

LOXAHATCHEE RIVER WATERSHED RESTORATION PROJECT

Project Delivery Team Meeting December 13, 2017

Progress Since May 2017 and Project Assumptions

for Base Cases and Alternative Plans

Scott Thourot, Lead Engineer, SFWMD

Federally designated as a National Wild and Scenic River, the Loxahatchee River and its watershed are homes to 33 federally threatened and endangered species, 20 federally protected migratory bird species, and 30 additional State's species of concern

*Trusted Partners Delivering Value
Today for a Better Tomorrow*



U.S. ARMY



US Army Corps of Engineers
BUILDING STRONG

One of the Last Old Growth Cypress
Floodplains in the SE Florida

Last Large Freshwater Wetland
Corridor in Project Area

Vulnerable estuarine habitats

Loxahatchee River Watershed Restoration Project 13 December 2017 PDT Meeting

Modeling Progress and Project Assumptions since May 2017

**C. Scott Thourot, P.E.
Lead Engineer, SFWMD**

LOXAHATCHEE RIVER WATERSHED RESTORATION (LRWR) PROJECT

COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)

Loxahatchee River: Designated National Wild & Scenic River



One of the Last Cypress Floodplains in the Southeast Florida



Vulnerable Estuarine Habitats



41 Federal & State Listed Plant & Animal Species



LECsR Model Progress

- **4/5/17: SFWMD/USACE Leadership meeting**
 - **Identified initial schedule and directed team to:**
 - ❖ **4/24/17: Released initial model results**
 - ❖ **4/26/17: Reviewed results and conduct PDT webinar**
 - ❖ **5/1/17: Released draft calibration report for review**
 - ❖ **5/2/17: Established model interpretation/immersion team for review and resolution of model associated issues**

LECsR Model Progress

- **Model Interpretation/Immersion team**
 - **Included representation from USACE, SFWMD, IMC, FDEP, Palm Beach County, FDACs**
 - ❖ **Others as needed (ITID, City WPB, Martin Co., SIRWCD, FWC)**
 - **Met daily until 7/14/17, twice weekly since**
 - ❖ **Tracking, review and resolution**
 - ❖ **Reviewed calibration statistics for wells and structures**
 - ❖ **Improved conceptualization and calibration**
 - ❖ **Determined appropriate verification period (2000-2005)**
 - ❖ **Developed initial schedules for completing calibration and alternative runs**

LECsR Model Progress

- **USACE/SFWMD Face to Face Discussions**
 - **8/22/17 – 8/24/17 (WPB)**
 - **10/3/17 (Jacksonville)**
 - ❖ **Model updates**
 - ❖ **Calibration**
 - ❖ **Conceptualization**

Where are we now?

- **Model has been updated to incorporate many of the team's suggestions**
- **Specific items were provided to team for final review and acceptance**
- **Calibration is complete**
- **Verification run complete, base case modeling underway**

Where are we now?

- **Core team synthesized three hybrids identified at 5/31/17 PDT meeting into one (12R2)**
 - **Will model 2 base cases and 6 alternatives**
 - **Alternative 5 includes a new management measure**
 - **Pump Station: Lower M-1 Basin into M-Canal**
 - **Engineering/Modeling Subteam: developed, refined project and model assumptions table, construction sequencing, risk-based contingencies**
 - **Eco-subteam: salinity tool**
 - **Water quality subteam: historical conditions, flow/load diagram, treatment capacities**
-

Project & Modeling Assumptions

- **Extensive workbook, 1 tab for each alternative**
 - ❖ ECB, FWO, Alts. 2, 5,10,12,12R2,13
 - **One column for project assumptions**
 - ❖ Engineering Subteam is lead
 - ❖ Input from multiple subteams/stakeholders
 - ❖ Now complete for base cases and alternatives
 - **One column for model assumptions**
 - ❖ Modeling subteam is lead, with stakeholder input
 - ❖ Base cases are complete
 - ❖ Development of alternative assumptions is in progress
 - **Modeling assumptions will describe how the project assumptions are implemented in the model**

Project & Modeling Assumptions

- **Categories include**
 - **Flow-way concepts**
 - **L8 Basin/C-51 Storage**
 - **M-Canal Conveyance**
 - **Grassy Waters Preserve**
 - **Loxahatchee Slough Area**
 - **C-18 Impoundment**
 - **C-18 Weir, G-92, Lainhart Dam**
 - **SIRWCD & ITID**
 - **Loxahatchee Tributaries**
 - **South Martin County Properties**
 - **Public Water Supply**

Project & Modeling Assumptions

- **G160 & G161 do not exist in ECB and FWO**
- **L-8 FEB**
 - **simulated as a lake in ECB**
 - **simulated as Restoration Strategies in FWO**
- **C-51 Phase 1 & 2: fully mined site**
- **M-Canal: existing operations**
- **E. Corbett Weir: as-is in both ECB and FWO**
- **Vavrus/Avenir: FWO includes development**
- **Public Water Supply (PWS): use permitted allocations for both ECB and FWO**

Project & Modeling Assumptions

- **Project & Modeling Assumptions table will soon be posted and available for base cases**
- **Diagrams for base cases and alternatives are available on USACE project website**