

LAKE OKEECHOBEE WATERSHED PROJECT

INTEGRATED PROJECT IMPLEMENTATION REPORT & ENVIRONMENTAL IMPACT STATEMENT

PROJECT DELIVERY TEAM MEETING

August 10, 2016

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MEETING AGENDA

LAKE OKEECHOBEE WATERSHED PROJECT INTEGRATED FEASIBILITY STUDY & ENVIRONMENTAL IMPACT STATEMENT

Introduction (Tim Gysan, USACE)

Sub-Teams and Leads (Lisa Aley, USACE)

Updates Since Project Kick-off (Lisa Aley, USACE)

Project area map

Purpose, scope, problems, opportunities, objectives, constraints

Management measures

Project risks

Real estate overview and considerations (Matt Morrison, SFWMD)

Existing screening tools

RESOPS and LOOPS (Clay Brown, SFWMD)

Capital, real estate, and O&M cost estimating tool overview (Tzufit Boyle, SFWMD)

Land Suitability Model (Lisa Aley, USACE)

Existing and future without project model assumptions (Clay Brown, SFWMD)

Milestone schedule overview, 90 day look ahead and budget review (Tim Gysan, USACE)

Tasks to get to Alternatives Milestones (Lisa Aley, USACE)

Next Steps

PDT meeting August 24, 2016 – web meeting

Task Force Working Group sponsored workshop – TBD

Public Comment Period





PLAN FORMULATION SUBTEAM TASKS



BUILDING STRONG

- Leads: Lisa Aley (USACE), Lesley Bertolotti
- Problems, opportunities, objectives, constraints
- Future without project assumptions
- Identify measures to address concerns
- Initial alternatives and screening
- Identify tentatively selected plan



ECOLOGICAL TASKS



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- Leads: Dr. Gretchen Ehlinger (USACE) and Dr. Bruce Sharfstein (SFWMD)
- Restoration performance measures
- Evaluate environmental effects and benefits
- Coordinate environmental concerns
- Identify measures to address concerns
- Monitoring and adaptive management plans

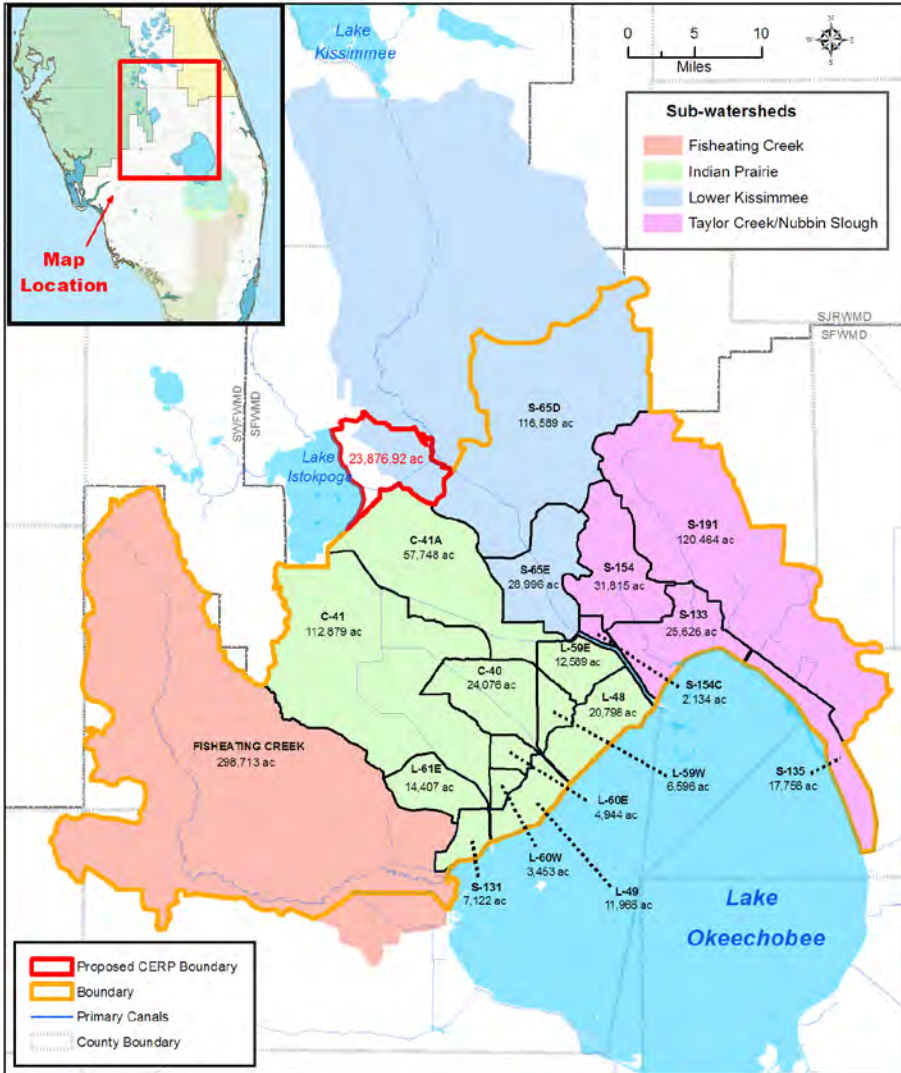


ENGINEERING SUBTEAM TASKS



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- Leads: Pete Russell (USACE) and Matt Alexander (SFWMD)
- Technical support to Plan Formulation Subteam
- Develops data and interpretations for hydrologic and geotechnical issues that arise during Alternatives Analysis
- Preliminary design and cost estimates
- Writes and reviews the Engineering Appendix of the EIS-PIR
- Model Selection, validation, and review



LAKE OKEECHOBEE WATERSHED PROJECT PLANNING BOUNDARY

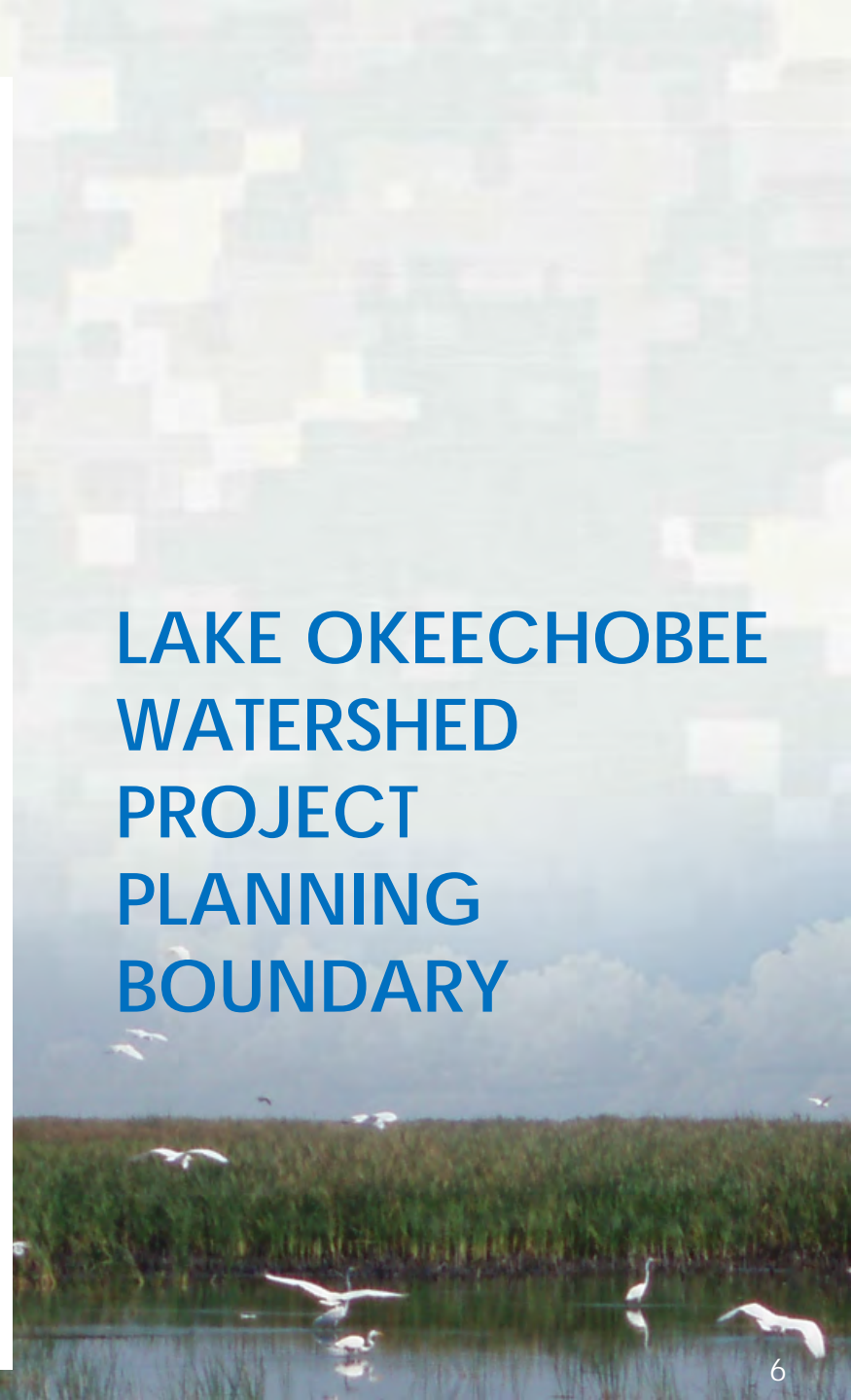
South Florida Water Management District
3351 Gun Club Rd., West Palm Beach, Florida 33436
(561) 968-6100, 1-800-432-0268, www.sfwmd.gov

North of Lake Planning Sub-watersheds

IMPORTANT DISCLAIMER:
This map is a conceptual or planning tool only. The South Florida Water Management District does not guarantee or make any representation regarding the information contained herein. It is not sufficient for zoning or building, and does not affect the interests of any persons or properties, including any present or future rights of use of real property.

August 2016

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GEOSPATIAL SERVICES





PROBLEM STATEMENTS



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- Substantial reduction in the spatial extent and functionality of wetlands
- Reduced water storage capacity in the watershed has led to extreme high and low water levels in Lake Okeechobee
- Undesirable Lake Okeechobee regulatory releases of flood control discharge to the St. Lucie and Caloosahatchee estuaries, which adversely affects salinity and estuarine biota
- Degraded habitat for fish and wildlife throughout the study area
- Degraded water quality in the watershed





OPPORTUNITIES



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- Increase system-wide water management operational flexibility
- Reduce undesirability regulatory releases from Lake Okeechobee to the Caloosahatchee and St. Lucie estuaries to minimize ecological impacts
- Reconnect and restore fragmented wetlands to improve wildlife habitat
- Improve water supply and flood control benefits (ancillary)
- Improve water quality (ancillary)
- Increase/improve recreational opportunities within the watershed
- Coordinate with ongoing restoration activities in watershed



GOALS



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CERP Goal	LOW Project Goals
Enhance Ecological Values	Improve habitat in the watershed and Lake Okeechobee
	Improve Lake Okeechobee Water Levels
	Improve the northern estuaries
Enhance Economic Values and Social Well Being	Maintain water supply in the Lake Okeechobee watershed
	Maintain agricultural and urban flood protection
	Protect and manage significant cultural, historical, and archeological resources
	Minimize adverse socioeconomic impacts on the local and regional economies



PROJECT OBJECTIVES



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- Increase the spatial extent and functionality of wetland habitat in the watershed
 - Performance measure: increase in wetland acreage
 - ECO-Subteam working on performance measure for improved habitat for fish and wildlife

Improve Lake Okeechobee water levels

- Lake Performance measure: RECOVER Lake Okeechobee Stage Envelope
- Performance measure: RECOVER Lake Okeechobee Overall Annual Ecological Score

Provide for better management for releases to northern estuaries

- Performance Measures: RECOVER northern estuaries salinity envelope, oyster PM, seagrass PM



CONSTRAINTS



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- Comply with all Federal, state and local laws, regulations and policies.
- Maintain levels of service for flood protection to agricultural and urban lands (Savings Clause [Section 601 (h)(5)(B) of WRDA 2000]).
- Maintain levels of water supply service for legal users (Savings Clause [Section 601 (h)(5)(A) of WRDA 2000]).
- Maintain navigability to the lake and within the watershed
- Operating within the existing flexibility of Lake Okeechobee Regulation Schedule (LORS)



PROJECT RISKS



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- **Performance measure sensitivity**
 - 250,000 ac-ft of Lake O storage = 6 inches off the lake
 - Will Lake O and estuarine performance measures be able to show a measurable lift?
- **T&E species**
 - Ex: Critical habitat for Florida Bonneted Bat has yet to be designated –could affect feature locations after already sited
 - May prevent features from being operated to achieve designated use
- **Unanticipated cultural discovery**
- **Uncertainties involved with ASR**



MANAGEMENT MEASURE OVERVIEW



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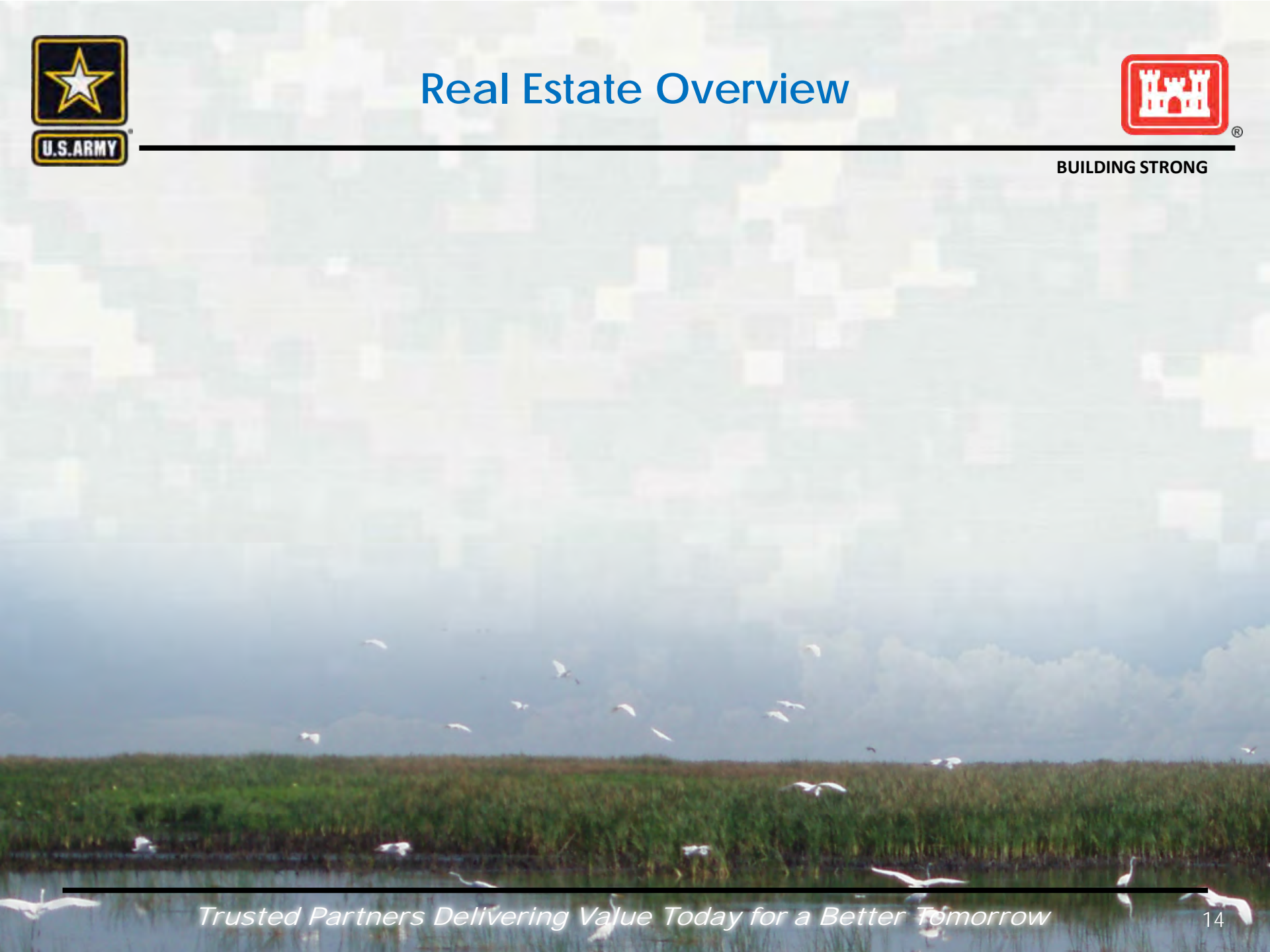
- Reservoirs
 - Shallow – 4 feet, intermediate 6-8 feet and deep 12 feet and over
 - Total storage capacity ~250,000 ac-ft in Yellow Book
- Aquifer recharge storage and recovery
 - Upper Floridan; Middle Floridan; Boulder Zone ASR
- Wetland/Floodplain Restoration
 - 3,500 acre wetland restoration in Yellow Book
 - Wetland rehydration and connectivity
 - Removal of exotics
 - Lake Okeechobee littoral zone creation and enhancements
 - Create/reconnect oxbows and/or restore additional river floodplain
- Improve operational flexibility within existing Lake Okeechobee Regulation Schedule (LORS)
 - Provide ecological benefits to lake (improve lake ecology)
 - Reduce discharges to northern estuaries
 - Provide environmental water supply to meet restoration goals
- Perpetual Flowage easements
- Inter-basin Transfer



Real Estate Overview



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EXISTING SCREENING TOOLS



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RESOPS and LOOPS (Clay Brown, SFWMD)



EXISTING SCREENING TOOLS



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Capital, real estate, and O&M cost estimating tool overview (Tzufit Boyle, SFWMD)



EXISTING SCREENING TOOLS

Land Suitability Model



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- Used by the previous LOW PDT to identify locations within the study area that possessed the most desirable characteristics for siting management measures with least environmental Impact



EXISTING SCREENING TOOLS

Land Suitability Model- Reservoir



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Constraint Layer	Criteria	Suitability Attributes			Data Source
		<u>Level 1</u> High Suitability	<u>Level 2</u> Moderate Suitability	<u>Level 3</u> Low Suitability	
Real Estate	Minimize number of impacted parcels	0 to 6 parcels/ section ¹	7 to 25 parcels/ section	26 or more parcels/ section	Florida Geographic Data Library
Existing Wetlands	Avoid existing wetlands	Outside the boundary of existing wetlands	--	Within the boundary of existing wetlands	SFWMD
Ecologic Value	Avoid areas with high ecologic values	Areas with ecologic values between 0 and 2	Areas with ecologic values between 3 and 4	Areas with ecologic values greater than 4	USFWS
Land use economic values	Minimize regional economic impacts and real estate costs	Land use types with low economic impact/ value	Land use types with moderate economic impact/ value	Land use types with high economic impact/ value	SFWMD
Cultural Resources	Avoid areas of culturally significant resources	Areas outside a 300-foot buffer zone	--	Areas inside a 300-foot buffer zone.	Florida Division of Historical Resources (FDHR)
Environmental and Economic Equity (EEE)	Avoid areas with EEE populations	Areas with no EEE populations	Areas with moderate EEE populations	Areas with dense EEE populations	SFWMD



EXISTING SCREENING TOOLS

Land Suitability Model-Wetland



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Secondary Screening Factor	Rationale	High Suitability (Level 1)	Moderate Suitability (Level 2)	Low Suitability (Level 3)	Data Source
Ecological Value	Avoid high-quality ecological lands	Ecological score of 0 to 3	Ecological score of 4 to 6	Ecological score of 7 to 10	USFWS wetland siting ecological value model
Contaminants	Target land uses that are not highly disturbed or do not have high contaminant loads	Land uses with low or no potential for contaminant loads	Land uses with moderate potential for contaminant loads	Land uses with high potential for contaminant loads (intensive agriculture)	Best professional judgment and recent land contaminant studies for other CERP projects
Economic Value	Minimize local and regional economic impacts and real estate costs	Land use types with low economic value	Land use types with moderate economic value	Land use types with high economic value	Best professional judgment
Cultural Resources	Avoid areas of cultural resource significance	Areas outside a 300-foot buffer zone of a culturally important resource	All sites are either within or outside of the buffer zone, therefore no sites rate Level 2	Areas inside a 300-foot buffer zone of a culturally important resource	FDHR
EEE	Avoid areas with EEE populations	Areas with no concentrations of EEE populations	Areas with moderate concentrations of EEE populations	Areas with dense concentrations of EEE populations	SFWMD



EXISTING AND FWOP MODEL ASSUMPTIONS



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Existing and future without project model assumptions (Clay Brown, S



LAKE OKEECHOBEE WATERSHED RESTORATION FEASIBILITY STUDY SCHEDULE (UP TO 36 MONTHS)



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LAKE OKEECHOBEE WATERSHED RESTORATION

KEY TASKS: FIRST 90 DAYS



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REPORT

- Determine Study Scope
- Identify Problems/Opportunities
- Inventory Existing Conditions
- Forecast Future Conditions
- Identify Study Objectives/Constraints
- Formulation of initial array of alternatives

SUPPORT DOCUMENTS

- Initiate (update & report at each milestone)
 - Risk Register
 - Decision Log
 - Report Synopsis
 - Decision Management Plan
 - Project Management Plan
 - Review Plan
 - 3x3x3 Exemption Process if necessary

NEPA

- Publish Notice of Intent
- NEPA Scoping
- Prepare Scoping Meeting Materials
- Conduct Scoping Meeting
- Review scoping comments



NEXT STEPS



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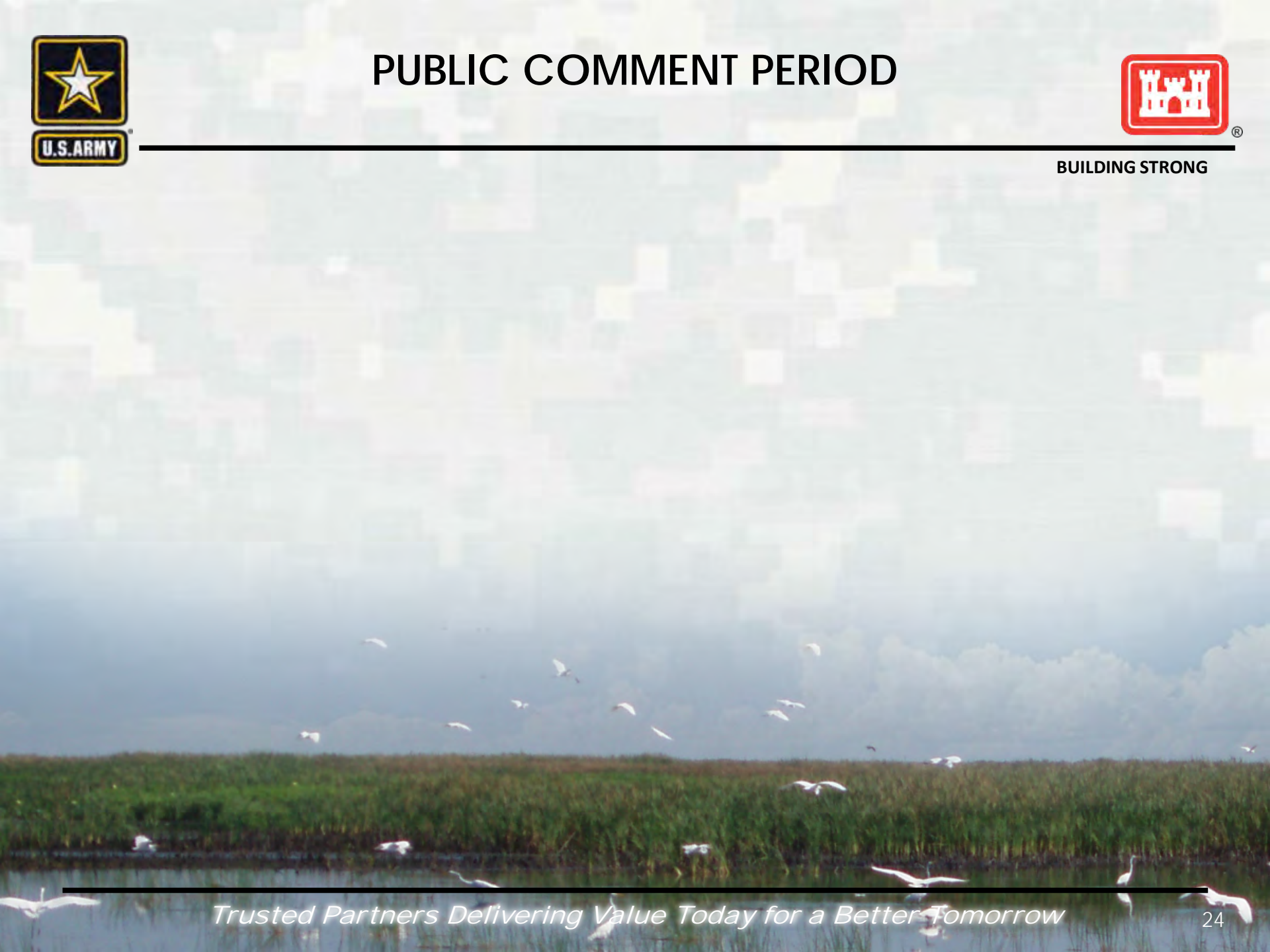
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- **Task Force Working Group sponsored workshop – TBD**



PUBLIC COMMENT PERIOD



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THANK YOU FOR YOUR PARTICIPATION TODAY!

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