

CENTRAL EVERGLADES PLANNING PROJECT



EAA Storage Reservoirs

PRESENTED BY
Matt Morrison,
Everglades Policy and
Coordination

South Florida Water
Management District

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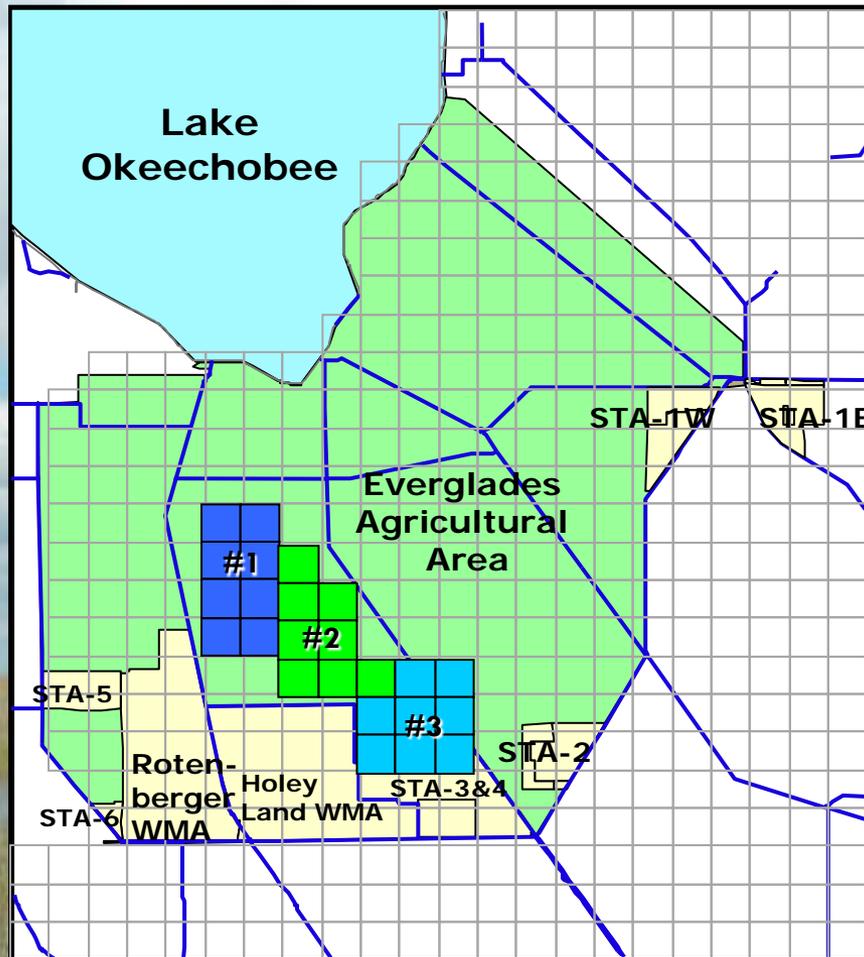
RECAP EAA RESERVOIRS PRESENTATION OUTLINE

- Restudy Authorization
- EAA Reservoirs
 - Goals and Objectives
 - Project Location Screening Analysis
 - Plan Formulation Rationale
 - Tentatively Selected Plan
 - Plan Formulation Challenges
- CEPP Land Considerations

RE STUDY AUTHORIZATION

- Study first authorized by Congress in 1992; amended in the WRDA of 1996
- Re-examination the C&SF Project
 - Restore south Florida ecosystem
 - Enhance water supplies
 - Maintain flood control
 - 360,000 ac-ft of storage and improved canal conveyance
- WRDA 2000 was signed in Dec 2000
 - Authorized the Comprehensive Everglades Restoration Plan
 - Conditionally authorized EAA Reservoir Phase 1 - 240,000 ac-ft

EAA RESERVOIRS AS RECOMMENDED IN THE RESTUDY



Three 120,000 ac-ft cells

- **Compartment 1**
 - Used to meet Everglades Agricultural Area irrigation demands
- **Compartment 2**
 - Used to meet environmental demands as a priority
- **Compartment 3**
 - Used to meet environmental demands

EAA PIR GOALS AND OBJECTIVES

- Store Lake Okeechobee releases and EAA Basin runoff
- Reduce Lake Okeechobee regulatory releases to the estuaries
- Improve inflow timing into STA-3/4
- Improve environmental water deliveries to the Water Conservation Areas and Everglades National Park
- Preserve EAA irrigation demands
- Provide incidental flood protection within EAA

EAA RESERVOIRS PLAN FORMULATION RATIONALE

- Regional storage location screening analysis
 - Robust hydraulic connection to Lake Okeechobee with flexibility to manage high water levels
 - Improve the timing of environmental deliveries to the WCAs
 - Reduce regulatory releases of water from the EAA to the WCAs
 - Reduce regulatory releases to the northern estuaries
 - Meet agricultural demands and flood protection within EAA
 - Potential to enhance STA operations

EAA RESERVOIRS PLAN FORMULATION RATIONALE (Continued)

- Minimize negative impacts on socio-economics in Palm Beach County
 - Value and productivity of land in the EAA decreases with distance from Lake Okeechobee
- Conclusion
 - Southern portion of EAA demonstrated better cost effectiveness on a cost per ac-ft of storage when compared to other locations
 - No compelling reason to pursue meeting the planning objectives elsewhere in the study area

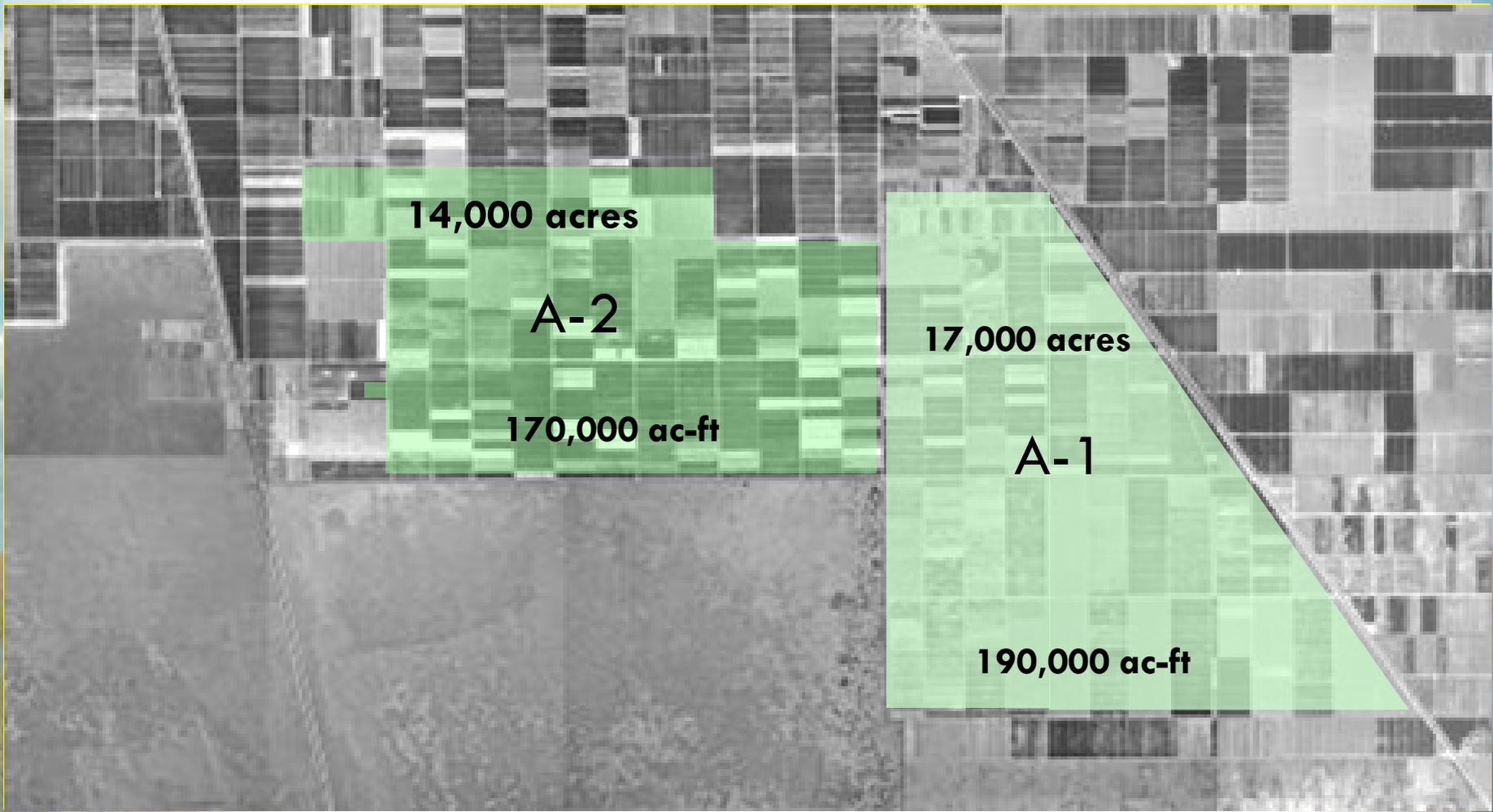
EAA RESERVOIRS PLAN FORMULATION

Evaluation of alternative configurations and Yellow Book Plan Reaffirmation

Modeling Alternative Number	Storage Depth (feet)	Footprint Area (acres)	Storage Volume (acre-feet)	Total Costs
1	6	60,000	360,000	\$1,200M
2	10	36,000	360,000	\$ 932M
3	12	30,000	360,000	\$ 912M
4	14	25,715	360,000	\$1,038M

- Alternative 3 – Tentatively Selected Plan

EAA RESERVOIRS TENTATIVELY SELECTED PLAN



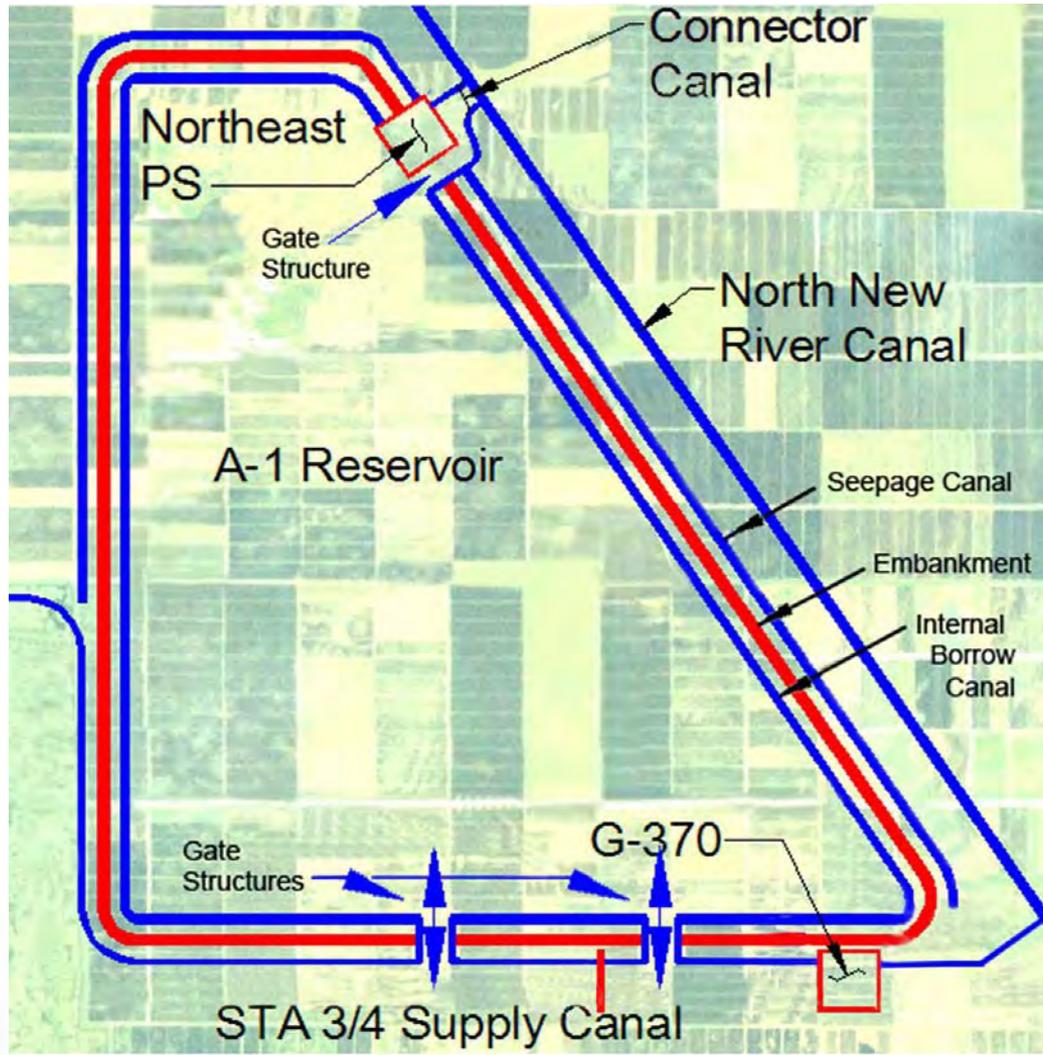
NATIONAL ACADEMY OF SCIENCE RECOMMENDATIONS

- “A fundamental premise of CERP is that increased water storage is needed to improve the condition in the South Florida Ecosystem”
- Incremental Adaptive Restoration (IAR)
 - Alternative framework for initiating restoration actions
 - Make investments in restoration that are significant but generally smaller than CERP Projects to promote learning and provide the foundation for more rapidly advancing restoration benefits

NATIONAL ACADEMY OF SCIENCE RECOMMENDATIONS (Continued)

- Catalyst for CERP PIR Project Phasing and SFWMD's Expedited Design Construction Program (Acceler8)
 - EAA PIR Recommended Phased Approach
 - Phase 1 - A1 Reservoir and associated conveyance recommended for authorization
 - Phase II - A2 Reservoir and STA
 - SFWMD expedited design and construction of Phase I - A1 Reservoir

A1 RESERVOIR – 190,000 ac-ft



EAA RESERVOIRS PLAN FORMULATION CHALLENGES

- Independent rather than interdependent project formulation with Decomp and ENP Seepage Management – difficult to quantify benefits
- Technical and policy uncertainties associated with the sizing and layout of A2 and new STA
- System wide Benefits Evaluation Analysis Methodology (BEAM)
 - 80% improved target, 20% away from target
 - Lacked zone methodology developed in Decomp PIR
- Water Made Available to ENP – 33 years of delivery increases and 3 years of delivery decreases over the 36 year POR

CEPP LAND CONSIDERATIONS

WHY FOCUS ON PREVIOUSLY ACQUIRED SFWMD LANDS?

- Unwilling sellers, eminent domain authority, economic realities
- Lands already acquired and ready for environmental restoration purposes
- Uniform topography that reduces design and construction costs for above ground features
- Major canal network (Miami Canal, B&C Canal and NNR Canal) already in place and in close proximity to move water from LO to project features
- Adjacent to existing treatment facilities and natural areas – centralized economy of scale

CEPP LAND CONSIDERATIONS

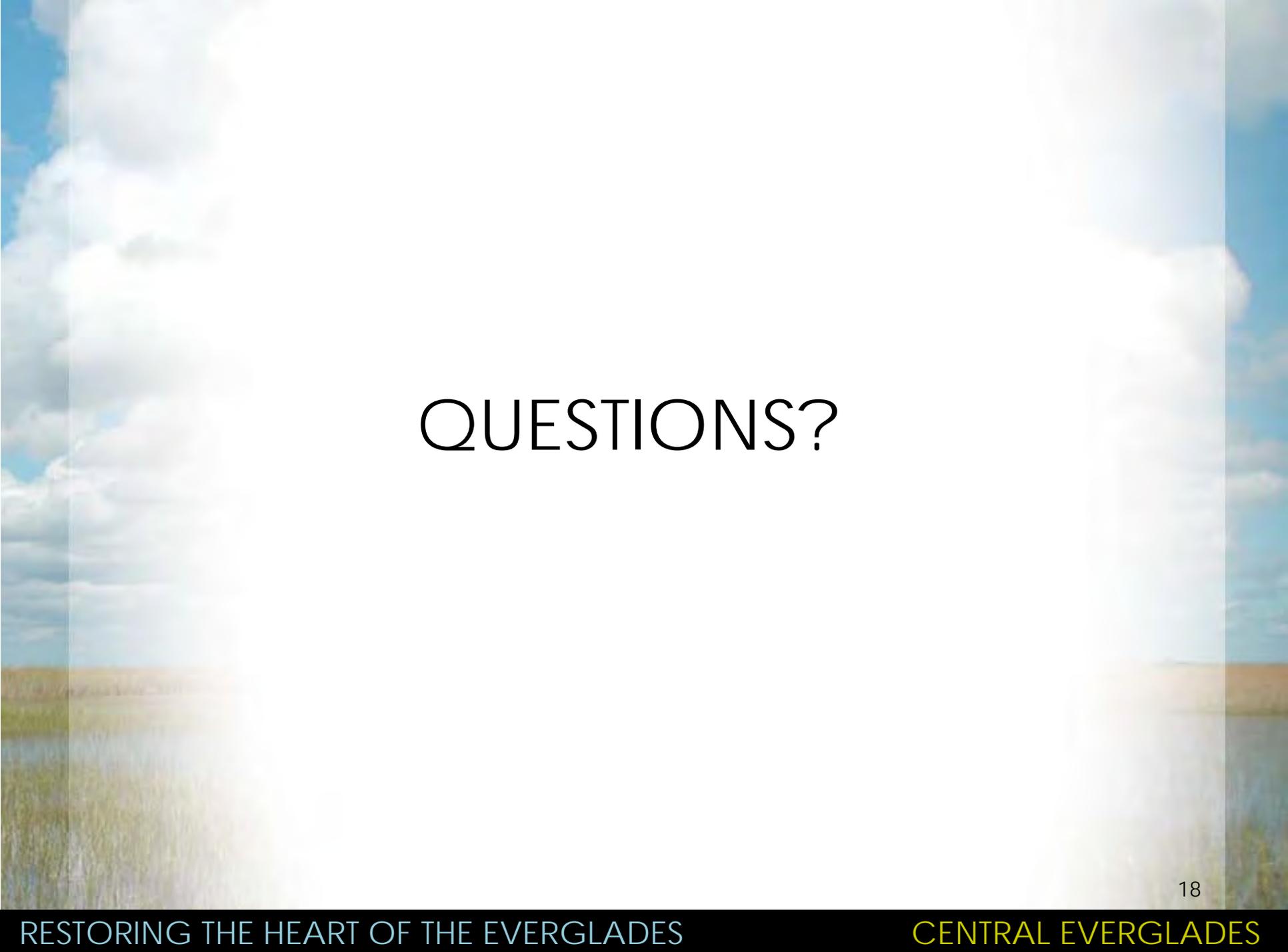
WHY FOCUS ON PREVIOUSLY ACQUIRED SFWMD LANDS? (Continued)

- **Construction Considerations**
 - Muck depths lowest in Tailsman - reduces construction costs for above ground features
 - Easy construction and maintenance access as geographically located
 - Could utilize existing G-370 pump station as feature inflow pump station – significant cost savings
 - Seepage south out of above ground features into STA 3/4 and natural areas (Holey Land) is a benefit and provides a cost savings by eliminating the need for a deep cut-off wall and seepage canal on the south perimeter of project features

CEPP LAND CONSIDERATIONS

WHY FOCUS ON PREVIOUSLY ACQUIRED SFWMD LANDS? (Continued)

- Construction material available on site for above ground features in EAA (blasting)
- Meets current applicable FAA Circular requirements for the creation of facilities (water bodies and marshes -STAs) in approach, hold and departure patterns
- Significant amount of other project related data already exists
 - Existing Site Conditions
 - Geotechnical
 - Agricultural Chemicals
 - Cultural Resources



QUESTIONS?