

# Decomartmentalization of Water Conservation Area 3

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## Purpose of Decomp

Restore natural landscape patterns and native flora and fauna in WCA-3 and Everglades National Park by removing barriers to sheetflow that disrupt natural hydroperiods, water flow and depths, and ecological connectivity.

### Ecological Problems within WCA-3A

Compartmentalization has altered hydrology, leading to:

#### Shifts in vegetative communities

Degraded areas and cattail monocultures have expanded

#### Subsidence

Lack of hydration has caused soil oxidation and changes in the topography in WCA-3A.

- Soil oxidation leads to elevated soil phosphorus levels, perpetuating cattail monocultures.

- Topographical changes alter historic flow patterns. Ponding risks have increased, encouraging undesirable vegetation

#### Peat fires

Dry conditions encourage peat consuming fires, which devastate tree islands, and promote subsidence, soil phosphorus elevations, cattail proliferation and undesirable topographical changes .

### Project Components

#### PIR 1:

- Miami Canal Backfill
- North New River Improvements (not necessary at this time)
- Hydropattern Restoration

#### PIR 2:

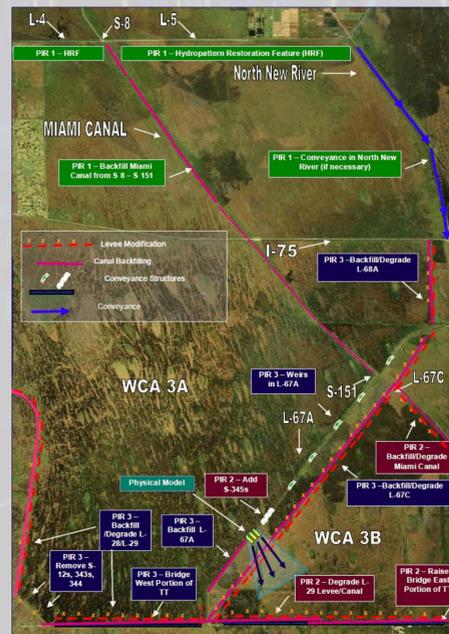
- Elevate eastern portion of Tamiami Trail
- Degrade eastern L-29 levee and canal
- Additional S-345s
- Backfill Miami Canal between S-151 and S-31
- Remove S-151
- Conveyance in North New River (as necessary)

#### PIR 3:

- Elevate western portion of Tamiami Trail
- Remove L-29 levee and canal
- Remove L-68A levees
- Remove L-67C levee and canal
- Remove L-28
- Install weirs along L-67A
- Relocate S-349
- Backfill southern 7.5 miles of L-67A
- Remove S-344, S-343A and B and S-12 structures

#### Decomp Physical Model:

- Field scale design test to address uncertainties with PIRs 2 and 3



### Challenges in Plan Formulation

**Scientific uncertainties** have hampered prior Decomp planning efforts. While reasonable predictions of marsh response to rehydration can be made, these predictions are not definite. These uncertainties were accommodated for in 2007 with the decision to implement Decomp in phases (multiple PIRs). **Use of a phased approach and data gathered from the Decomp Physical Model will help maximize achievable benefits while minimizing potential risks in future phases of the Decomp project.** Phasing will also allow near-term benefits to be realized with implementation of PIR 1.

**The South Florida ecosystem is complex and many CERP and non-CERP projects are hydrologically connected. Several projects build upon one another and their successes are dependent upon the achieved benefits of prior projects.** Current projects influencing Decomp include the EAA Storage Reservoir and Everglades Construction Project (ECP) to the north, Broward County Water Preserve Areas to the east, and Modified Water Deliveries to the south. Uncertainties related to the ECP recently instigated a scope change for Decomp PIR 1. Prior planning efforts for Miami Canal backfill assumed that a hydropattern restoration feature, originally envisioned as part of the ECP, spanning the northern boundary of WCA-3A would be in place by 2015. In February 2010, a determination was made that this hydropattern restoration feature would no longer be implemented by 2015. Hydropattern restoration was recognized as critical to the overall success of the Decomp project. At this time, this hydropattern restoration feature is being evaluated alongside Miami Canal backfill alternatives as a part of Decomp PIR 1.

**Agency and stakeholder interests are often diverse and sometimes divergent.** WCA-3A is used by several recreational groups, and several organizations have spoken up both for and against the backfill of the Miami Canal. **Agency involvement, scoping processes, public outreach and comment periods** help to ensure that the interests and input of agencies and stakeholders alike are heard by team members during critical project planning periods.

### Current Status:

#### PIR 1 – Planning Phase

Miami Canal backfill alternatives are completed. The Decomp Plan Formulation Sub-team is developing and refining problems, opportunities, objectives, constraints, management measures and performance measures for the northern WCA-3A hydropattern restoration feature.

Preliminary modeling using the South Florida Water Management Model is underway to determine benefit interactions between Miami Canal backfill and northern hydropattern restoration within WCA-3A. Modeling results will help determine the final components and features considered for Decomp PIR 1.

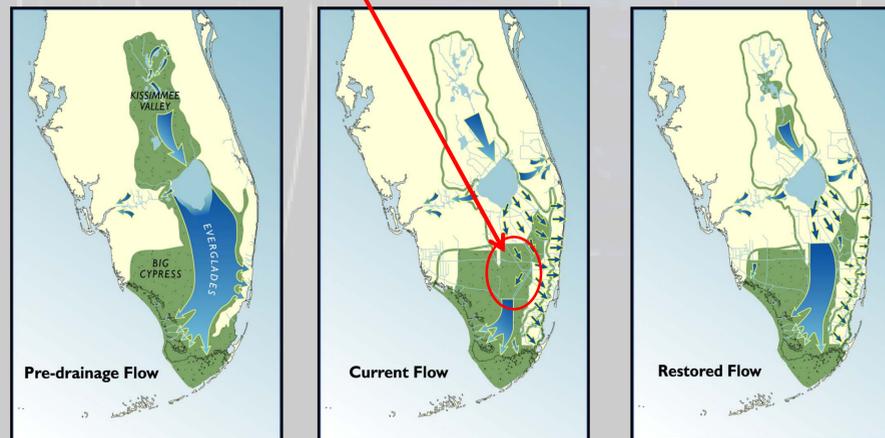
#### Decomp Physical Model – Baseline Monitoring

An Environmental Assessment is completed and a Finding of No Significant Impact was signed April 2010. A scientific monitoring plan is being finalized with baseline monitoring scheduled to begin October 2010, and construction to begin August 2011.

### Path Forward to TSP

- Develop and screen alternatives for hydropattern restoration feature
- Develop final array of alternatives that includes both Miami Canal backfill and hydropattern restoration feature
- Model final array of alternatives using Regional Simulation Model
- Evaluate final array of alternatives and determine the tentatively selected plan (TSP)

### The Heart of the Everglades - WCA-3A



### Timeline

