



Everglades Restoration Update



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sfwmd.gov





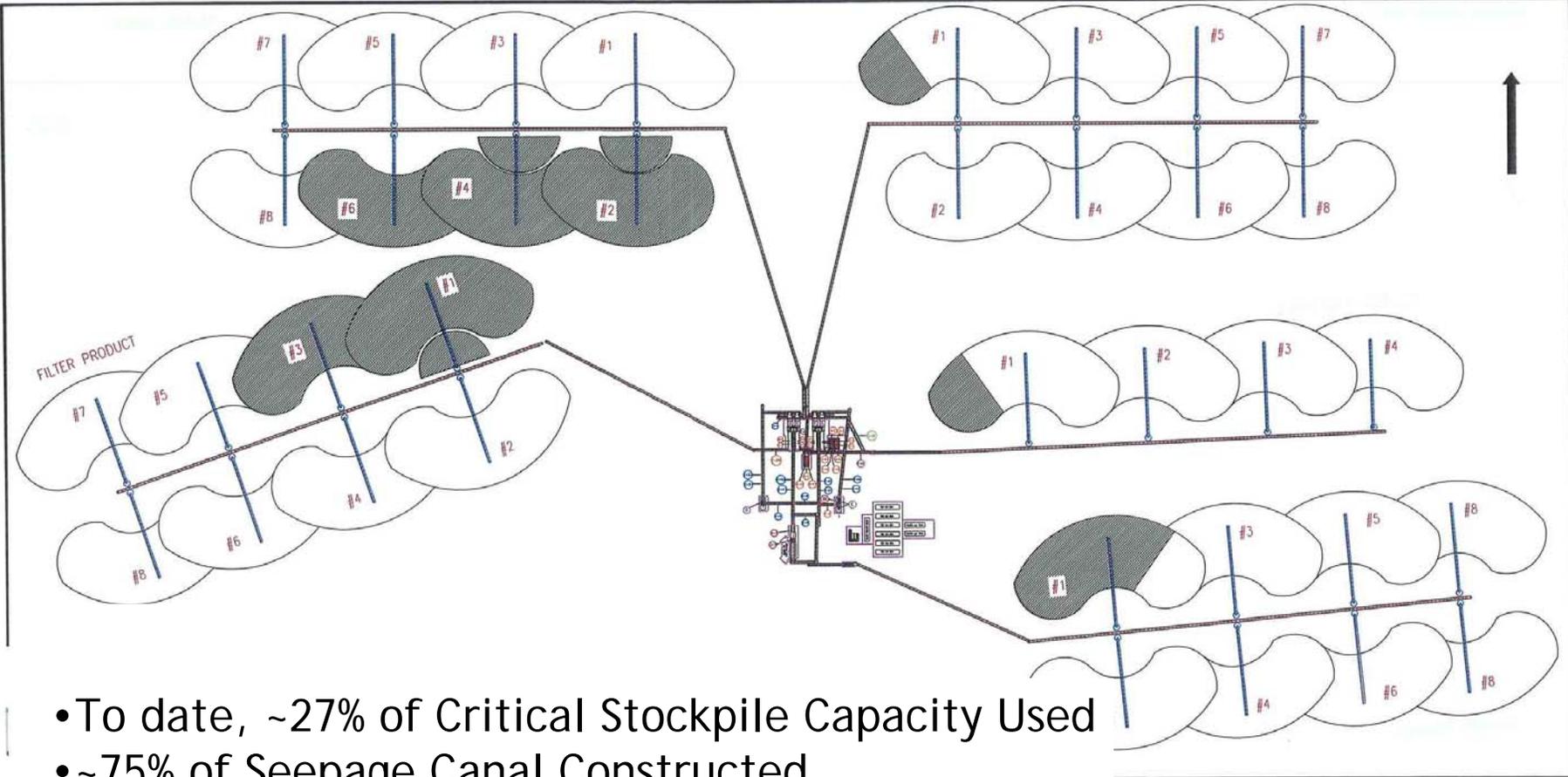
Presentation Summary

- **EAA A1 Reservoir – Construction Management Contract**
- **Northern Everglades Update**
- **Southern CREW Status**
- **C-111 Spreader Canal Status**





Rock Processing Site Capacity







EAA A1 Reservoir Construction

- **Construction Management Contract Award**
 - Brown & Caldwell, Inc.
- **Awarded under a competitive General Engineering and Professional Services (GEPS)**
- **Services are Construction Monitoring, Quality Control/Quality Assurance, and Project Controls for the EAA A-1 Reservoir Project**
- **Work Order estimated value of not-to-exceed of \$26.5M through Dec 2010.**
 - **Expended \$2.5M to-date under previous contract**
- **Reservoir on-site staff of 25 individuals during the two of the three years of embankment construction. Year 3 will reduce to 12 individuals.**
 - **Staff Include management, inspectors, supervisors, technicians, and administrative support personnel.**

Northern Everglades Initiative

- **Lake Okeechobee Phase II Technical Plan submitted to the Governor and Legislature on February 1**
- **Staff are now focusing on the development of the St. Lucie and Caloosahatchee River Watershed Protection Plans**
 - **Identifying Management Measures**
 - **Developing tools necessary for alternative evaluation similar to those used for the Phase II Technical Plan**
 - **Working teams for River Watershed Protection Plans are meeting monthly-
dates are posted on the Northern Everglades website:**

<https://my.sfwmd.gov/northerneverglades>

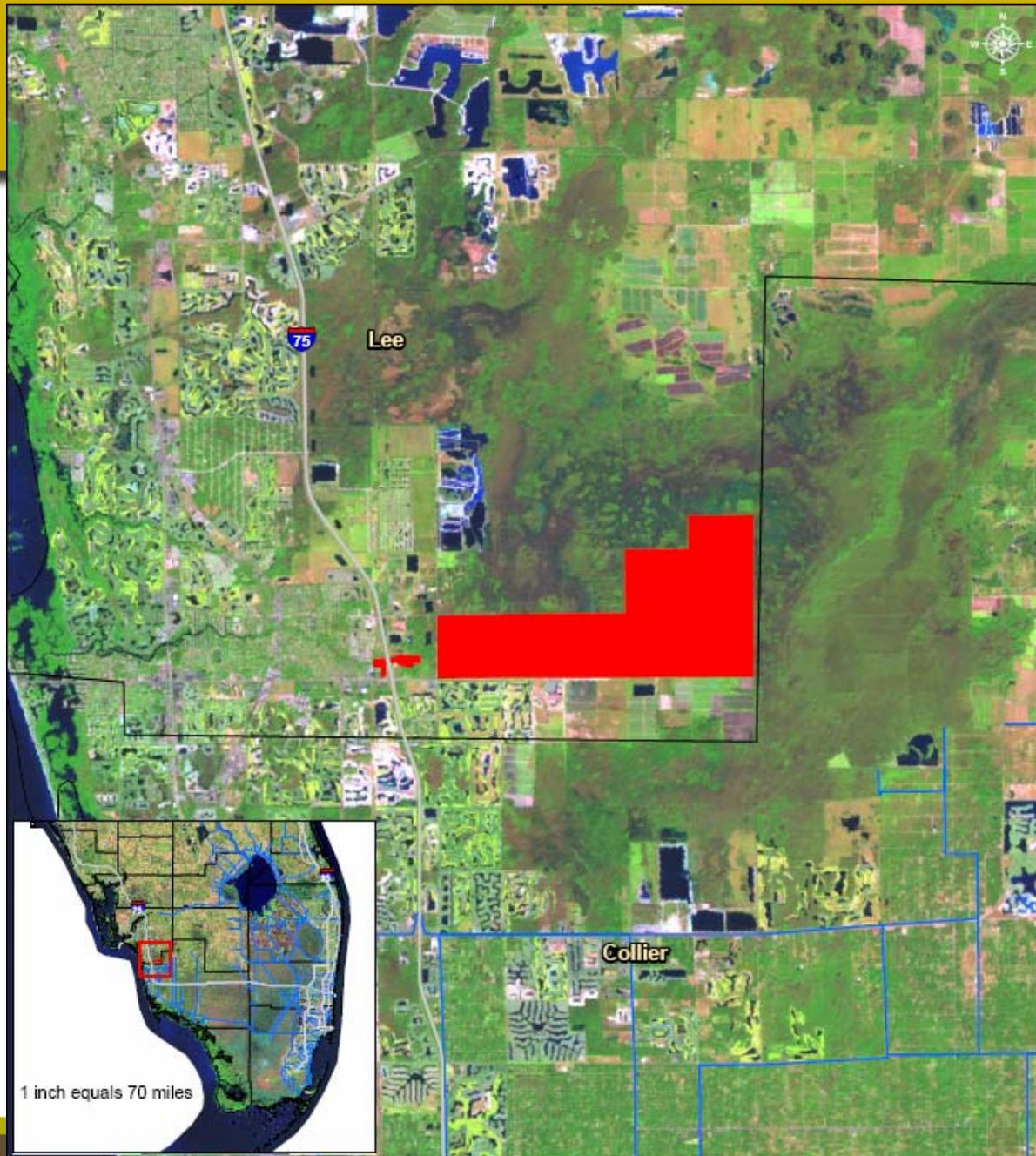


Southern CREW Critical Project

Status Update



Location Map



Southern CREW Project

- **In December, 2007 staff proposed a revised configuration that removed 3 half-sections from the current Critical Project footprint**
 - **Maintain original project goals**
 - **Remove developed areas from footprint**
 - **Impacts of existing development on footprint**
 - **Hydrologically disconnected south of Kehl Canal**
 - **Bonita Beach Road adjacent to southern boundary**
 - **Consolidate land holdings**
 - **Condemnation issues**



Southern CREW Project



- **Concerns have been raised regarding loss of potential restoration area in the project**
- **Staff agreed to evaluate alternatives and report back to the Governing Board**
- **Subsequent discussions by SFWMD with Lee County, Florida Audubon, U.S. Fish & Wildlife Service, resulted in a modified configuration that potentially removes 2 half-sections from the current footprint.**

Exclude Developed Area



Project Boundary

Terry

Sec 32

Sec 33

Sec 34

Future CR-951

Kehl Canal

Bonita Grande

CRITICAL CREW

Bonita Beach Road

Excluded Area



7978 ft

2004-05 SFWMD Aerial Photography

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Google

Southern CREW Project



- **Implementation Issues**
 - **Coordinate land swap with DOI to replace 12 acres of cost shared DOI land in south half sections of 32 & 33 excluded from the project.**
 - **Potential Lee County funding assistance to acquire remaining parcels in reformulated project footprint.**
 - **Lee County CR-951 alignment along western project boundary north of Kehl Canal (approx 55 acres).**
 - **Continue coordination with Lee County for future right-of-way.**
 - **County agrees mitigation would be implemented in project footprint.**



C-111 Spreader Canal –Taylor Slough Enhancement Status Update



Project Status

- **SFWMD has completed Preliminary Engineering Design (30%) of the 'Frog Pond' impoundment**
- **USACE is leading work on the Project Implementation Report (PIR)**
 - **Recently identified the 'Tentatively Selected Plan'**
 - **Preparing to initiate writing the draft PIR**
- **SFWMD has initiated discussions with stakeholders before completing the engineering design process.**



Original Spreader Canal Project Objectives

- **Improve flow patterns for the Southern Glades and Model Lands**
- **Eliminate ecologically damaging flows to Florida Bay**
- **Promote recreational opportunities where consistent with environmental restoration**
- **Improve flood control**



Incremental Adaptive Restoration (IAR) Approach

- IAR proposed by National Academy of Sciences
- To resolve implementation uncertainties, the team has split the project into two phases, with separate Project Implementation Reports
- Emphasis on features that enhance opportunities to ‘learn’ and reduce uncertainty
 - Initial (Western) PIR Focus –
 - Reduce seepage losses from Taylor Slough
 - Reduce damaging pulse discharges from S-197
 - Resolve uncertainties related to Spreader Canal
 - Second (Eastern) PIR Focus -
 - Spreader canal to Southern Glades and Model Lands
 - Optimize operations to remove lower C-111 Canal



PIR Recommended Plan – Alt 2D



Alt 2D with Pilot Projects



Ag WQ source controls

WQ Pilot for S-178

Portable Pump and Temporary Spreader Canal

Proposed plug at S-20A (approximate location)

S-20 triggers raised 0.5'

Uncertainties to be Addressed by Pilot Features

- **What are the flooding effects associated with various spreader canal discharge rates?**
- **Can a spreader canal replace the lower C-111 canal?**
- **Can an infiltration and/or source controls improve S-178 discharge water quality?**
- **How much water should go to Taylor Slough Restoration vs the Model Lands?**



Operational Details To Be Determined

- **Maximize operations to retain water in Taylor Slough**
- **Depending on operations – Taylor Slough flows could increase from 8% to 25% during wet season**
- **Operational testing will determine how far we can go while balancing flood control and beneficial flows to the environment**



Issues

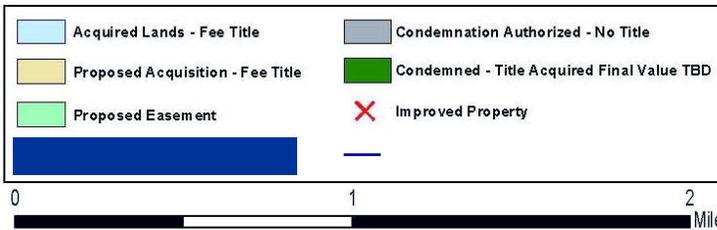
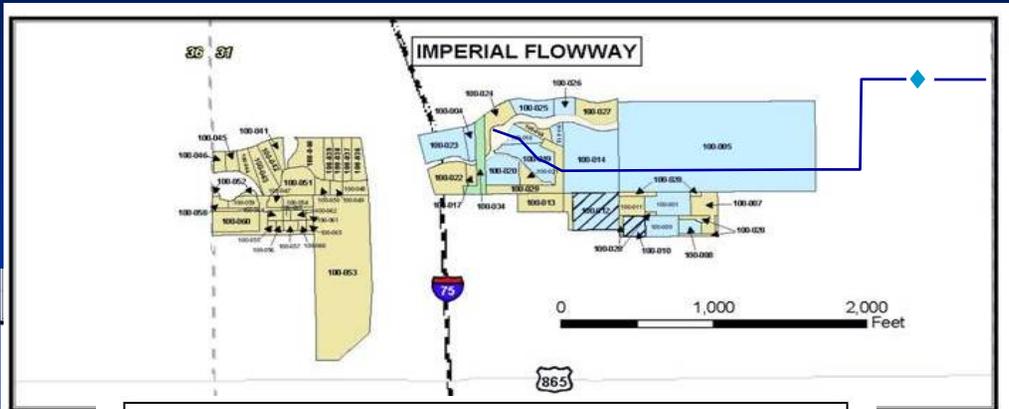
- **\$70 Million budget limitation**
- **Need to evaluate system-wide pumping & structure capacities**
- **SFWMD's accelerated plans should include all PIR Phase I elements**
- **Avoid impacts to Model Lands wetlands**
- **Evaluate higher regional groundwater levels**
- **Evaluate flood protection impacts**
- **Consider L-31W Canal test**
- **Continue intensive stakeholder interactions**





Questions

Acquisition Map



"Yellow Book" Alternative



Issues with the "Yellow Book" Plan

- **Significant uncertainties exist related to water availability, and spreader canal flooding effects**
- **Concerns regarding extending benefits to Southern Glades and Model Lands before restoration of the Taylor Slough ecosystem had been fully realized**
- **Environmental concerns with locating Stormwater Treatment Area in pristine everglades**
- **Water quality concerns appear to be limited to discharges from S-178**



Major Potential Constraints

- Project budget plus monitoring cannot exceed \$70M
- Project ops cannot impact Sparrow
- EFA monitoring compliance must show no increasing trend toward violations with project ops
- Some minimum flows may be needed through “new” water control above S-197 to protect manatees
- Project ops cannot increase salt intrusion east of US-1 or impact Florida Keys Aquaduct operations
- Real time flood control assessment and trigger locations must be part of project ops, including Pre-storm drawdowns
- An interagency MOU of the project intent, limitations and flood control responses must be part of the plan
- Project cannot increase dry season water deliveries above existing water supply operating levels (tied to canal minimum canal stages and availability from WCA3A) without additional infrastructure for WQ treatment



Modeled Operational Changes for Alt-2D

- **Used SFWMD Regional Simulation Model (RSM) and MODBRANCH Model**
- **Simulated TSP in place with new water control features and “general operations”**
- **Extracted model results to compare with and without project affects on Taylor Slough flows and S-18C discharge rates**
- **Model results show a range of seepage control can be achieved depending on how the system is operated**



RSM Model Results Compared 1991 Wet Year

Groundwater & Surface Water Flow Volume (acre-feet)

Location	1991 Baseline (1,000 ac ft)	With Project (1,000 ac ft)	% Change
Upper TS (GW+SW)	181	221	22
Lower TS (GW+SW)	166	201	21
S-18C	172	68	-60
S-197	15	7	-57



FIGURES
Figure 24-1 PMP Dam Break Inundation Map

