

LAKE OKEECHOBEE WATERSHED RESTORATION

INTEGRATED FEASIBILITY STUDY
& ENVIRONMENTAL IMPACT STATEMENT

NATIONAL ENVIRONMENTAL POLICY ACT
SCOPING MEETING

July 26, 2016

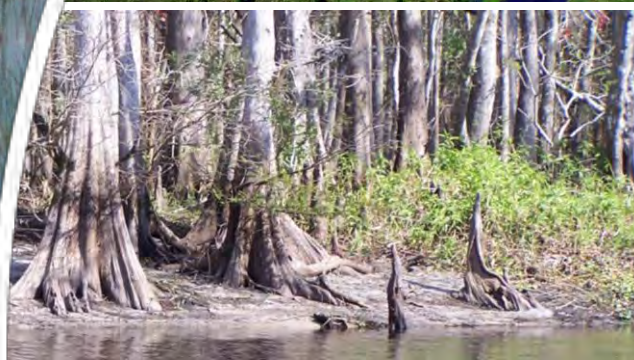
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U.S. ARMY



US Army Corps of Engineers
BUILDING STRONG



MEETING AGENDA

LAKE OKEECHOBEE WATERSHED RESTORATION INTEGRATED FEASIBILITY STUDY & ENVIRONMENTAL IMPACT STATEMENT

- Welcome and Introductions
- Comprehensive Everglades Restoration Plan Overview
- Lake Okeechobee Watershed Overview
- National Environmental Policy Act (NEPA)
- Project Planning Process
- Public Comment



MEETING PURPOSE

LAKE OKEECHOBEE WATERSHED

INTEGRATED FEASIBILITY STUDY & ENVIRONMENTAL IMPACT STATEMENT

To involve the public in an inclusive, dynamic process designed to ensure an economically, ecologically and socially justified design for improvements to Lake Okeechobee



SOUTH FLORIDA ECOSYSTEM PROJECT OVERVIEW

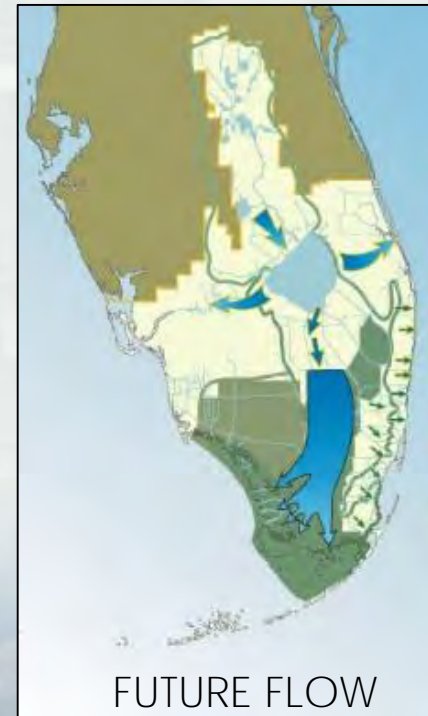
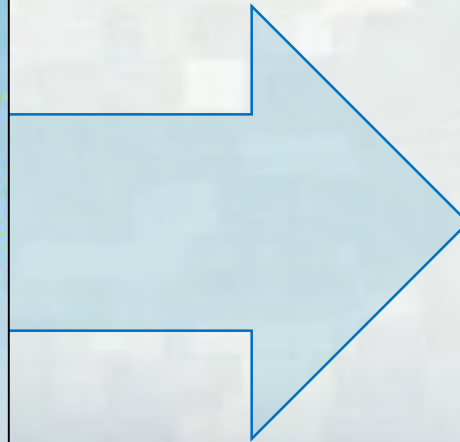
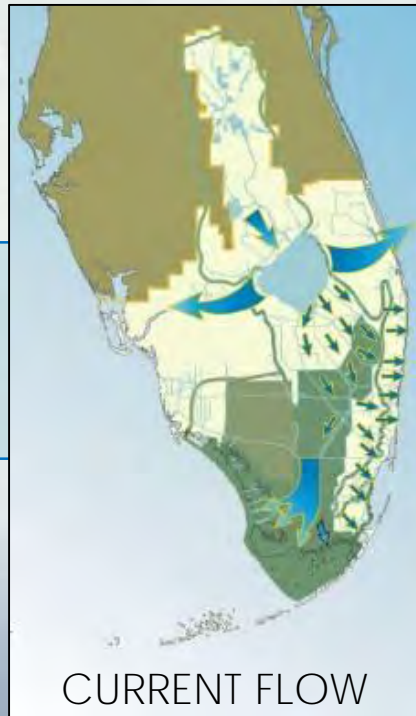
Presenter:

Matt Morrison, Federal Policy Chief,
Everglades Policy & Coordination Chief
South Florida Water Management District (SFWMD)



SYSTEM-WIDE PERSPECTIVE

Increased Operational Flexibility = Relief to Estuaries and Restoration of Flows to Everglades



SOUTH FLORIDA ECOSYSTEM RESTORATION



Pre-CERP Foundation Projects

- Kissimmee River Restoration
 - Modified Water Deliveries
 - C-111 South Dade
- } Significant Progress/
Nearing Completion

1st Generation CERP

- Melaleuca Eradication Facility Completed
- IRL-South Under Construction
- Picayune Strand Design

2nd Generation CERP

- C-43 Reservoir
 - Broward County WPA
 - C-111 Spreader Canal Western Features Operational
 - Biscayne Bay Coastal Wetlands Partially Constructed & Operational
- } Under Construction

Completed and Active Planning Studies

- Central Everglades Planning Project Authorization Pending
- Loxahatchee River Watershed Restoration Planning Underway

What's
next?

FOUNDATION PROJECTS
restoration projects authorized
prior to CERP

FIRST GENERATION CERP
PROJECTS

SECOND GENERATION CERP
PROJECTS

FOUNDATION AND CERP PROJECTS UNDER CONSTRUCTION OR WITH
COMPLETE/NEARING COMPLETE PROJECT IMPLEMENTATION REPORTS

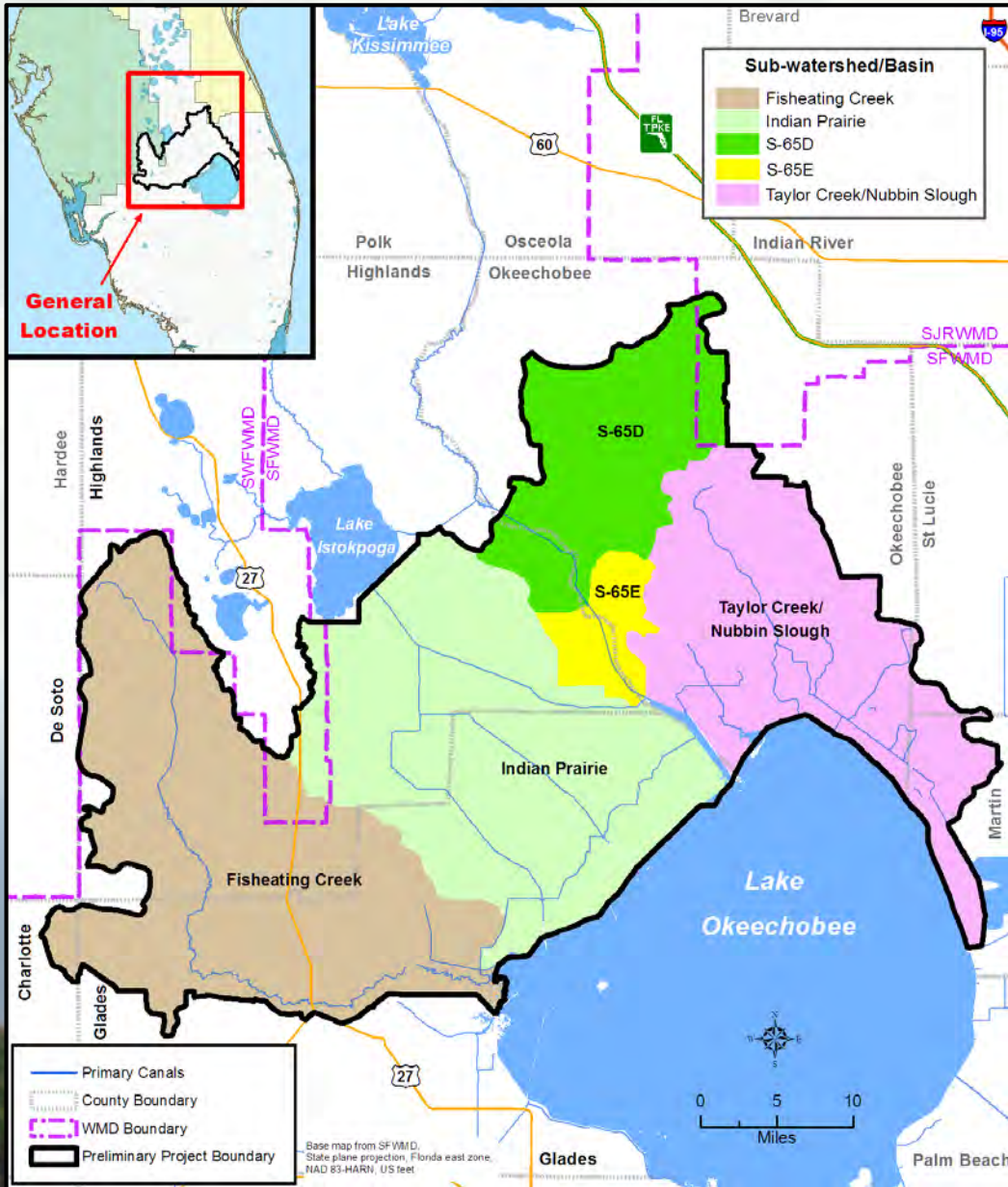


SYNCHRONIZING PRIORITIES INTEGRATED DELIVERY SCHEDULE (IDS)

| Project | Yellow Book Code | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|------------------|----------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | Federal Construction Cost (SFER) | | 41 | 138 | 142 | 190 | 204 | 141 | 212 | 192 | 195 | 221 | 213 | 186 | 200 | 144 | 151 | 100 | 0 | 0 | 0 |
| Non-Federal Construction Cost (SFER) | | 43 | 139 | 161 | 161 | 77 | 119 | 55 | 39 | 142 | 141 | 141 | 210 | 192 | 192 | 192 | 123 | 123 | 0 | 0 | 0 | 0 |
| Total Construction Cost (SFER) | | 84 | 277 | 303 | 350 | 282 | 260 | 267 | 231 | 336 | 362 | 354 | 396 | 392 | 336 | 343 | 223 | 123 | 0 | 0 | 0 | 0 |
| Modified Water Deliveries to Everglades National Park* | | ●○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ● | | | | | | | | | | | | | | | |
| Herbert Hoover Dike* | | | | | | | | | | | | | | | | | | | | | | |
| Seminole Big Cypress* | OPE | ● | | | | | | | | | | | | | | | | | | | | |
| Restoration Strategies* | | | | | | | | | | | | | | | | | | | | | | |
| Tamiami Trail Next Steps Phase 1* | | ●●●●●● | ●●●●●● | ● | | | | ● | | | | | | | | | | | | | | |
| Kissimmee River Restoration | | | | | | | | | | | | | | | | | | | | | | |
| West Palm Beach Canal/STA-1E | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| C-111 South Dade Contract 8 & 9 | | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● |
| C-111 South Dade PACR | | ●○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ |
| Picayune Strand Restoration | OPE | | | | | | | | | | | | | | | | | | | | | |
| Merritt Pump Station | | ● | ● | | | | | | | | | | | | | | | | | | | |
| Faka Union Pump Station | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Manatee Mitigation and Flood Protection Features | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Miller Pump Station | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Remaining Features - Road removal & canal backfill | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Site 1 Impoundment | M | | | | | | | | | | | | | | | | | | | | | |
| Phase 1 | | | | | | | | | | | | | | | | | | | | | | |
| Indian River Lagoon-South | | | | | | | | | | | | | | | | | | | | | | |
| C-44 Intake Canal | B | ●○○○ | | | | | | | | | | | | | | | | | | | | |
| C-44 Reservoir | B | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| C-44 STA & Pump Station | B | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| C-23/24 Reservoir North | B | | | | | | | | | | | | | | | | | | | | | |
| C-23/24 Reservoir South | B | | | | | | | | | | | | | | | | | | | | | |
| C-23/24 STA | B | | | | | | | | | | | | | | | | | | | | | |
| C-25 Reservoir | B | | | | | | | | | | | | | | | | | | | | | |
| C-25 STA | B | | | | | | | | | | | | | | | | | | | | | |
| Natural Lands | B | | | | | | | | | | | | | | | | | | | | | |
| Decomp Physical Model | Q | ●○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ | ○○○○ |
| Caloosahatchee River (C-43) West Basin Storage | | | | | | | | | | | | | | | | | | | | | | |
| Pump Station & Cell 1 | D | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● |
| Cell 2 | D | | | | | | | | | | | | | | | | | | | | | |
| Broward County Water Preserve Areas | | | | | | | | | | | | | | | | | | | | | | |
| C-11 Impoundment | Q | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| WCA 3A&38 Seepage Management | O | | | | | | | | | | | | | | | | | | | | | |
| C-9 Impoundment | R | | | | | | | | | | | | | | | | | | | | | |
| Biscayne Bay Coastal Wetlands Phase 1 | FFF, OPE | | | | | | | | | | | | | | | | | | | | | |
| L-31 East Flowway | | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Cutler Wetlands | | | | | | | | | | | | | | | | | | | | | | |
| C-111 Spreader Canal Western Project | | | | | | | | | | | | | | | | | | | | | | |
| Central Everglades Planning Project (Authorization WRDA 2016) | | | | | | | | | | | | | | | | | | | | | | |
| PPA South: LRR & PPA Execution | | | | | | | | | | | | | | | | | | | | | | |
| Remove Old Tamiami Trail (CNTX) | | | | | | | | | | | | | | | | | | | | | | |
| L-67A Structure 1 & Gap in L-67C Levee (CNT 3) | | | | | | | | | | | | | | | | | | | | | | |
| Increase S-356 (CNT 4) | | | | | | | | | | | | | | | | | | | | | | |
| L-29 Gated Spillway (CNT 4b) | | | | | | | | | | | | | | | | | | | | | | |
| Increase S-333 (CNT 4a) | | | | | | | | | | | | | | | | | | | | | | |
| L-67A Structures 2 & 3 (CNT 5) | | | | | | | | | | | | | | | | | | | | | | |
| Removal L-67C & L-67 Ext, Constr L-67D Levee (CNT 6) | | | | | | | | | | | | | | | | | | | | | | |
| Removal L-29 Levee & Backfill L-67 Ext (CNT 7) | | | | | | | | | | | | | | | | | | | | | | |
| PPA North | OO, II, G | | | | | | | | | | | | | | | | | | | | | |
| PPA New Water | V | | | | | | | | | | | | | | | | | | | | | |
| Loxahatchee River Watershed Restoration Project | X, Y, K | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Lake Okeechobee Watershed, ASR | | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Big Cypress/L-28 Interceptor (Western Everglades) | | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| EAA Storage & A&A Decomp Ph2 | | | | | | | | | | | | | | | | | | | | | | |
| C-111 Spreader Canal Eastern & B&CW Ph2 | | | | | | | | | | | | | | | | | | | | | | |

- Lake Okeechobee Watershed, ASR
- Big Cypress/L-28 Interceptor (Western Everglades)

- Developed through a public process
- Based on technical information
- Integrated Delivery Schedule (IDS) was completed in November 2015
- Identifies two upcoming CERP planning efforts



LAKE OKEECHOBEE WATERSHED PROJECT PLANNING BOUNDARY



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LAKE OKEECHOBEE WATERSHED PROJECT OVERVIEW

Presenter:

Lisa Aley

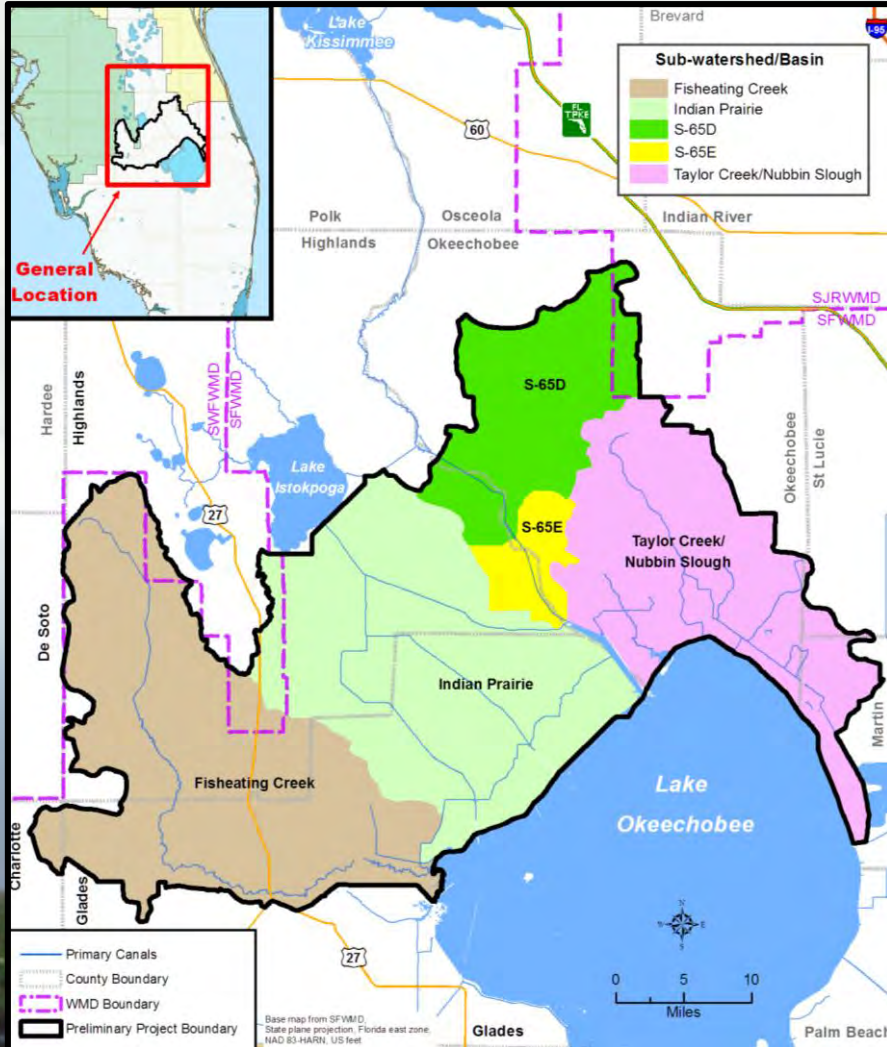
U.S. Army Corps of Engineers (USACE)



LAKE OKEECHOBEE WATERSHED STUDY PURPOSE








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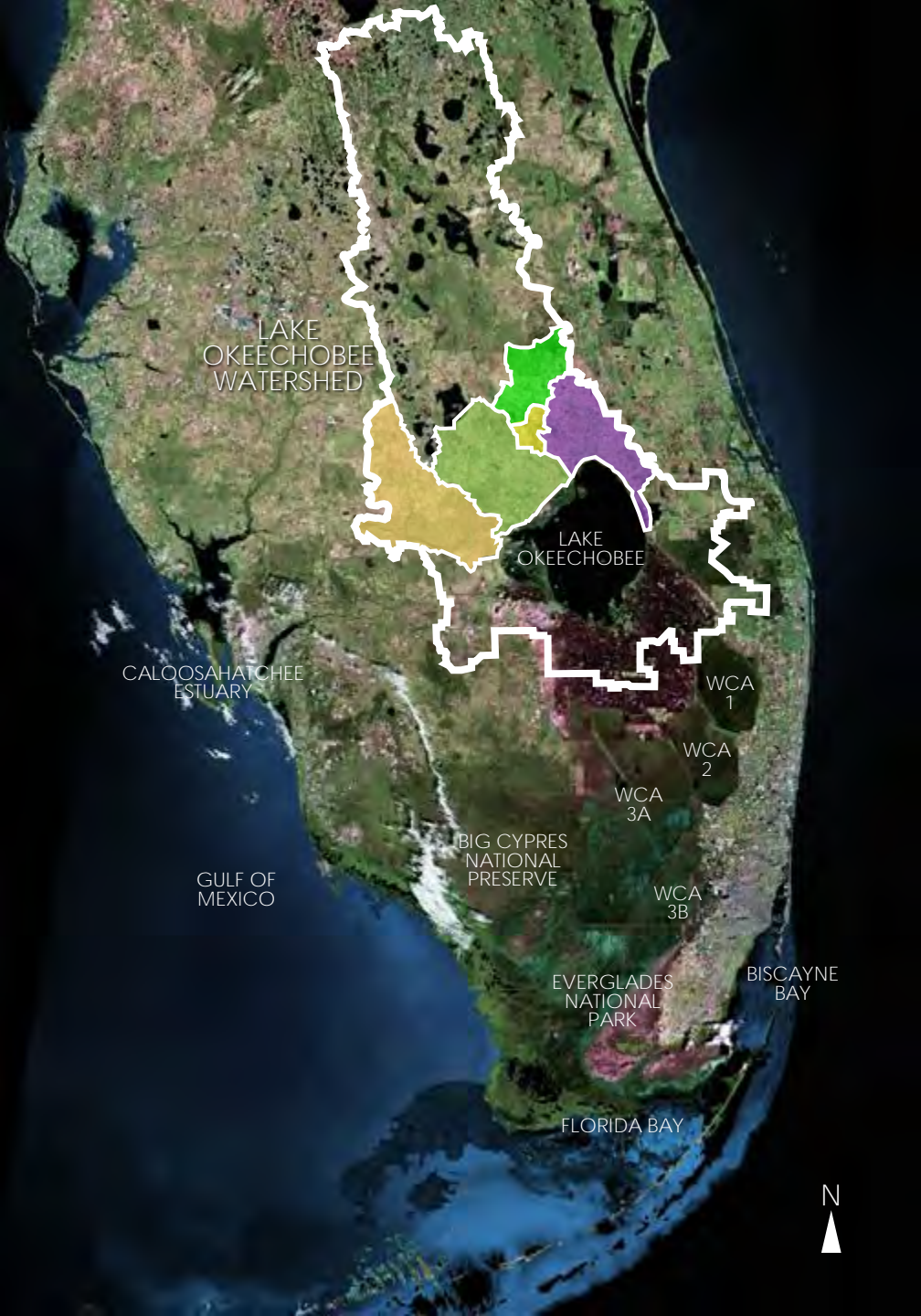
The purpose of the LOW project is to improve the quality, quantity, timing and distribution of water to Lake Okeechobee

LAKE OKEECHOBEE WATERSHED

-  Fisheating Creek
-  Indian Prairie
-  S-65D
-  S-65E
-  Taylor Creek/Nubbin Slough

LOW Project Preliminary Footprint:

- 922,108 acres (~1,441 square miles)
- Historically dominated by wetlands
- Dominant current land use
 - ▶ Agriculture
 - ▶ Natural/Open Land and Water
 - ▶ Urban/Infrastructure





PROBLEMS



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- Degraded water quality in Lake Okeechobee and the watershed
- Inflows to Lake Okeechobee greatly exceed outflow capacity
- Extreme high & low water levels in Lake Okeechobee
- Undesirable high volume discharges to the Caloosahatchee and St. Lucie Estuaries
- Substantial reduction in the spatial extent and functionality of wetlands and other wildlife habitat
- Adverse impacts to threatened and endangered species





OPPORTUNITIES



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- Improve system-wide operational water management flexibility
- Increase water storage north of Lake Okeechobee
- Improve the quality of water entering Lake Okeechobee
- Reconnect and restore fragmented wetlands
- Potential ancillary water supply and flood control benefits
- Increase recreational opportunities
- Coordinate with ongoing restoration activities in watershed



PROJECT OBJECTIVES



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- Reduce undesirable discharges from Lake Okeechobee to the Caloosahatchee and St. Lucie estuaries
- Improve the quality, quantity, timing, and duration of water entering Lake Okeechobee Improve system-wide operational flexibility
- Improve system-wide operational flexibility
- Restore isolated wetlands in the watershed



CONSTRAINTS



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- Maintain existing levels of flood protection and water supply
- Cultural, historical, and archaeological resources
- Environmental Justice
- Applicable laws, regulations, and standards
- Navigation
- Lake Okeechobee Regulation Schedule (LORS)



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NATIONAL ENVIRONMENTAL POLICY ACT AND PLANNING PROCESS

Presenter:

Gretchen Ehlinger, Ph.D.,
U.S. Army Corps of Engineers (USACE)



National Environmental Policy Act (NEPA) Goals



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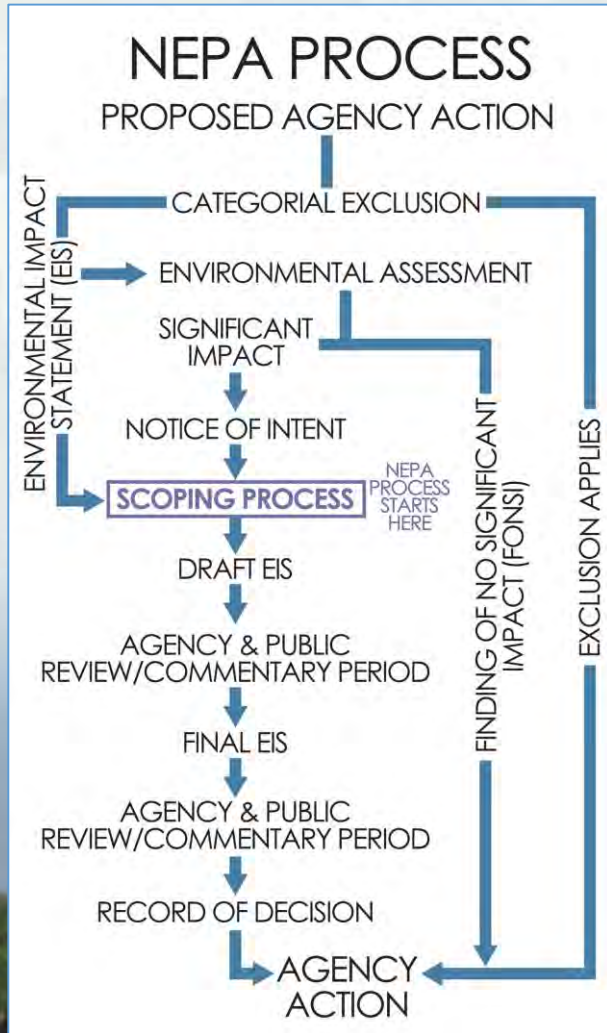
- NEPA is a Federal law requiring Federal agencies to consider the environmental impacts of a proposed project that are:
 - ▶ Major Federal Actions that may have a significant affect on the quality of the human environment
- Solicit and consider public views on proposals
- Consult with Tribal, state, and local governments concerning plans
- Provide agencies with a mechanism to coordinate overlapping, jurisdictional responsibilities



NEPA PROCESS & ASSESSMENTS



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- Prepare detailed statements addressing the potential environmental impacts related to a major Federal action:
 - Categorical Exclusion (CAT-EX)
 - Environmental Assessment (EA)
 - Environmental Impact Statement (EIS)



COMBINED NEPA & PLANNING DOCUMENTS AND PROCESS



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SIX-STEP PLANNING

Step 1: Problems and Opportunities;
Goals and Objectives

Step 2: Forecast Existing
and Future Conditions

Step 3: Develop Alternatives

Step 4: Evaluate Plans

Step 5: Compare Plans

Step 6: Select Plan

NEPA ASSESSMENT

- Purpose and Need
- Affected Environment,
No Action Alternative
- Range of Alternatives
- Environmental Effects
- Conclusions – Consultation
and Coordination



WHAT IS NEW IN THE PLANNING PROCESS?

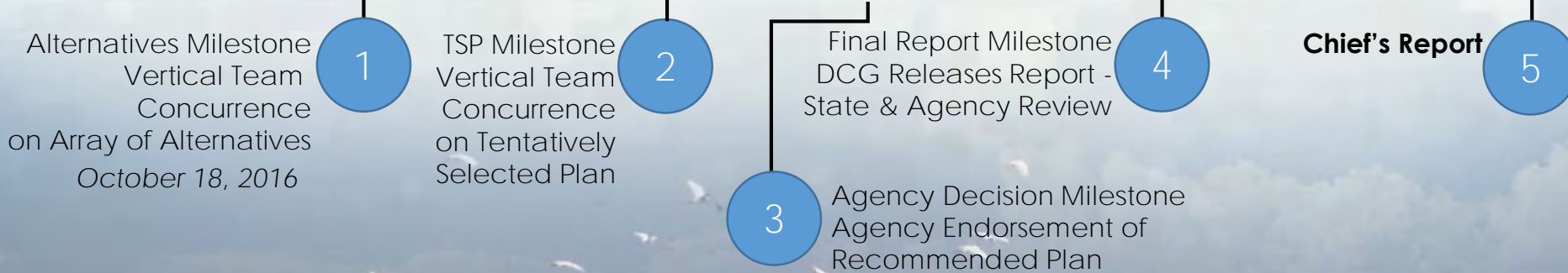
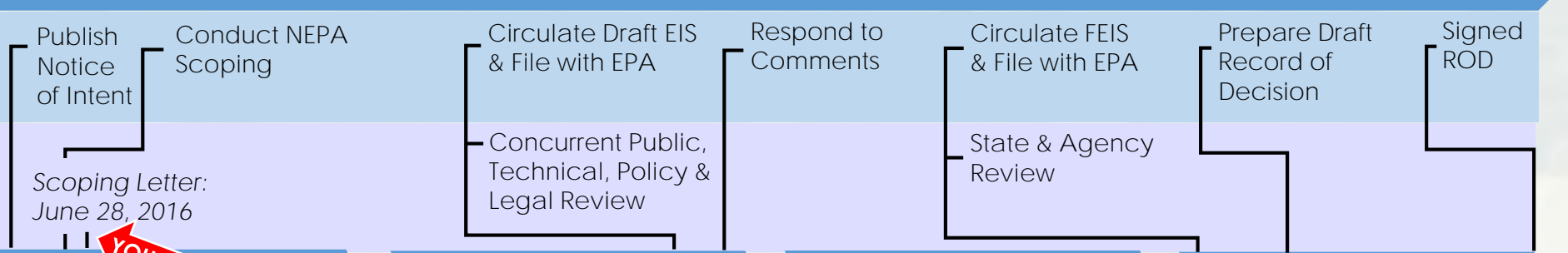


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- 3x3x3 Planning Process: No more than 3 years, 3 million dollars, and efficient/effective coordination among 3 levels of U.S. Army Corps of Engineers governance
- Process and outputs are decision focused, and within the 6-step planning process
- Risk and uncertainty for each decision is acknowledged and appropriate level of details is managed
- Report developed from the beginning of the study, documenting the decisions

NEPA PROCESS & ESTIMATED PLANNING SCHEDULE

SMART FEASIBILITY STUDY PROCESS 18-36 MONTHS





PUBLIC PARTICIPATION PROCESS



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ADDITIONAL COMMENT OPPORTUNITIES



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- Public Comment Cards
- Email: OkeechobeeWatershedRestoration@usace.army.mil
Dr. Gretchen Ehlinger
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019
- Scoping Comment Period Ends August 12, 2016
- Additional Information Available at:
<http://bit.ly/LakeOWatershed>