Project Schedule

EAA Storage Reservoir Timeline

Public Scoping

- May 9: SB 10 Signed into Law
- June 20: Notify Landowners
- July 1: Requested USACE to Initiate PACR
- Aug. 1: Initiated Project
- Oct. 23 and 26: Public Scoping Meetings

Alternative Evaluations/Feasibility Level Analysis

- Nov. 6: Plan Formulation
- Nov. 15 and Initial Concepts
- Dec. 5: What We’ve Heard
- Dec. 13: Model Results

Submit PACR for Congressional Approval

- Jan. 9: Update Florida Legislature
- Jan. 11: Governing Board Meeting
- Jan. 12: 1501 Pre-App
- Jan. 30: Draft Report Due
- March 30: Final Report Submitted to ASA
- Oct. 1: ASA Submits Report to Congress
- Dec. 31: Congressional Authorization

EAA Storage Reservoir

sfwmd.gov
Public Involvement

- Since October 2017, the District has held 9 public meetings between West Palm Beach and Clewiston
- Received extensive public input during meetings, through emails, and written letters
- Project dedicated website provides access to up-to-date information www.sfwmd.gov/EAAreservoir
SFWMD Approach

The Everglades Agricultural Area (EAA) Reservoir Storage project has been formulated to address the following problems and opportunities:

- High-volume damaging freshwater discharges from Lake Okeechobee to the northern estuaries
- Need for additional freshwater flow to the Everglades system
- Identify the next increment of storage, treatment and conveyance south of Lake Okeechobee to reduce ongoing ecological damage to the northern estuaries and Everglades system

CERP Goals

- 80% reduction in harmful discharges to the northern estuaries
- Average annual increase in flows to the Everglades system of approximately 300,000 ac-ft
Central Everglades Planning Project as a Starting Point

- Authorized by U.S. Congress in 2016
- First increment of the CERP - Everglades Agricultural Area (EAA) Storage Reservoir
- Initiated planning process for a Post Authorization Change Report (PACR) for CEPP
- Alternatives under consideration benefit the ecology of the northern and southern Everglades by providing the final increment of EAA storage to:
  - Aid in reducing harmful discharges to the northern estuaries
  - Achieve the CERP goal of increasing flow to the central portion of the Everglades by approximately 98 billion gallons (300,000 acre-feet) on an average annual basis
- Building on the first increment of CEPP, the PACR provides the final increments of the following components of CERP:
  - EAA Storage Reservoirs (CERP Component G)
  - Flow to Northwest and Central Water Conservation Area 3A (CERP Component II)
  - Environmental Water Supply Deliveries to the St. Lucie Estuary (CERP Component C)
  - Environmental Water Supply Deliveries to the Caloosahatchee Estuary (CERP Component E)
All Alternative Configurations

- Followed “Federal Process Requirements” for plan approvals, congressional authorization and cost share
- Will achieve water quality requirements for the Everglades
- Meet screening level project assurances and savings clause requirements
- Reduce discharges to the Northern Estuaries
  - 33% reduction in high-flow discharge events lasting more than 60 days to the Caloosahatchee Estuary (in addition to CEPP)
  - 55% reduction in high-flow discharge events lasting more than 42 days to the St. Lucie Estuary (in addition to CEPP)
  - 50-54% reduction in discharge volumes from Lake Okeechobee to the northern estuaries in conjunction with authorized projects
  - 56-61% reduction in the number of discharge events from Lake Okeechobee to the northern estuaries in conjunction with authorized projects.

- Increase flows to the Greater Everglades
  - Achieve the CERP goal of increasing flow to the central portion of the Everglades by approximately 300,000 acre-feet on an average annual basis.
  - Improve slough depths and vegetation suitability
  - Increase overland flows into the northern portions of ENP
  - Provide an increase in surface water flows at Taylor Slough
Real Estate Actions and Requirements

- Actively pursued the purchase of privately held lands in the area to the west of the A-2 parcel identified by the Legislature
- Made written acquisition offers to both of the private landowners in the western lands between the A-2 parcel and the Miami Canal, and negotiations are moving forward favorably
- Private landowners who own more than 2,500 acres and the majority of the lands in the EAA notified SFWMD in writing that they are not willing to sell their property for the project
- Inquiries to other EAA owners of parcels larger than 150 acres have been largely unresponsive about their willingness to sell or exchange
- All SFWMD leaseholders located within the EAA have been notified that their leases will be terminated in accordance with lease terms
- As willing landowners are successfully identified within this planning process, SFWMD will work to exchange state-owned lands for private lands, as long as they can be used effectively in conjunction with existing facilities
Working with the USACE to Help Ensure Federal Approvals and Cost Share

- Identified the most likely path forward to achieve timeframes in Senate Bill 10 and protect eligibility for federal cost share
- Mechanism selected is authorized under Section 203 of the Water Resource Development Act of 1986 (as amended) which encourages local sponsors to develop feasibility studies with technical assistance from the federal government
- Letter exchange between SFWMD and ASA Civil Works Office indicated full support of our efforts and directed staff to prepare a Memorandum of Agreement (MOA) for technical assistance for the Post Authorization Change Report to CEPP under section 203
- SFWMD and USACE prepared and executed a Memorandum of Agreement for technical assistance
- As a follow-up step, SFWMD has attempted to develop supporting scopes of work for USACE technical assistance and proposed to fund their participation
- Letter sent to ASA Civil Works Office expressing concerns regarding policy interpretations and federal delays in executing a scope of work for technical assistance
- ASA Civil Works Office response still pending
- Continue to follow federal process requirements and pursue participation by USACE in the planning process
Selecting the plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes ecological benefits while passing tests of cost effectiveness and incremental cost analyses, significance of outputs, acceptability, completeness, effectiveness and efficiency.”
Federal Process Requirements
Plan Approval, Authorization and Cost Share

Federal Accounts for Alternative Evaluation

- **Acceptability**: The extent to which the alternative plans are acceptable in terms of applicable laws, regulations and public policies.

- **Completeness**: The extent to which the alternative plans provide and account for all necessary actions to ensure the realization of the planning objectives, including actions by other federal and non-federal entities.

- **Effectiveness**: The extent to which the alternative plans contribute to achieve the planning objectives.

- **Efficiency**: The extent to which an alternative plan is the most cost effective means of achieving the objectives.
Ecological habitat models are used to quantify gains in habitat function to support selection of an ecosystem restoration project plan.

The CEPP ecological habitat model was peer reviewed and is certified by the National Ecosystem Restoration Planning Center of Expertise (ECO-PCX).

The CEPP ecological habitat model uses Restoration, Coordination and Verification (RECOVER) approved performance measures and produces predictive habitat suitability indices (HSI) to generate habitat units from indicator region acreages (inherent anomalies).

Means and methods for Habitat Unit Analysis for the Post Authorization Change Report are dictated by Federal process, provide for an “Apples to Apples” comparison among alternatives, meets the required Federal planning requirements and maintains evaluation consistency with analysis conducted in the Congressionally authorized CEPP.
A cost benefit analysis is a systematic approach to estimating the strengths and weaknesses of alternatives.

Cost Effectiveness and Incremental Cost Analysis (CE/ICA) is used to identify alternatives that maximize environmental benefits compared to costs.

- Utilizes each alternative’s habitat units and costs to determine cost benefit variances.
- Reveals changes in cost for increasing levels of environmental output.
- Cost effectiveness is the degree to which something is effective or productive in relation to cost.
- Plans with the lowest incremental cost per unit output are called “Best Buy” plans.

Assists decision makers in allocating limited resources more efficiently by selecting an economically prudent project plan.
Alternative Configurations

**Alternative R240A:** COST EFFECTIVE + BEST BUY
- 240,000 acre-foot reservoir plus A-1 Flow Equalization Basin
- Reservoir is approximately 10,100 acres and approximately 23 feet deep
- Stormwater Treatment Area (STA) is approximately 6,500 acres

**Alternative R240B:**
- 240,000 acre-foot reservoir plus A-1 Flow Equalization Basin
- Reservoir is approximately 10,100 acres and approximately 23 feet deep
- Stormwater Treatment Area (STA) is approximately 6,500 acres

**Alternative R360C:**
- 360,000 acre-foot reservoir
- Reservoir is approximately 19,700 acres and approximately 18 feet deep
- Stormwater Treatment Area (STA) is approximately 11,500 acres

**Alternative R360D:**
- 360,000 acre-foot reservoir
- Reservoir is approximately 19,700 acres and approximately 18 feet deep
- Stormwater Treatment Area (STA) is approximately 11,500 acres

**Alternative C360C:** COST EFFECTIVE + BEST BUY
- 360,000 acre-foot reservoir
- Same configuration as Alternative R360C
- Can also serve multiple purposes including water supply as identified in the Comprehensive Everglades Restoration Plan (CERP), Component G

- All costs are in 2018 dollars
- Costs and benefits will be refined through the planning process
- Selected cost effective + best buy alternatives will be optimized to increase benefits
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Changes posed by these alternatives to “Restoration Strategies” are consistent with the changes identified in CEPP for the A1 FEB

Changes posed by these alternatives to “Restoration Strategies” modify the A1 FEB to deep storage but would still ensure achievement of Water Quality Standards
Plan Capital Cost $1.74B\(^{(1)}\) – CEPP New Water Component $0.40B\(^{(2)}\) = **Capital Cost to Implement Plan $1.34B**  
\(^{(1)}\)Includes Reservoir + Stormwater Treatment Area + Real Estate $1.64B, Canal Conveyance Improvement $100M, and Recreation Plan $2.2M Costs  
\(^{(2)}\)Includes CEPP A2 FEB and A2 Recreation Plan
Alternative C360C

COST EFFECTIVE + BEST BUY

Plan Capital Cost $2.11B\(^{(1)}\) – CEPP New Water Component $0.40B\(^{(2)}\) = **Capital Cost to Implement Plan** $1.71B

\(^{(1)}\)Includes Reservoir + Stormwater Treatment Area + Real Estate $2.01B, Canal Conveyance Improvement $100M, and Recreation Plan $2.2M Costs

\(^{(2)}\)Includes CEPP A2 FEB and A2 Recreation Plan
How Modeling Fits into Project Planning

First Phase: Screening Modeling to Assist in Selection and Sizing of Features that will be Evaluated in More Detail

Second Phase: Detailed Modeling of a Variety of Options to Determine how to Route Water to Achieve Desired Project Benefits

Third Phase: Detailed Modeling of a Variety of Options Provides Information for System Evaluation (e.g. Habitat Units)

Final Phase: Optimization Incorporating Feedback and Information Gained in Earlier Steps, Refine Detailed Modeling of a Highly Performing Option

Along this path, there are many opportunities for refinement. Intermediate products serve the immediate need and then are enhanced, incorporating feedback and information as the process progresses.
Next Steps

- Optimization of Cost Effective Best Buy Alternatives after Governing Board Input
- Identification of Recommended Plan
- Conduct Independent External Peer Review
- Complete 1501 Compliance Report
- Finalize project documentation
- Submit Post Authorization Change Report to the Assistant Secretary of the Army for Civil Works on March 30, 2018