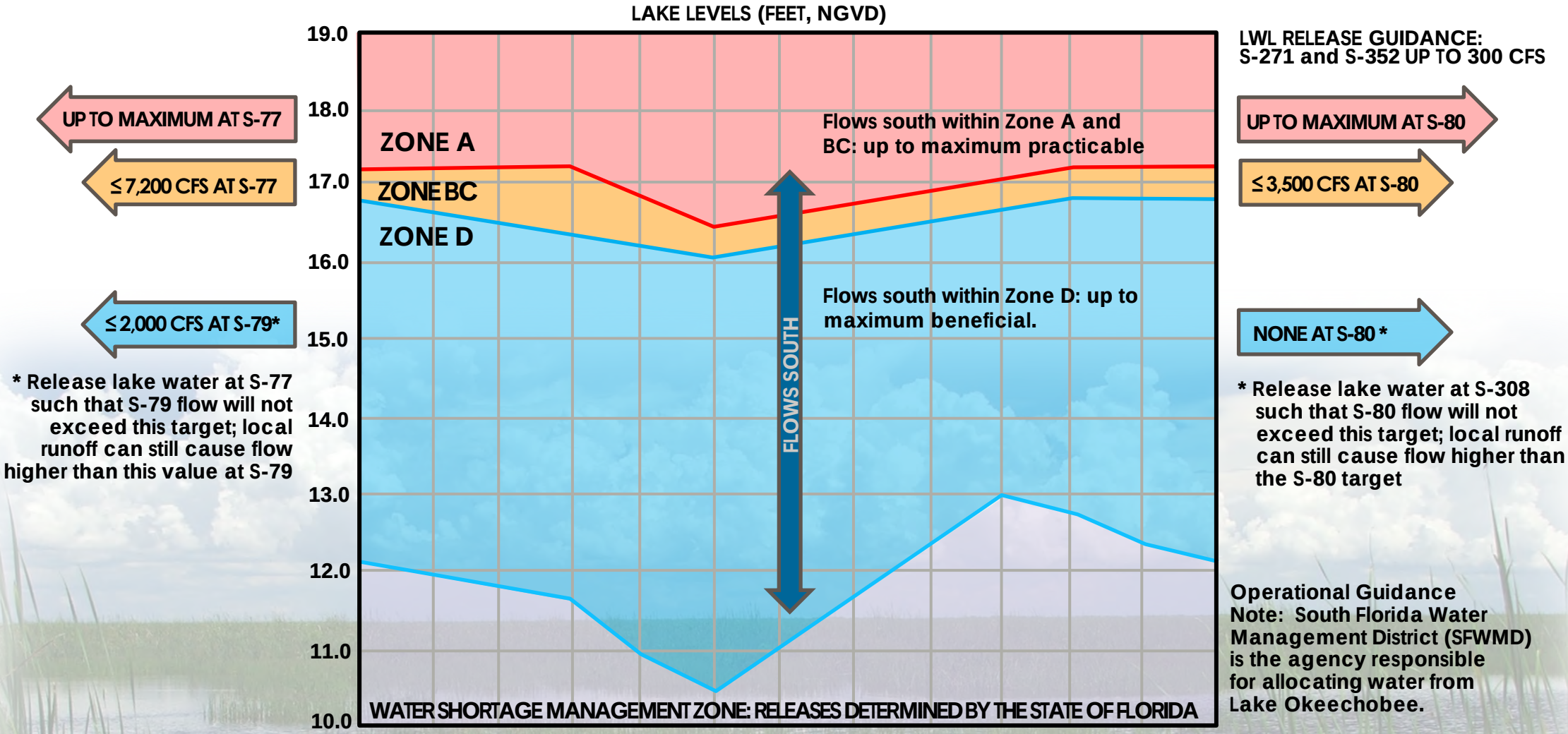
- **DRY SEASON:** Most opportunity to send water south based on downstream constraints. Typically, there is more desire for flows from the lake to the Everglades and CRE.

- **WET SEASON:** During the wet season, local rainfall along the C-43 and within the Everglades Agricultural Area (EAA), as well as Stormwater Treatment Area (STA)/Water Conservation Area (WCA) conditions and water levels will often limit the ability to make releases from the lake.

Appendix A, Section 7.5.1

THE LOSOM REGULATION SCHEDULE

TO THE CALOOSAHATCHEE RIVER ESTUARY (CRE)



UP TO MAXIMUM AT S-77

≤ 7,200 CFS AT S-77

≤ 2,000 CFS AT S-79*

* Release lake water at S-77 such that S-79 flow will not exceed this target; local runoff can still cause flow higher than this value at S-79

LWL RELEASE GUIDANCE:
S-271 and S-352 UP TO 300 CFS

UP TO MAXIMUM AT S-80

≤ 3,500 CFS AT S-80

NONE AT S-80 *

* Release lake water at S-308 such that S-80 flow will not exceed this target; local runoff can still cause flow higher than the S-80 target

Operational Guidance Note: South Florida Water Management District (SFWMD) is the agency responsible for allocating water from Lake Okeechobee.

TO THE ST. LUCIE ESTUARY (SLE) AND LAKE WORTH LAGOON (LWL)

TO THE GREATER EVERGLADES

THE WATER CONTROL PLAN AND REGULATION SCHEDULE
ADDITIONAL WATER MANAGEMENT TOOLS

HAB Operations

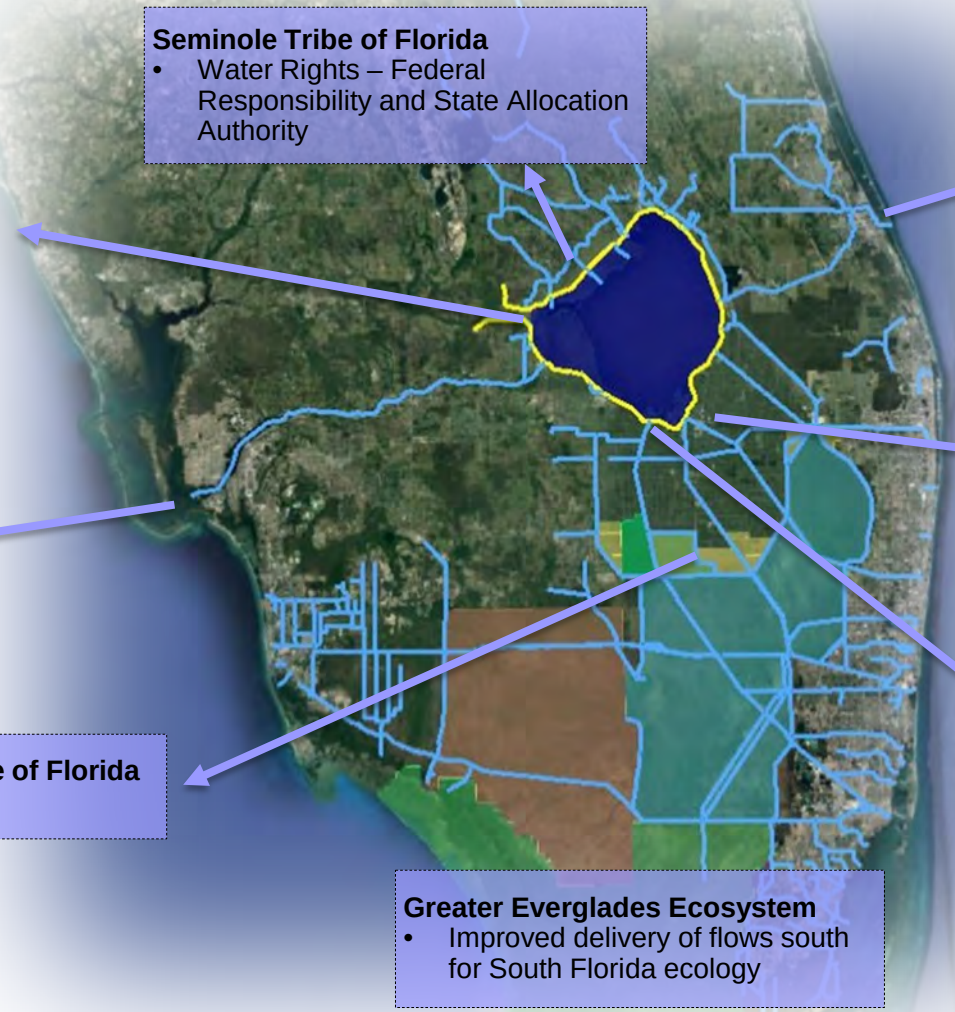
- USACE may pause or delay releases in Zone D or BC out of the lake due to risk posed by algal blooms, but this decision will be evaluated against all Congressionally authorized project purposes
- Looking at all available data, resources, and observations from federal, state, and local agencies
- Agency and stakeholder recommendations for mitigation action and risk levels

Lake Recovery Operations

- Intent: Recover Lake Okeechobee ecology after harmfully high lake stages or prolonged moderately high lake stages which can damage vegetation in the lake.
- How: Moderate releases to the estuaries in the winter and spring to accomplish a draw down by early summer (flows east/west within optimal flow ranges defined by RECOVER 2020 northern estuaries performance metric).

NEPA COMMENTS OVERVIEW

> 4,000 PUBLIC/AGENCY COMMENTS



Seminole Tribe of Florida
- Water Rights – Federal Responsibility and State Allocation Authority

Lake Okeechobee
- Adverse effects to Lake Okeechobee ecology, socioeconomics, and EJ communities
- LOSOM is not CERP – Savings Clause; CERP Goals; RECOVER metrics

St. Lucie Estuary
- Improved ecology/water quality for Northern Estuaries
- Lake recovery operations and effects on estuaries

Caloosahatchee Estuary
- Improved ecology/water quality for Northern Estuaries
- Ecological effects of extreme high flows

Water Supply Performance
- State water rights – reliance on State guidance when water levels are low
- Pre-LORS08 baseline; expectation
- EAA demands assumptions

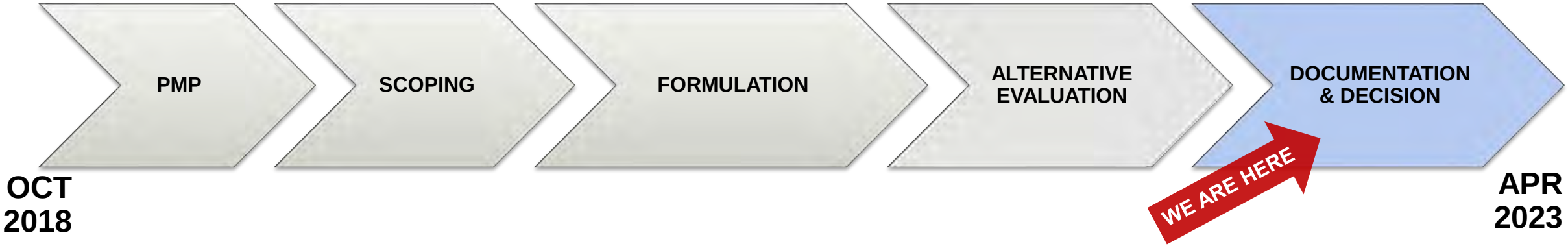
Miccosukee Tribe of Florida
- Water Quality

Water Control Plan (WCP)
- Certainty in Zone D especially near LOWSM line
- Preferred alternative representation in EIS and WCP
- Improved flows south guidance

Greater Everglades Ecosystem
- Improved delivery of flows south for South Florida ecology

USACE appreciates the transparency and inclusiveness of all stakeholders in LOSOM formulation

LOSOM SCHEDULE AND NEXT STEPS



MILESTONE	DATE
Scoping Meetings (complete)	February - March 2019
Plan Formulation & Performance Evaluation Finalized	June 2020
Evaluation of Alternative Lake Schedules and Operational Guidance	July 2020 – February 2022
Draft EIS Release	July 2022
Final EIS Release	February 2022
Record of Decision (ROD)	April 2023

SCHEDULE LOOK AHEAD

SEP 2022
- Draft Environmental Impact Statement and Water Control Plan (EIS/WCP) NEPA Period Concluded – 12 Sep
- Response to NEPA/SAD comments

OCT 2022
- Responses to comments
- Develop Final EIS/WCP

NOV 2022
- USACE Quality Review Final EIS/WCP
- Final U.S. Fish and Wildlife Service (FWS) Biological Opinion
- Final Independent External Peer Review (IEPR/ATR) Certification

QUESTIONS?