



**Department of  
Environmental  
Resources  
Management**

**Environmental Enhancement &  
Restoration Division**

**June 2008  
Status Report**

Completing a 934 report will enable the County to save considerable time and money and maintain its current renourishment schedule of fall 2009. County staff will seek the BCC's approval of the renourishment scope of work (SOW) and a FDEP funding agreement in August.

**Jupiter/Carlin Erosion Control Project**

County staff met with its consultant to discuss anticipated project performance goals and possible breakwater engineering scenarios. A second ADCP deployment to capture summer wave conditions will occur over the summer.

**Singer Island Erosion  
Control Project**

The environmental resource survey of the nearshore reef has been completed and the draft report is being reviewed by County staff. The scoring used to determine mitigation requirements will be completed by the end of the month. The data from the resource survey are being incorporated into the FDEP RAI #2 response. A consultant is continuing the numerical modeling efforts of the design

modifications to evaluate how alternative configurations could help minimize impacts to the exposed nearshore hardbottom and potential downdrift erosion impacts.

The Corps of Engineers will soon visit the project area and reef to verify results of the resource survey.

The Riviera Beach City Council held a workshop on June 10<sup>th</sup> to discuss the proposed funding agreement with the County to help fund shoreline protection efforts on Singer Island. County staff provided a presentation discussing the erosion issues, current responses in the form of dune restoration and the long-term solution of breakwaters. The Council agreed to cost share but additional discussions are necessary to determine how to secure the local share, estimated to be \$6 million (20%) of total project costs.

**South Palm Beach**

The consultant provided ADCP results (wave parameters, currents and tides) for the winter deployment (March 10 - April 20). A strong swell occurred from March 17-20 and resulted in the burial of the nearshore ADCP. Due to the sand coverage, the ADCP was unable to acquire wave directional spectrum and current velocity data. However, the instrument was still able to collect the wave parameters and tide levels until the recovery date.



**Snook Islands Natural Area**

The third year of seagrass monitoring at the Snook Islands Natural Area is currently underway with seagrasses, predominantly *Halophila johnsonii* and *H. decipiens* found throughout the site. In May, just prior to initiating the seagrass work, two manatees were spotted feeding on *Spartina* along the shoreline at the north end of the restored site. More recently, an American Oyster Catcher chick was observed feeding with his parents along the flats at one of the islands (photo above). This is the second year in a row that an oyster catcher has fledged from this location. Work continues on design of the public use facility and a funding request was submitted to FIND.

**Juno Beach Renourishment**

The response to the FDEP's 3<sup>rd</sup> Request for Additional Information (RAI) was submitted June 11. The response to the Army Corps RAI was submitted June 25. A letter to FDEP containing supplemental information for the mitigation reef permit modification was mailed June 26. Construction contract technical specifications are in development.

**Jupiter/Carlin Renourishment**

The ACOE informed the County that a Section 934 (Economic Feasibility Study) report is now required instead of a General Reevaluation Report.

Staff intends to present the engineering & design SOW for the erosion control project to the BCC in August.

### **South Lake Worth Inlet**

30% plans for the modified sand transfer plant design are under review. Staff is preparing a response to RAI #2 for a jetty rehab permit or exemption. The existing plant continues to pump while fine tuning of the RPM's continues following the engine overhaul. Monitoring seagrass impacts resulting from the sand trap dredging inside the inlet will occur in July.

### **Reef Monitoring and Management**

This month the Reef Research Team visited Warrior Reef, Tug Boat Reef, and 2 natural reefs. Warrior Reef continues to attract goliath grouper, and gorgonians are encrusting on the flat concrete basis of the pillars. MG111 next to Warrior Reef has all but collapsed but continues to attract large numbers of fish, including several more goliath groupers. The northernmost tug could not be found; currents were strong that day.

### **Sea Turtle Nesting Update**

Loggerhead nesting is higher than during this point in the 2007 nesting season and 10-20% higher than the 5-year average. After the record low 2007 nesting season, it is encouraging to record an increase in loggerhead nesting. Though green nesting has just begun, nesting is similar to the 5-year average. Leatherback nesting has almost concluded for the 2008 nesting season and, though lower than the record 2007 nesting season, is generally 10-20% higher than the 5-year average. Sea turtle nesting season continues through October 31.



### **Sea Turtle Lighting Compliance**

Lighting inspections have been conducted in Jupiter Inlet Colony, Tequesta, North Palm Beach, Riviera Beach, Palm Beach Shores, Manalapan and portions of unincorporated Palm Beach County. Follow-up inspections will be conducted throughout the sea turtle nesting season. Disorientations have been

reported; lighting sources contributing to the events include street lights and skyglow (pictured above).



### **In-water Sea Turtle Monitoring**

InWater Research Group (IRG) conducted a sampling event to characterize the turtle populations in the Lake Worth Lagoon and on the nearshore reefs adjacent to shoreline protection projects in northern Palm Beach County. Three juvenile green sea turtles were captured during netting activities and over 40 juvenile greens were sighted during visual transects in the vicinity of Little Munyon Island. Four sea turtles (three greens and one loggerhead) were sighted during visual transects conducted on the nearshore reef between Jupiter and Riviera Beach. IRG will conduct the next sampling event in September.

### **Nearshore Mitigation Reefs**

There were no bidders for the rock placement and mitigation reef construction contract. The contract is being re-advertised and bids are due July 29. Construction of mitigation reefs at Riviera Beach and Ocean Ridge will be delayed until September.

### **Seagrass Mapping**

The 2007 Habitat Classification and Mapping Project for all of PBC estuarine habitat are nearly completed. Aerial photography that was obtained last summer has been converted into digital orthophotography and used to map seagrass, mangroves, oysters and spartina grass within the estuarine boundaries of Palm Beach County. Preliminary data has shown an increase of mangroves from 646 acres in 1985, to 669 acres in 2001, to 725 acres in 2007 a 12% increase in mangrove coverage county wide. Preliminary seagrass data comparing 2001 to 2007 has shown a 62 acre increase of seagrass. The increase was observed mostly in the Southern portion of the LWL and PBC.

### **Juno Dunes Hydrologic Restoration**

The hydrologic restoration of the Juno Dunes Natural Area is underway. Approximately 4 acres of vegetation clearing was completed with 3 culverts installed to facilitate the use of the management roads. In addition, excavation continues in the creation of a rookery island and 2 freshwater ponds for bird utilization and holding mosquitofish (*Gambusia affinis*) that are important in controlling mosquito populations.



### **South Cove Natural Area**

Staff is still in the permitting process with DEP currently preparing our 3<sup>rd</sup> RAI response. County staff recently completed a site visit with DEP staff that was very positive. An interlocal agreement will be considered by West Palm Beach on July 14. This project was also recently presented to FIND (Florida Inland Navigation District) Board for funding with the 2008 Waterway Assistance Program.

### **Ibis Isle Restoration**

The project components are to cap 20 acres of muck sediments with a layer of sand and create mangrove, spartina grass, and oyster reef habitat. The objective is to restore a muck lagoon bottom to a healthy benthic environment. Staff is in the process of testing the compression rates of muck with a layer of sand at the surface by installing metal culverts of various lengths at eight locations within the proposed project area. Muck depths in the project area have been measured between 1 and 8 feet in depth.



### **NENA Trail Head at Lake Okeechobee Scenic Trail**

Construction on the Northeast Everglades Natural Area (NENA) trail head to the Lake Okeechobee Scenic Trail (LOST) is progressing toward completion in August of this year, however, the Army Corps of Engineers is working on the Herbert Hoover Dike in this area and therefore this section of the Lake Okeechobee Scenic Trail is currently closed to public use.

### **NENA Historic Jupiter-Indiantown Trail, Phase 1**

The design for the sections of trail and associated facilities to be built in Cypress Creek Natural Area was scoped in-house in June. Staff is investigating various options for creating a ten foot wide hardened trail for use by pedestrians and bicyclists and a separate six foot wide trail for horseback riders.

### **John Prince Park/Chain of Lakes Restoration**

Six months after the hydric hammock and littoral zone was planted at Bird Island, the plants have grown in, the wetland has filled with littoral growth and the birds have moved in. Four juvenile limpkins were recently spotted. Limpkins feed heavily on Apple Snail, marsh insects and frogs, all of which are in abundant supply in this restored wetland. Three families of great blue heron have also constructed nests and raised their young on the island. The area is a favorite spot for birders who can almost be assured of observing aquatic birds in this freshwater wetland habitat.



*For more information on Palm Beach County environmental restoration projects, please visit:*  
<http://www.co.palm-beach.fl.us/erm/>