

## **ACTION PLAN** *Habitat Restoration Enhancement and Monitoring*

### **HE- 2**

#### **Restore, Create and Protect Mangrove and Spartina Habitats**

##### **ACTION:**

Increase mangrove coverage within the Lake Worth Lagoon through implementation of projects to create new mangrove and spartina wetlands and to protect and enhance existing resources.

##### **BACKGROUND:**

The lagoon supports approximately 295 acres of mangroves, 11 acres of which have been added since 2007 through the construction of habitat restoration projects. This represents an 8% increase in overall mangrove habitat since 1985.

Steps 1 and 2 outlined in the 2008 HE-2 AP have been successfully completed, with the mapping of mangrove resources and the construction of five habitat restoration projects which contained intertidal wetland components: Peanut Island Spartina, Ibis Isle, Bryant Park Islands, Snook Islands II and South Cove Natural Area. An additional 30 acres have been enhanced and protected through construction of wave attenuating breakwaters at Boynton Beach/Ocean Ridge.

While no significant progress has been made on Step 3 of the 2008 AP, the new restoration trend “Living Shorelines” provides a habitat component and is a shoreline protection alternative to armoring. Living Shorelines can be created by installing plant material, oyster shells, earthen material and riprap. These materials can be placed to create shoreline planters and restore shoreline habitat lost to bulkheads or armoring. The Living Shorelines concept is a good strategy to take to municipalities as they consider shoreline protection in response to climate change.

##### **STRATEGY:**

STEP 1 Design and permit priority habitat restoration projects identified in Table C-1.  
*Potential Partners: ERM, SFWMD, FDEP, USACE*

STEP 2 Establish Interlocal Agreements with municipalities or land owners to restore and create mangrove/spartina habitats and Living Shorelines within their jurisdiction, and protect these habitats through education.  
*Potential Partners: ERM, FDEP, League of Cities, Municipalities: North Palm Beach, Lake Park, Riviera Beach, Palm Beach Shores, West Palm Beach, Palm Beach, South Palm Beach, Lake Worth, Lantana, Hypoluxo, Manalapan, Boynton Beach, and Ocean Ridge*

STEP 3 Identify funding and construct projects to create intertidal habitat.  
*Potential Partners: ERM, FDEP, FIND, FWC, USACE, NOAA, USFWS*

**SCHEDULE:**

**Step 1** was initiated with the identification of priority restoration projects. Conceptual design and permitting will be initiated in 2013, with the cooperation of municipalities. **Step 2** will be initiated for projects identified in Table C-1. Letters will be sent to appropriate municipalities to request partnership and project support through an Interlocal Agreement with Palm Beach County.

**Step 3** Permitted projects will be constructed based on municipal support and funding.

**COST:**

Design and permitting: \$250,000/year/project = staff time and permit fees

Construction costs: \$2,000,000/year

Monitoring/maintenance \$100,000/year

**EXPECTED BENEFITS:**

- Habitat and nursery grounds for invertebrates and fisheries with important recreational and commercial value.
- Roosting and nesting sites for wading and overwintering birds.
- Shoreline protection and reduced re-suspension of sediments
- Mangroves trap and cycle organic materials and nutrients within the estuarine ecosystem
- Water quality/clarity improvements through filtration of runoff & sediment trapping
- Mangroves contribute to the economy of our coastal communities
- Manatee refuge and habitat.

**MONITORING ENVIRONMENTAL RESPONSES:**

Progress in implementing mangrove habitat restoration will be monitored by ERM.

**REGULATORY NEEDS:**

Permits for construction are required by FDEP or SFWMD and USACE. Legislation to streamline the permitting process, for Government sponsored limited restoration or enhancement projects (including living shorelines), is currently being evaluated for inclusion in the Statewide Environmental Resource Permit rule as a Restoration General Permit. Some of the habitat restoration/enhancement projects may qualify for the USACE Nationwide Permit #27. Steps are being considered by USACE to streamline the permitting for "Living Shoreline" shoreline stabilization projects.

**POTENTIAL PARTNERS AND FUNDING SOURCES\*:**

*PBC, FIND, SFWMD, USACE, FDEP, FWC, NOAA, USFWS, EPA.*

\*Listed Agencies have not committed funds and are subject to Agencies' budget approvals