

Inlet Management Study of Blind Pass to be Developed

Old Man Winter built a significant ebb tidal shoal along the entrance of Blind Pass this year. The rate of sediment infilling was monitored by Lee County as part of the Blind Pass Project. Lee County manages the inlet and schedules maintenance dredging of the Pass to keep open water flow. An open Pass provides a flushing connection between the interior waterways and the Gulf of Mexico. The positive effects include increased recreation, improved water quality and support of fish and wildlife habitat.

History of Blind Pass

Blind Pass is a natural inlet that has existed for as long as 1,000 years, although its location has migrated at various times. Prior to the opening of Redfish Pass



Blind Pass March 2014



Blind Pass March 2015

in 1921, Blind Pass was a more substantial inlet with a larger tidal prism. When Redfish Pass opened, it captured a significant portion of the tidal prism, making Blind Pass a smaller, more unstable inlet. The ebb shoal migrated to shore and no longer provided protection for southern Captiva and northern Sanibel.

In 1960 the construction of the Intercoastal Water-
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Construction Ready

A periodic renourishment plan that ensures a sustainable beach and protection of coastal infrastructure is in place on Captiva. The objective is to design and permit a project that is ready for construction in response to the next major storm event. Although the 2013 project has an 8-year renourishment interval, in practice major storms drive this event. Controlling beach erosion and reducing potential damage to the upland infrastructure during a storm event is the purpose of a renourishment project. The need to maintain the project for future storm damage prevention and enhanced recreational qualities is essential. A new joint coastal permit that will enable the CEPD to continue beach renourishment for a 15-year permit period is on its way to the District. While the project authorization from the Florida DEP and the U.S. Army Corps of Engineers will replace the previous permit that expired in November 2014, the new permit contains some new components that the District requested.

- The new multi-use permit will have a 15-year permit period while the previous permit had a 10-year period.
- The permit addresses sea level rise. To account for rising waters, the turtle friendly beach and dune elevations will increase by 0.5 feet. The design of the beach width will also increase.
- The project permit will include the option of emergency hot spot nourishment using an upland sand source. If the sand needs are small, it is more economical to use truck delivery of sand from an upland sand mine to a hot spot on the beach as opposed to the high cost of a dredge for small projects.

In order to protect the groin and rock revetment along the interior shore of Redfish Pass, a small fillet of fill will create protection during storms. The next project is tentatively scheduled for 2021 based upon the 8 year design life of the 2013 project but could be required earlier in response to a major storm.

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Keep Turtles in the Dark

Each year beginning May 1 threatened and endangered sea turtles nest on Florida beaches as they have done for millions of years. Two months later, tiny hatchlings emerge from their sandy nests and scamper for the water using the seaward horizon as their guiding light. Artificial light visible from the beach confuses them and lures them inland away from the water. Thousands of hatchlings die because lights along the beach are visible, not shielded properly or not turned off.

No light source should be directly visible from the beach. Unshielded interior lighting, even from a single beachfront condominium, is enough to disrupt the normal sea-finding behavior of hatchlings.



Amber LED bulb



Shielded wall fixture



Shielded landscape fixture

Examples of problems and their remedies include:

- unshielded white lights - change bulbs to amber LED (turtles are unable to see dark amber light), shield the fixture, or turn off the lights;
- bright white light reflecting off exterior wall - change bulbs to amber LED and adjust the fixtures to eliminate light reflected toward the beach;
- bright white roof lights shining on the beach - change bulbs to amber LED, shield the fixture, and direct the light away from the beach;
- white uplights illuminating trees and landscaping on seaward side of house - turn off lights during turtle nesting season;
- white exterior and interior lights shining seaward – change bulbs to amber LED, shield fixtures, and close the blinds;
- bright white ground lights illuminating sign at entrance drive - change bulbs to amber LED and reduce the wattage;
- bright white exterior stair, hall, and porch lights-change bulbs to amber LED and shield the fixtures.

Teens Get Involved in Protecting Captiva's Beach and Dune System

While spring break is a time for teenagers to relax and enjoy Florida's beaches, a local teen and her classmates also used the time to raise money to protect Captiva's beach.

Morgan Mansur, age 17, daughter of Barry and Traci Mansur, founded the Florida Environmental Protection League. The League's \$2,000 donation will be used for educating the public on the importance of the dune system and providing signage to protect Captiva's dune areas.

Kathy Rooker, CEPD Administrator, complimented Morgan and her classmates. "Your generous donation and work will help with the care and stewardship of our coastal system so that our beaches and dunes flourish. It is reassuring to know that this current generation seeks to understand issues and to find a role in making a positive difference."



Morgan (2nd row 4th from right) and her classmates

Captiva Island Turtle Data As of 6/29//2015

Nests: 94
Hatched Eggs: 63
Emerged Hatchlings: 56
False Crawls: 176

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way through Pine Island Sound diverted more tidal flow through Redfish Pass, further reducing Blind Pass flow volumes. The inlet cross section decreased due to shoaling to the point of complete closure of the channel. For many years a cycle ensued in which Blind Pass was opened by storms and closed by shoaling.

In 2001 a joint Lee County and CEPD project removed sand from the Gulf side of Blind Pass Bridge. To the objections of CEPD engineers, the Florida DEP



Blind Pass after it was opened in 2008

did not allow removal of sediment accumulated from the channel east of the bridge. The Pass was reopened but closed shortly thereafter.

In 2006, the Florida DEP agreed to allow dredging the interior and seaward sides of the bridge. It was completed in 2008 by Lee County and the Pass was reopened. Subsequent maintenance dredging by Lee County occurred in 2012 seaward of the channel and landward in 2013.

Today

Lee County, the CEPD, and the City of Sanibel worked cooperatively this spring on a scope of services to develop an Inlet Management Plan Study for Blind Pass. One goal of the study will be for State adoption of the plan with support of the three local government entities. The study will update existing studies with the application of state of the art models to address critical questions concerning the maintenance of Blind Pass and the performance and maintenance of adjacent beaches. Additionally, the study will utilize an updated sediment budget to develop more efficient and effective regional sediment management approaches to improve the pass and adjacent beaches. Lastly, the study will utilize advanced numerical modeling to evaluate solutions to ongoing problems that may employ intervention or enhance natural

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TDC Recommends Approval of CEPD Funding Requests

At a May 14th Lee County Tourist Development Council meeting, members of the Council formalized a recommendation for the Board of County Commissioners to approve a total \$348,247 of County collected tourist tax dollars be spent on two CEPD funding requests. Funding provided by the tourist development tax utilizes 24.4% of the five-cent bed tax paid by tourists for beach and shoreline requests from local government agencies such as the CEPD.

In an application submitted to the Council, CEPD requested \$325,000 of bed tax dollars from the County as a share of the cost for an inlet management study of Redfish Pass and adjacent beaches. The primary focus of the study will be to identify and evaluate sand borrow area alternatives within the Pass that are more economical to dredge, sustainable, and with minimal impact to the coastal system. Dredging designs for beach nourishment borrow area alterna-



Redfish Pass looking from tip of Captiva toward North Captiva

tives will be analyzed for any potential impacts to the Pass, adjacent shorelines and overall coastal system. Up to 5 different conceptual designs will be simulated and compared to a no action scenario. Borrow area boundary conditions, shapes and sizes will be developed for differing volumes of sand to be expected for renourishment projects ranging from a modest emergency fill to a full beach nourishment project.

The CEPD explained to the Council the reasoning behind the proposal. Importantly, the sand borrow area in the Pass is sustainable and easy to reach. A re-emergent ebb shoal within the pass could provide a constant source of sand that is more economical to dredge due to its close proximity to the island. This is

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systems to the mutual benefit of Lee County, the CEPD, the City of Sanibel, and residents and visitors.

Since time was of the essence, responses to the solicitation were received on May 7, 2015. An evaluation committee consisting of Lee County staff, Kathy Rooker of CEPD, and James Evans of the City of Sanibel examined all submittals and interviews/presentations of the responding qualified engineering firms to initiate the ranking process. Following Presentation, the evaluation committee made a recommendation based upon the information provided from the firm's presentations and evaluation committee discussion. A Recommendation of Award will be presented to the Board of County Commissioners for approval to enter into negotiation to provide professional services which in the opinion of the County would be in the best interest of Lee County.

SAVE THE DATE

8/12/2015	Regular Board Meeting	1:00 pm
9/10/2015	Tentative Budget Hearing	5:01 pm
9/21/2015	Regular Board Meeting	3:00 pm
9/21/2015	Final Budget Hearing	5:01 pm
10/14/2015	Regular Board Meeting	1:00 pm
11/10/2015	Regular Board Meeting	1:00 pm
12/9/2015	Regular Board Meeting	1:00 pm

Meetings are held at Tween Waters Inn, 15951 Captiva Dr., Captiva, FL 33924. The public is welcome.

New Sign at Groin at Redfish Pass



The original sign erected during the groin extension project in 2005 had faded. CEPD's permit requires the District CEPD to maintain this sign.

**TDC Recommends Approval of CEPD funding Request
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not the case with the sand in the existing borrow area 8 miles offshore of Captiva that has been previously used for beach projects. Once that sand is gone, it is gone. Additionally, transporting sand over 8 miles to shore is costly due to the long distance and increased cost of using dredges designed for that purpose.

In addition to approving the Redfish Pass Inlet Management Study, the TDC also approved CEPD's request to fund \$23,247 of the annual cost to maintain the Hagerup Beach Park access and parking area at the end of Captiva Drive. These funds enable the CEPD to maintain the safety, appearance, and cleanliness of the public beach areas and access 365 days a year.

The TDC approved projects have been forwarded to the Lee County Board of County Commissioners for inclusion in their annual capital improvement budget.

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