

LAKE BELT MITIGATION SUBCOMMITTEE

Model Lands Meeting Summary

South Florida Water Management District

West Palm Beach

December 7, 2004 - 9:00 a.m.

1. Call to Order

a) Attendees

1. Committee Members

- a. Veronica Fasselt, USEPA
- b. Matt Davis, Alternate, DERM
- c. Howard Hayes, Alternate, DEP
- d. Jeff Rosenfeld, Alternate, MF&L (Non-voting)

2. Other meeting attendees

- a. Beth McArdle, SFWMD
- b. Jason Smith, SFWMD
- c. Ed Cronyn, SFWMD
- d. Marjorie Moore, SFWMD
- e. David Foote, SFWMD
- f. Alan Whitehouse, DEP
- g. Tracy Hurst, USACE
- h. Michael Spinelli, DERM
- i. Jim Goldasich, Goldasich & Associates, Inc.

2. The meeting summary and field trip notes from the October 15, 2004 Model Lands field trip were discussed. The suggested changes (clarification of the use of large polygons on page 1 and comparisons between UMAM and WRAP on page3) have been incorporated in the attached revised field trip notes.

3. Marjorie Moore handed out updated restoration/long-term management costs for the District activities in Pennsuco. The restoration/long-term management costs have increased to

\$3179/acre from \$3071/acre, due an increase in the endowment needed for long-term management.

4. The different issues involved in developing a Model Lands recommendation for the full Committee were briefly discussed: the use of a consistent scoring methodology with the existing Lake Belt permits, the need for scoring in less infested areas in the Model Lands, proportion of lift from acquisition vs. restoration/long-term management, and costs estimates for acquisition and restoration.

5. The potential for using the Lake Belt Trust Fund to reimburse the Miami-Dade EEL Program for acquisition/restoration costs was discussed. Matt Davis will discuss the possibilities with the EEL Committee.

6. A field trip to Model Lands areas with lower degrees of exotic infestation, than were scored during the first field trip, was scheduled for January 21, 2005 at 9 AM at the SFWMD Homestead Field Station.

2/17/04

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
SCHEDULE OF RESTORATION AND MANAGEMENT COSTS
MIAMI-DADE COUNTY
(PER ACRE)

Restoration and Associated Costs

Contractual Costs for Restoration.....	\$2,098.50
Contract Monitoring (7 1/2% of Contract Price)	\$ 157.39
Overhead (128% of Contract Monitoring)....	<u>\$ 201.46</u>

Subtotal Restoration and Associated Costs	\$2,457.35
--	-------------------

Perpetual Management

Endowment *	<u>\$ 722.00</u>
-------------------	-------------------------

TOTAL COSTS	\$3,179.35
--------------------	-------------------

Rounded: \$3,179.00

* Annual management costs are approximately \$27.00 per acre.

**LAKE BELT MITIGATION COMMITTEE
MODEL LANDS FIELD TRIP NOTES
OCTOBER 15, 2004**

Introduction

The South Dade Wetlands Forested Fringe area was informally divided by DERM into three habitat classes based on the extent of exotic infestation. The classes are separated as follows: High (75-100% infestation), Medium (25-75%) and Low (0 to 25%). The potential mitigation evaluation focused on two areas with a high density of exotics, since these areas are common and their restoration would provide the greatest ecological benefit. The current Lake Belt permits are based on WRAP scores for the potential wetland impacts (and Pennsuco enhancement) and therefore both WRAP and UMAM methods were used in the evaluation. The DERM draft wetlands forested fringe map, a location map for the two sites, field notes, and UMAM and WRAP scoresheets are attached.

Site 1.

Site 1 was located approximately 150 feet west of the road shoulder along the west side of the C-111 Canal, near the point where the canal turns to the southeast. The evaluation was performed at the end of a cut line trail surrounded by dense, deeply shaded stands of Brazilian Pepper (*Schinus terebinthefolius*) and shoebutton ardisia (*Ardisia elliptica*). Some native willow (*Salix sp.*) was also present, but their distribution is sporadic.

When this type of area is restored, the desirable target community type would be a mixed graminoid marsh with scattered islands of willow, holly and other native trees and shrubs.

There was some discussion about the size of the polygon that should be evaluated, since areas located closer to nearby farming fields would have an appreciably lower UMAM score. The private parcels in the area that would likely be purchased for mitigation range from about 10 to 40 acres in size. While smaller polygons placed nearer to active farms would receive a lower score, the overall effect on the aggregate score for the entire area of potential mitigation land would not be significant (since most of the acreage would be centrally located within the polygon and not close to active farms). Therefore, it was decided that each of the three zones (High, Medium and Low) could be evaluated individually as a single large polygon.

Site 2. (Aerojet Road Habitat Enhancement Project):

Site 2 was selected to depict what areas that fit in the category with a High infestation with exotics would look like after initial treatment. Site 2 was located just east of Aerojet Road (south of Ingraham Highway). The area was historically a short hydroperiod sawgrass dominated wetland, along a rockland hammock/pine rockland interface. At some point, the native community was replaced by farming, and the site was used to

grow taro. The exotic trees and shrubs were aerially treated approximately 2 years ago with an herbicide. In April 2004, the site was mulched with a tracked Brontosaurus mulching machine. No further treatment has been conducted since completion of the mulching, but additional localized herbicide treatment will most likely be necessary to further reduce the exotic vegetation at the site.

UMAM Scores:

Location and Landscape Support - The site, while heavily disturbed, benefits from the proximity to Everglades National Park, and various state-owned conservation holdings in the Southern Glades. It does have value as a buffer from more intensive human activities, and provides habitat connectivity through the area. Nearby surrounding land uses (farming) are not likely to significantly impact wildlife movement through the area. The hydrologic connectivity throughout the landscape is good.

The large-scale clearing had provided the site with improved access for mammals, reptiles, and wading birds. Two peregrine falcons were observed utilizing the area for hunting and roosting. We rated it a “6” (with the potential to reach an “8” with restoration).

Water Environment - The site has a reasonably good water environment. The site is impacted by past farming practices (which may have left some residual nutrients in the soil) and by ongoing farming upstream. The presence of canals has had some limited effect on regional hydroperiods.

The enhancement had not produced a significant change. We rated it an “8” both before and after restoration.

Community Structure - Originally the site was probably dominated by a mixed graminoid marsh with sawgrass and scattered willow. It has since been replaced by a dense forest of exotic trees and shrubs with very low biological diversity. Wading birds are scarce and have been replaced by passerine birds and hawks, although these tend to congregate primarily around habitat openings. Movement by mammals and reptiles through the forest is severely restricted, and their populations are very low. The topography has been altered by past farming practices, which “fluffed up” the substrate, and left frequent ditches and “moguls”.

The structure at the site had been greatly enhanced. Much of the vegetation was still exotic, with plants like taro, giant cane and others, however native plants (particularly grasses and sedges) were also common. Wildlife access was greatly enhanced. Some trees had been left to provide roosting sites. We rated it a “2” (with the potential to reach a “7” with restoration).

These numbers resulted in a raw score of .533 for the current condition for Site 1, and .766 for the potential enhanced condition. The enhancement Delta value is .233. It was agreed that with proper management, the target enhanced marsh could be achieved in

three years, which results in a T factor of 1.07. The risk factor was determined to be 1.5. Some of the risk is due to the unproven nature of the restoration, and the effects of surrounding land uses. However, the entire area is considered a high priority by the state, which provides some assurance that the restoration will be sustained in the long run.

With additional herbicide treatment and fire, we can expect Site 2 to maintain the hypothetical .766 that was assigned to the enhancement potential at Site 1. We concluded with some discussion of whether the UMAM scoring should be influenced by the fact that the mitigation land would be put into preservation in perpetuity. It was discussed that this component was incorporated into the value assigned to the “Risk” adjustment, but the group decided additional discussion was needed especially when considering other portions of the Model Lands with less enhancement potential.

As calculated using UMAM, the potential lift for the mitigation area would be 0.14 (.233 x 1.5 x 1.07). This score was much lower than the WRAP scores for the Pennsuco and Hole-in-the Donut mitigation areas. It was discussed that the UMAM and WRAP methodologies, although similar approaches, are not strictly comparable.

WRAP Scores:

The site characteristics, as discussed above, were considered using the WRAP method. The WRAP method resulted in a score of .48 for the current condition for Site 1, and .85 for the potential enhanced condition. The potential lift for the mitigation area would be 0.37.

This lift is between the lift assigned by the WRAP evaluations for Hole-in-the-Donut and Pennsuco, which would appear to be consistent, based on existing conditions and the degree of enhancement expected. The Model Lands restoration is expected to be less intensive and costly compared to Hole-in-the-Donut, where the soil layer is removed down to the rock substrate (this would not be desirable in the Model Lands area due to a much thicker soil horizon). Pennsuco, on the other hand, has significantly greater ecological value prior to restoration and the enhancement activities are less intensive and costly compared to the potential Model Lands activities.