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FLORIDA'S TREASURE COAST AND PALM BEACHES

Manatee Pocket dredging project nearing completion, may serve as model

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PORT SALERNO — Martin County's Manatee Pocket dredging project could provide a model for the removal of sediment from the Indian River Lagoon as part of the Comprehensive Everglades Restoration Plan, county officials said.

A hydraulic dredge could finish removing sediment from the Manatee Pocket by the end of November if work resumes as planned on Monday on the navigation and environmental project, county officials said.

In addition to dredging a navigation channel in the Manatee Pocket for the first time, the project should improve the harbor's water quality by removing sediment from tributaries and shoreline areas where sea grasses and other marine organisms grow, said County Engineer Don Donaldson and Coastal Engineer Kathy Fitzpatrick.

The Manatee Pocket dredging project is large enough to provide a model for the removal of sediment from the nearby St. Lucie Estuary, which has been proposed by the state and federal governments as part of the $12 billion Everglades restoration project, Donaldson and Fitzpatrick said.

The Pocket is a protected harbor near the confluence of the Okeechobee Waterway, the Intracoastal Waterway and the St. Lucie Inlet.

"In a lot of ways, the Manatee Pocket is kind of the county's version of CERP," Donaldson said. "It's a unique project in that an estuary dredging project of this magnitude does not happen often."

"One of the components was dredging millions of cubic yards out of the St. Lucie Estuary to improve the habitat and to remove materials that have accumulated from years of discharges," Donaldson said. "This project is a good demonstration because it's big enough to show you the magnitude of what's needed. It's big enough to be scalable for even a larger project."

The Manatee Pocket dredging project shows how difficult it is to dredge and dispose of large amounts of estuary sediment, Fitzpatrick said.

"I think it's been very instructive," Fitzpatrick said. "I think it is a very cautionary tale because from everything we've learned here, it will be very expensive and very time consuming and just very difficult to do something on an even larger scale. Not that it can't be done, but you're going to know you need to really prepare for something."

The water quality in the Manatee Pocket should improve as a result of the dredging of sediment from the Manatee, Salerno, Chapman and Crooked creeks as well as improvements to the stormwater drainage facilities along the tributaries to reduce the amount of sediment flowing into the pocket, Donaldson said. Dredging a navigation channel and other areas of the pocket will also reduce the amount of sediment kicked up by boat propellers.

The Ocean Research and Conservation Association has installed water-quality monitoring devices in the pocket so it may be possible to measure the improvements, Donaldson said.

Improved water quality is expected to help marine life flourish in the pocket, Donaldson and Fitzpatrick said. Homeowners along Willoughby Creek reported an increase in bait fish and manatee sightings after that waterway was dredged in 2003.

So far, the $11.5 million dredging project is on time and within budget, Fitzpatrick said. Dickerson Florida of Fort Pierce started removing nearly 300,000 cubic yards of sediment from the Manatee Pocket and its tributaries in July 2010.

The new 10-foot-deep, 100-foot-wide and 2-mile-long channel enables large boats to reach the boatyards and marinas that line the shoreline of Manatee Pocket, said Arthur Cox, the owner of A&J Boatworks and president of a group of business owners called The Pocket Bunch.

Shoaling and shallow water had been discouraging large boat owners from frequenting the Manatee Pocket, Cox and county officials said.

"Here on the south end with the water depth we have now, we are now moving large vessels in here," Cox said. "Our business has picked up considerably. The activity has easily doubled. No one is getting stuck anymore."

One stumbling block to the dredging project was the widely held concern that toxic waste contaminated the sediment in the pocket, Fitzpatrick said. But sediments tests revealed nothing that would require a hazardous waste cleanup.

"Once we knew we didn't have material that needed people in orange suits and yellow drums to take it out, it became a project that really could happen," Fitzpatrick said.

The cost of the dredging project posed another major hurdle, Donaldson said. But Fitzpatrick succeeded in obtaining millions of dollars in grants from the Northern Everglades and Estuaries Protection Program, the Florida Inland Navigation District and the St. Lucie River Issues Team, as well as smaller grants from several other agencies.

The County Commission awarded the dredging contract to Dickerson Florida of Fort Pierce in July 2009 after county officials questioned whether two lower bidders were capable of doing the work.

Dickerson has been using a dredge vessel with a 10-inch cutter head to dig the sediment out of the pocket, said Jeff Ehrhard, a vice president with the company. The mixture of sand, muck and water is pumped through a mile-long pipeline to the dredged material management area on a 25-acre site on U.S. 1 and Slater Street.

Two ponds within the 15-foot high earthen structure allow the sediment to settle before clean water flows through another pipeline to the Manatee Pocket, Fitzpatrick said. The remaining sediment is mixed with sand and trucked to All County Earth Movers, an old mining site on Martin Highway in Western Martin County.

The containment basin was built on a property where the Stuart City Council had approved an upscale shopping center known as The Fountains before the economic downturn scuttled the project.

The earthen containment basin, where the dredged sediment has been processed for about a year and a half, will be leveled in early 2012, Donaldson and Fitzpatrick said. The site will be restored and planted with grass.

Manatee Pocket amenities

Businesses

13 marinas that can accommodate more than 1,000 boats

5 waterfront restaurants

Chapman School of Seamanship

Port Salerno Commercial Fishing Fleet

Public facilities

Sandsprit Park

Manatee Pocket Walk

Broward Street boat ramp

Port Salerno Civic Center

Manatee Pocket dredging

Main Channel: 217,409 cubic yards

Manatee Creek: 22,072 cubic yards

Chapman Creek: 11,381 cubic yards

Salerno Creek: 6,398 cubic yards

Crooked Creek: 5,184 cubic yards

Habitat areas: 20,800 cubic yards

Total: 283,244 cubic yards

Dredged Material Management Area

Location: U.S. 1 and Slater Street

Site size: 25 acres

Basin size: 16.92 acres

Capacity: 220,617 cubic yards

Truckloads removed: 8,600