

ACTION PLAN *Habitat Restoration Enhancement and Monitoring*

HE-1

Expand Oyster Reef Habitat

ACTION:

Increase the Lake Worth Lagoon (LWL) oyster population through enhancement of impacted habitat.

BACKGROUND:

All the steps highlighted in the 2008 HE-1 AP have been successfully implemented. A five acre oyster reef pilot project was constructed in central Lake Worth Lagoon in 2009, with an additional 5 acres to be placed in 2013. This newly created oyster reef habitat adjacent to John's Island, consists of limestone boulders placed in discrete piles with open space to allow water flow. The reef has colonized with oyster spat and continues to develop and support a thriving oyster and fisheries community. Other restoration projects constructed with an oyster reef component include Boynton Beach/Ocean Ridge Riprap, Ibis Island Restoration, Lantana Oyster Reefs, South Cove Natural Area, Snook Island's II and Bryant Park Wetlands Restoration. Since 2008, a total of 14 acres of oyster reef has been added to LWL.

Step 3 of the 2008 AP was accomplished with the development and implementation of an oyster monitoring plan designed to track oyster recruitment and health on natural and created oyster reefs within the lagoon. ERM, in cooperation with Harbor Branch Oceanographic Institute (HBOI) at Florida Atlantic University, initiated a two year study to determine the health and productivity of three reef sites (2 natural/1 created), and the potential for creating additional oyster reef habitat in these locations. The oyster monitoring study set a solid framework for future monitoring and concluded, in part, that the LWL is a productive system with patches of healthy oyster beds that provide the recruitment necessary to seed large and small restoration projects (detailed in Chapter 2). It had been hypothesized that LWL is substrate limited. This study further concluded that the addition of substrate to provide oyster reef in LWL should be successful, improve water quality, provide erosion control and increase habitat for associated species. In the future, consideration should also be given to expanding mollusk restoration activities to other species to diversify the restoration effort.

STRATEGY:

STEP 1 Identify new project sites for optimum oyster reef placement

Potential Partners: ERM, HBOI/FAU

STEP 2 Create additional oyster habitat

Potential Partners: ERM

STEP 3 Identify willing partners to assist with conducting and expanding the LWL Oyster Monitoring program

Potential Partners: ERM, SFWMD, FWC, HBOI/FAU

SCHEDULE:

Step 1 will be initiated in 2013. Step 2 material placement will be implemented upon completion of Step 1. Step 3 oyster monitoring protocols have been established but needs funding and agency participation to build upon the established baseline.

COST:

Construction of 14 acres oyster reef over 5 year period: \$3.5 million

Staff time involved in project design and management: \$350,000

Oyster Monitoring Program costs: \$75,000/year

EXPECTED BENEFITS:

Habitat enhancement, water quality improvements and erosion control by the placement of material to promote oyster recruitment in substrate limited areas of LWL. The oyster reefs will add high quality complex habitat in the lagoon, which supports oyster recruitment and associated species such as other invertebrates, fish and birds.

MONITORING ENVIRONMENTAL RESPONSES:

Annual monitoring will be conducted by ERM and FWC staff to assess aerial extent and health of oysters on deployed substrate.

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.

FUNDING:

Funding will be sought by PBC.

POTENTIAL PARTNERS AND FUNDING SOURCES*:

ERM, SFWMD, FDEP, NOAA / NMFS, FWC, FIND, USACE, HBOI/FAU.

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