

# Second Periodic CERP Update

South Florida Ecosystem Restoration  
Joint Working Group and Science  
Coordination Group Meeting  
September 6, 2023

Eva B. Vélez, PE  
Chief, Ecosystem Branch  
U.S. Army Corps of Engineers

Jennifer Reynolds  
Director, Ecosystem Restoration  
South Florida Water Management District



US Army Corps  
of Engineers®



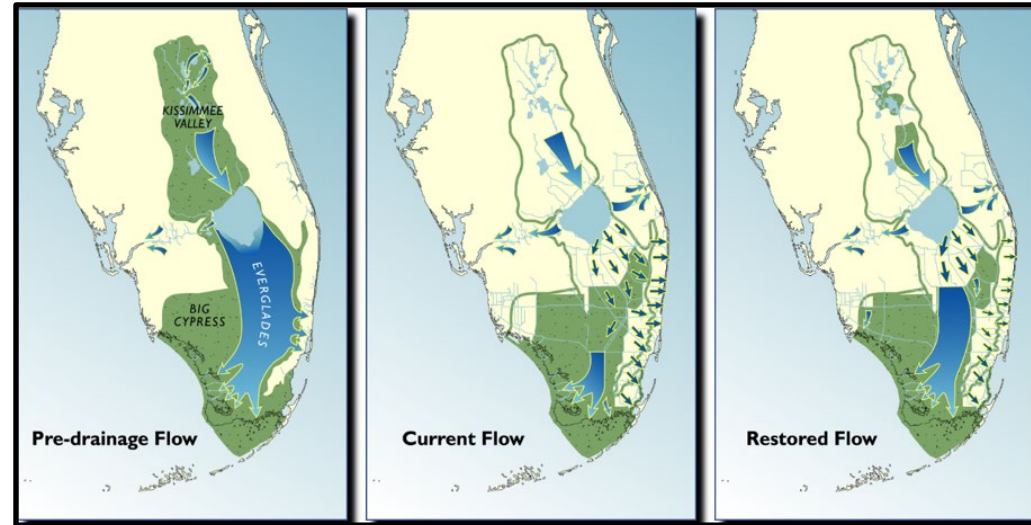


U.S. ARMY

# 68 Components FACTS



To achieve the vision of Everglades restoration, changes to the Southern Florida (C&SF) System are needed – meaning features and water management operations.



- All CERP components are part of the **Restudy or "Yellow Book"** and are labeled as a letter (Component A) or as an Other Project Element (OPE).
- A component can be new or a modification to infrastructure, or an operational change to the C&SF.

- The CERP framework and first 10 CERP projects were authorized in the Water Resources Development Act (WRDA) 2000.
- Congress provides additional authorizations to start construction of one or more components in WRDAs. These authorizations are the mechanism in which **components** become Federal **projects**.

- Since WRDA 2000, several components have been authorized for construction, completed, or implemented.
- A status is summarized in several documents (e.g., South Florida Water Management District (SFWMD) **South Florida Environmental Report (SFER)**, and the **Integrated Delivery Schedule (IDS)**).





# What is a 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.





U.S. ARMY

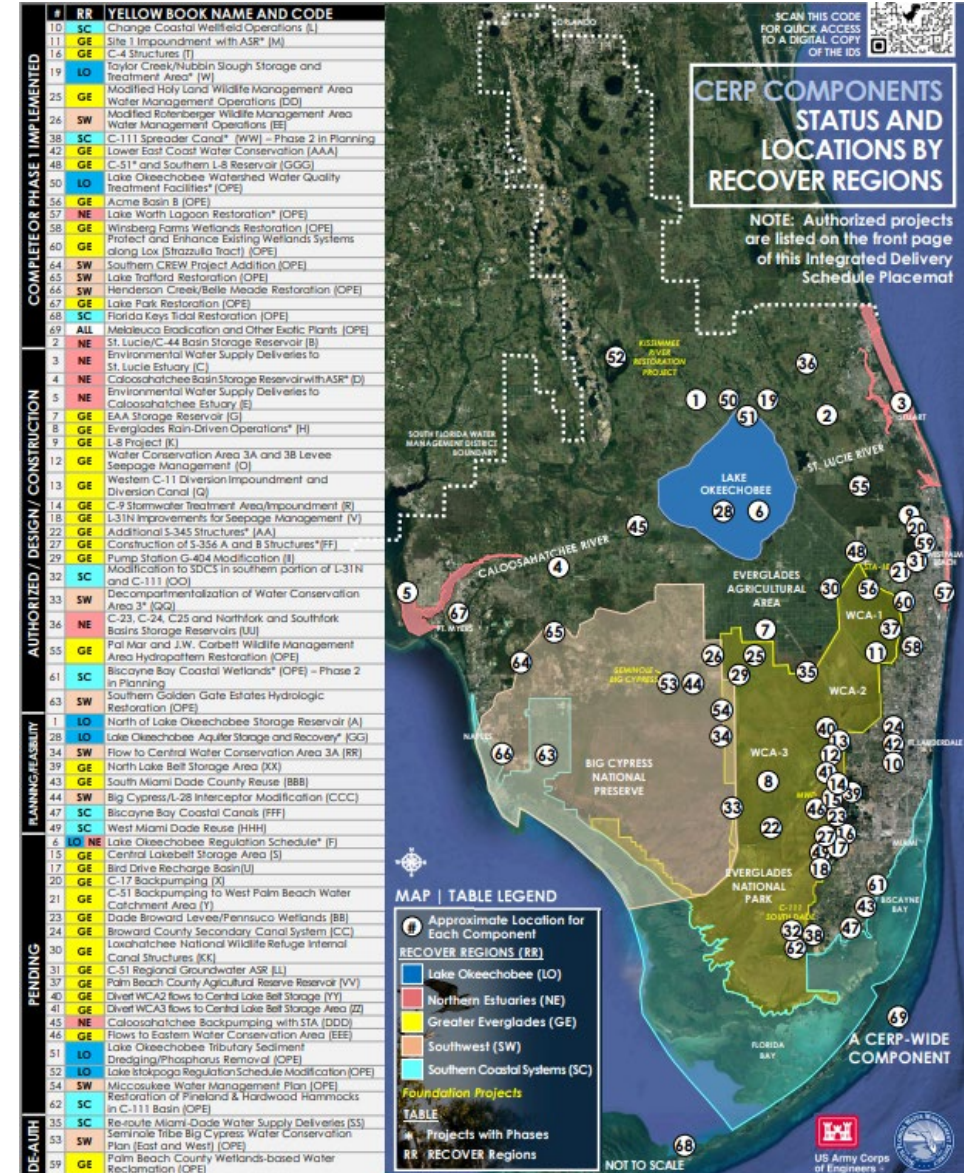
# Second Periodic CERP Update (SPCU): Scope



► The SPCU will not modify the authorization for CERP.

► The CERP Update will evaluate (Ref. 33 CFR, 385.31 (c))

- *The total quantity of water that is expected to be generated by implementation of the Plan, including the quantity expected to be generated for the natural system to attain restoration goals as well as the quantity expected to be generated for use in the human environment.*







# SPCU: Technical Considerations



- ▶ The CERP Update may include technical considerations, such as:
  - New information resulting from changed or unforeseen circumstances,
  - New scientific and technical information, new or updated modeling;
  - Information developed through the assessment principles contained in the plan;
  - And future authorized changes to the plan integrated into the implementation of the plan.
  
- ▶ Information For Consideration:
  - The latest Regional Simulation Model (RSM) with extended Period of Record,
  - Completed foundation projects information,
  - Water supply storage to the north, south, east and west of Lake Okeechobee,
  - Completed CERP first- and second-generation projects,
  - The updated Lake Okeechobee Regulation Schedule,
  - The latest Sea Level Rise information, etc.



U.S. ARMY

## SPCU: Coordination



- ▶ 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



# SPCU: RECOVER Technical Evaluation



## RECOVER Technical Evaluation will address the following questions:

- Are the CERP goals and objectives as identified in the Yellow Book achieved in the Future With Project (FWP) condition? Regional? System-wide?
- In what area/Indicator Region (IR) within the CERP footprint are CERP goals and objectives as envisioned in the Yellow Book achieved/not achieved in the FWP condition?
- In areas/IRs within the CERP footprint in which CERP goals and objectives as envisioned in the Yellow Book are not achieved in the FWP condition, what is the primary reason? (i.e. lack of freshwater flow, sea level change, etc.)
- What parameter(s) need to be considered for potential additional management measures (structural/operational) in areas where CERP goals and objectives are not achieved in the FWP condition? (e.g. quantity, quality, timing or distribution- e.g. additional dry season flows are needed in WCA-3A- north to prevent soil oxidation based upon output from soil oxidation PM)

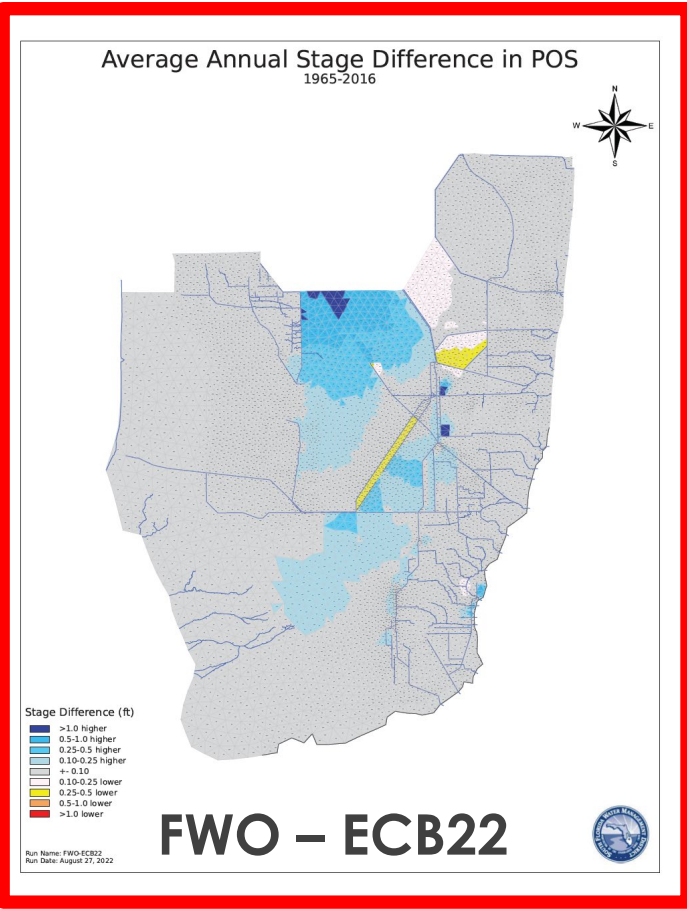


U.S. ARMY

# SPCU: Sea Level Change (SLC)

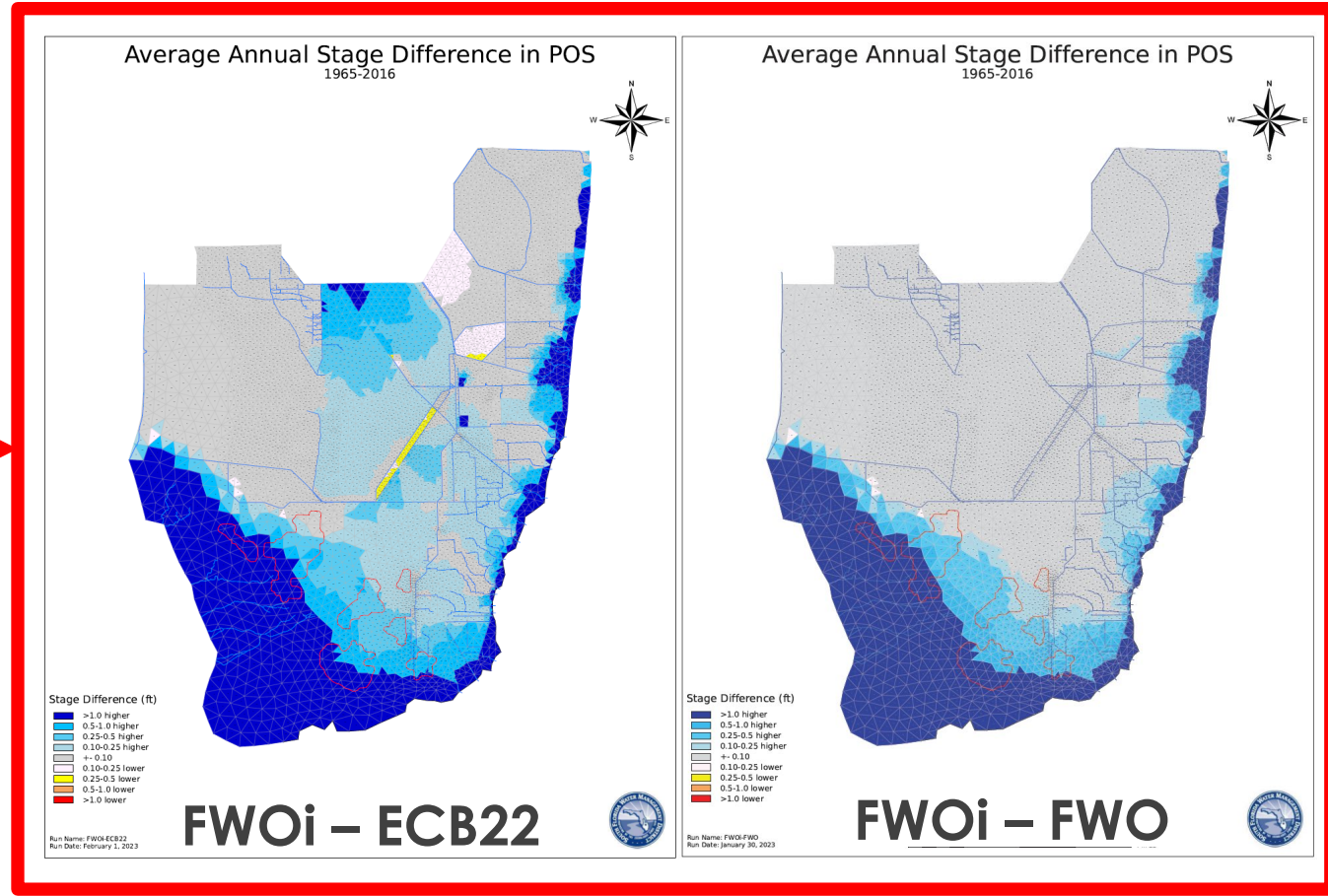
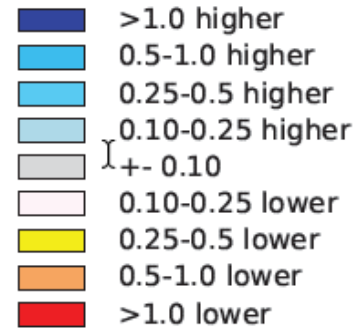


SPCU will use BBSEER Sea Level Rise, USACE Intermediate SLC for Future Without CERP and FWCEP:



**FWOi = +1.6ft SLC**

Stage Difference (ft)



- FWO and ECB22 have the same sea level boundary condition

- Stages increase regionally throughout South Florida due to SLC
- Backwater effects can be observed throughout the C&SF System
- Groundwater gradients from upland to downstream coast reduced

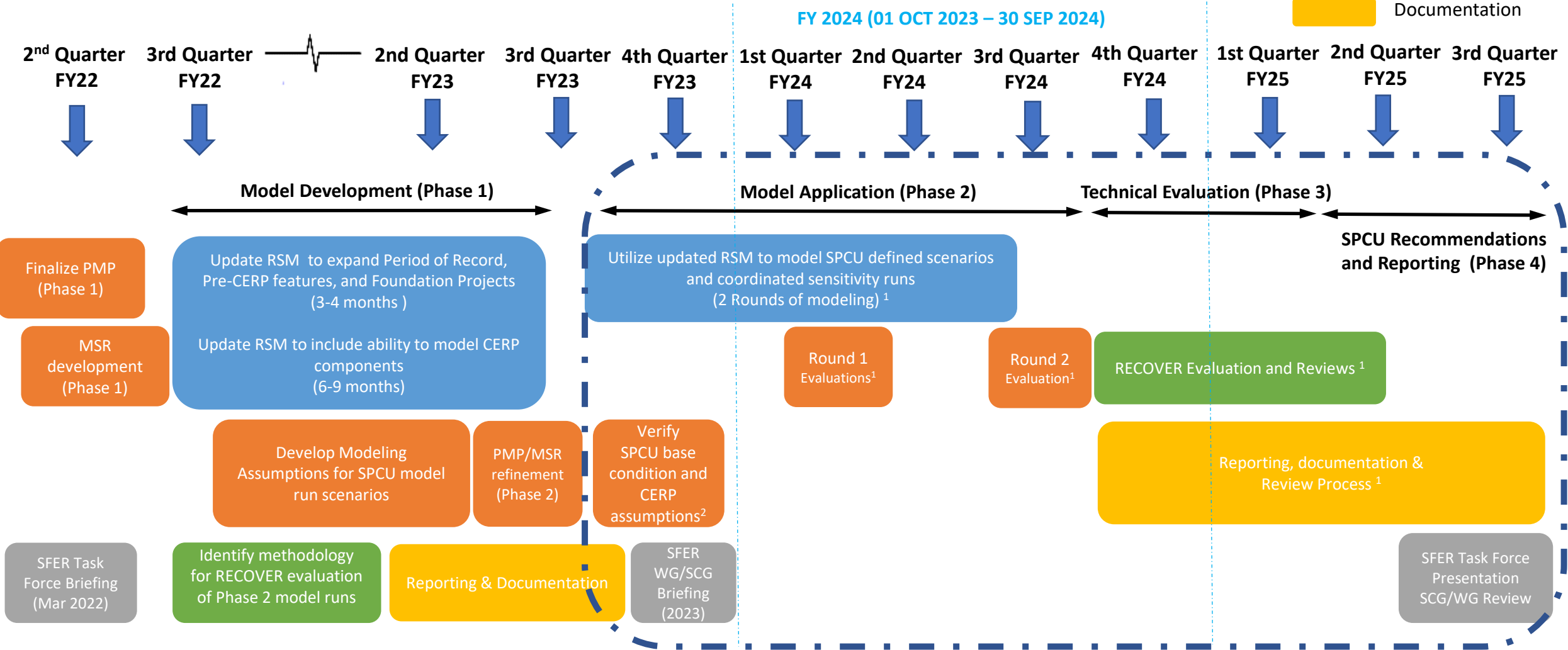


# SPCU Workflow



May 2023 PMP Update Scope

- Team Engagements
- Modeling
- RECOVER
- SFER Task Force
- Documentation



<sup>1</sup> Task durations and schedules reflect SPCU team, IMC and RECOVER coordination, as of May 2023

<sup>2</sup> Task Continued from Phase 1 PMP/MSR



U.S. ARMY

# SPCU: Status and Next Steps



- Status:
  - ▶ Currently working to develop RSM Pre-CERP baseline, Future without Baseline, and the Future with CERP
  
- What's Next:
  - ▶ Selecting model assumptions
  - ▶ Conduct modeling of all conditions without sea level change represented
  - ▶ RECOVER evaluation and comments



# Questions





U.S. ARMY

# Background



As defined in the CERP Programmatic Regulations (§385.3 Definitions), a periodic CERP update is an “*evaluation of the Plan that is conducted periodically using new or updated modeling that includes the latest scientific, technical, and planning information*” to understand whether the goals and purposes of the Plan are achieved. A periodic CERP Update is not a reformulation or a modification of the authorized CERP.

## CERP Goals & Objectives (USACE 1999),

**Table 5.1: Goals And Objectives For The C&SF Restudy**

Goals	Objectives
Enhance Ecological Values	Increase the total spatial extent of natural areas
	Improve habitat and functional quality
	Improve native plant and animal species abundance and diversity
Enhance Economic Values and Social Well Being	Increase availability of fresh water (agricultural/municipal and industrial)
	Reduce flood damages (agricultural/urban)
	Provide recreational and navigational opportunities
	Protect cultural and archeological resources and values

▪ CERP Purpose:

*“The purpose of the Restudy is to reexamine the C&SF Project to determine the feasibility of structural and operational modifications to the project essential to the restoration of the Everglades and south Florida ecosystem, while providing for other water related needs such as urban and agricultural water supply and flood protection in those areas served by the project.”*

C&SF Restudy, USACE 1999, Section 1.2.1, page 1-7).