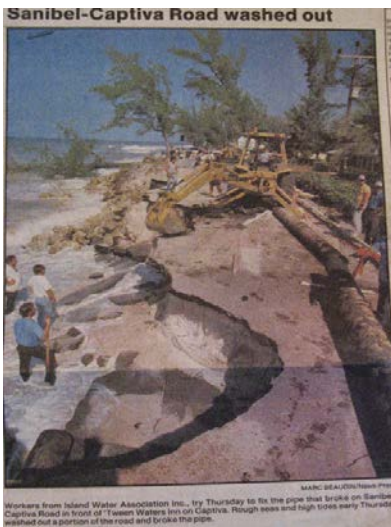


### Proactive Measures and Partnerships Work to Manage Shorelines

Fifty years ago, the barrier islands of Captiva, Gasparilla, and Estero (Ft. Myers Beach) were facing severe erosion problems. Beaches, the number one economic and environmental asset in Lee County, were not a County government priority in the 1960's. A County beach management plan to address the problem did not exist. Speaking at the 2014 Florida Shore & Beach Preservation Association (FSBPA)



1987 News-Press photo of road collapse

Conference, Steve Boutelle, FSBPA Chair and the Operations Manager for Lee County Natural Resources, described the development of a Lee County Beach Management Plan to restore eroded beaches that traces its roots to Captiva Island.

“Captiva Island

was the birthplace of beach nourishment in Lee County,” says Boutelle.

Boutelle told conference attendees that in March of 1966 a Lee County public hearing was held that included the Board of County Commissioners, community stakeholders, federal and state officials and agency representatives to discuss erosion control because it was widely believed that a stable beach provides storm protection and recreation and is essential to the entire local economy. A subsequent feasibility study concluded that beach nourishment from offshore sand sources (borrow areas) was the most feasible option. Following the study, however,

**(Continued on Page 3)**

### Tilling of Beach to Be Done in January

The CEPD will till the sand placed in the 2013/14 renourishment project. Tilling is required to lessen the impact of compacted sand on sea turtle nesting and hatching activities. The turtles prefer soft sand for digging their nests and laying their eggs. The next tilling is scheduled for January 2015 before piping plovers nesting begins February 1 and sea turtle nesting begins May 1.

CEPD issued a Request for Proposals in October and received bids from 3 contractors. Advantage Construction Group of North Port, Florida was selected by the CEPD Board of Commissioner at its November 12 Board Meeting with the low bid of \$19,500. Brandon Thull, the owner of Advantage, anticipates that he will begin Monday, January 5 on the renourished portion of Sanibel, after which the tiller will be moved to Captiva. The work is projected to take a week weather permitting. Residents and beachgoers must remove objects and obstructions that may interfere with the work, including beach chairs, umbrellas, and canopies.



The CAT 75D tractor and tiller

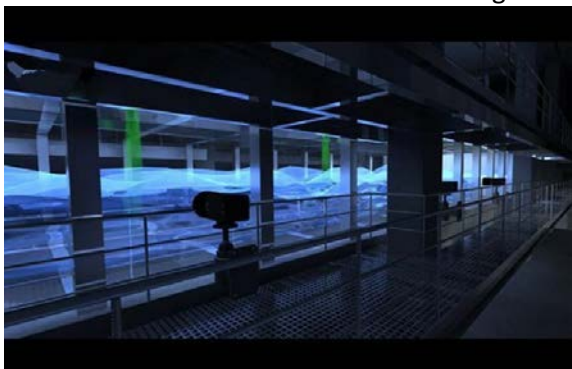
The project involves the tilling, dressing and escarpment leveling of approximately 30,350 linear feet of beach using a tracked vehicle pulling a rake with tines. Tilling will be to a minimum depth of 36 inches

**(Continued on Page 3)**

### Univ. of Miami Opens Hurricane Research Facility

The University of Miami recently completed the Marine Technology and Life Sciences Seawater Complex (MTLSSC), the centerpiece of the Rosenstiel School of Marine and Atmospheric Science. The MTLSSC houses the **SURge-STructure-Atmosphere Interaction (SUSTAIN)** research facility.

The SUSTAIN research facility is the only place in the world with a wind/wave/storm surge simulator capable of generating Category 5 hurricane-force winds in a three dimensional test environment. Before, scientists used fixed tanks to simulate water movement. But big tanks sunk in concrete are limited to two-dimensional imaging. Smaller tanks allow views from three sides but the small space interferes with wave production. The new seawater tank will allow experts to make critical observations within a realistic but scaled and controlled environment. The goal is to improve hurricane forecasting and intensity predictions. Simulating hurricanes will also further the study of the effects of sea level rise and storm surge.



**SUSTAIN Hurricane Simulation Tank**

In a hurricane, the ocean ingests air, blurring the normal separation between sea and air. Powerful winds can push water bubbles 40 feet below the surface. Winds can shear off the tops of waves, pulling water into the air. The mixing of water and air changes their normal physical properties. As winds become extreme, the friction between air and sea suddenly decreases. Why all this happens remains largely a mystery to meteorologists who want to improve intensity predictions as they have forecasting storm tracks. The size and unique construction of the tank will help them do this.

The tank will also assist engineers studying how structures withstand the forces of water, which are potentially far more destructive than wind. SUSTAIN

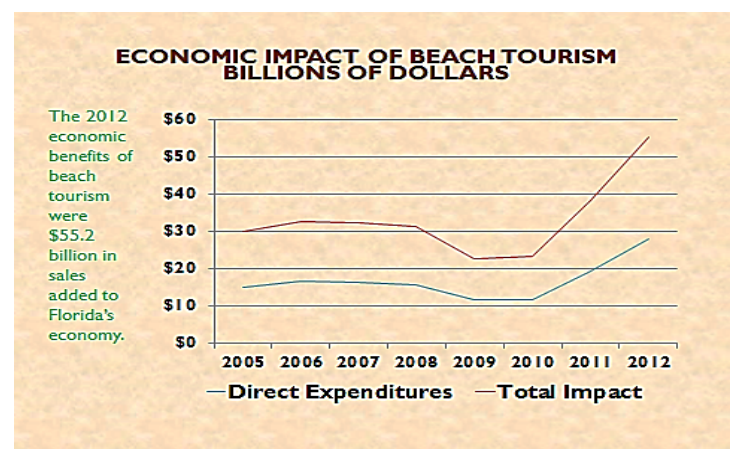
**(Continued on Page 4)**

### Beaches Need New Level of Dedicated State Funding

Florida local governments were pleased in 2014 to see the state’s appropriation of \$47.3 million for Florida’s successful beach management program. Not since 2007/2008 had beaches benefited from this level of revenue. The amount was enough to fund 53% of the total local government beach funding requests. Can we expect to see the same level of commitment from our State Legislature in 2015? According to Debbie Flack, President of the Florida Shore and Beach Preservation Association, the odds are not good for repeating this level of funding. “This year’s \$47.3 million appropriation is nothing more than a one-time allocation. There is no assurance regarding future year appropriations.”

Pursuant to a 1998 Constitutional Amendment, Florida’s beach program has been the recipient of a state doc stamp allocation of \$30 million annually or 2.12% whichever is less. This annual dedicated funding formula has not been updated since 1998 and is now inadequate. Beaches and the local governments responsible for coastal management would benefit from a consistent and higher level of dedicated annual funding from their state partner. Local elected officials and residents of coastal communities need to get the message to the Florida Legislature before the lawmakers travel to Tallahassee.

While there will be stiff competition for state dollars from many environmental interests when the 2015 Florida Legislature starts the new session on March 3, 2015, the economic benefits of beach



projects are inarguable. A higher annual funding level  
**(Continued on Page 4)**



### Proactive Measures and Partnerships (Continued from Page 1)

no further action was taken to implement renourishment projects.

While erosion along County beaches was evident, Boutelle said, the transition to management of area beaches was slow to develop. "Most of Lee County continued with a piecemeal shore protection implemented by individual owners and structural approaches."

As the audience viewed a 1987 photo of 100 feet of Captiva Drive collapsed into the Gulf of Mexico, cutting off the only evacuation route for over half the island, Boutelle told attendees that Captiva was the first place in Lee County to undertake beach nourishment. The Captiva Erosion Prevention District (CEPD) was created in 1959 by act of the Florida Legislature and was active in shore protection primarily through structural means until 1981. The CEPD's first island-wide beach nourishment project was completed in 1989 while "the rest of the County watched and learned and tried to figure out what to do with the rest of the County beaches," explained Boutelle. "In many ways, the other parts of the County had the chance to learn from the successes and struggles on Captiva as their nourishment history evolved from their first major project in 1989 through the very successful project completed in December 2013."

Boutelle shared that "While it has not always been easy, the Lee County beach management program continues to work in partnership with local, state and federal partners to implement projects that make Lee County and the beaches a premier destination to live, work, and play." Other recent renourishment projects in Lee County include Lover's Key, Estero Island, Gasparilla, and Bonita Beach.

| Hagerup Beach Parking Lot Data-2014 |              |
|-------------------------------------|--------------|
| Month                               | Tickets Sold |
| January                             | 2,324        |
| February                            | 3,017        |
| March                               | 3,562        |
| April                               | 3,356        |
| May                                 | 3,523        |
| June                                | 3,508        |
| July                                | 3,826        |
| August                              | 3,336        |
| September                           | 2,862        |
| October                             | 3,049        |
| November                            | 2,641        |

### CEPD Encourages Beach Protection

CEPD has distributed to Captiva property rental agencies and lodging establishments a guide to be placed in rental units. The card contains important points and reminders for visitors about the coastal environment and how everyone can do their part to protect our beaches. Call or stop by the office for the guide or more information.

**Important Reminders to Protect Captiva's Beach**

*Sun, sea, and sand are important to the thousands of residents and visitors that enjoy Captiva Island's beautiful beach. Since travelers to Captiva come from all parts of the nation and world, the Captiva Erosion Prevention District has prepared this guide of important notes about Captiva's beach for anyone unfamiliar with our coastal environment. With good care and stewardship, our beach can flourish!*

- ✔ ALL vehicles (including golf carts, ATV's, beach buggies, etc.) are not to be parked or driven on the beach or dune area at any time.
- ✔ Captiva is not a doggie beach. Pets are not allowed at Hagerup Beach Park with the exception of guide dogs accompanying impaired persons. Other areas of the beach require dogs to be on leash. Always have a pet scoop and bag to clean up after your pet.
- ✔ Dispose of your litter in the trash cans provided or take home. Trash including cigarette butts and fishing line can harm beach critters.
- ✔ Please remove all beach equipment such as chairs, umbrellas, tents and canopies at the end of each day and store off the beach and dune area.
- ✔ Please fill any holes you may create if digging in the sand. Holes create a walking hazard for pedestrians and become an obstacle for nesting turtles.
- ✔ Dunes are nature's protection from the waves and tides of coastal storms. Please do not disturb or walk on dunes and dune vegetation.
- ✔ Alcohol, glass containers, and fires are prohibited.
- ✔ Walk with care and avoid nesting areas of shorebirds and turtles. Respect markers around nests.
- ✔ Avoid shining lights on the beach at night. During nesting season (May 1-Oct. 31) state regulations are in place to prevent any lighting use that interferes with nesting female turtles and with baby turtle's ability to find the sea.



### Tilling to be done in January (Continued from Page 1)

throughout the beach while avoiding vegetation. Following tilling, the beach will be dressed. Any existing escarpments that exceed 18 inches in height for a distance of 100 feet or more will be leveled to the approximate natural beach contour.

Operations will be conducted between dawn and dusk. The use of horns, whistles, and signals will be minimized to ensure a quiet operation while maintaining job site safety. Work will be done with minimal disruption to traffic on the roads adjacent to the beach.

For questions or more information, call CEPD at 239-472-2472 or email us at [mycepd@mycepd.com](mailto:mycepd@mycepd.com).

### Hurricane Research Facility

(Continued from Page 2)

will enable the development and testing of building envelopes to protect structures during hazardous conditions. It will also be used to develop advanced sensors that can be deployed in hurricanes.

#### SAVE THE DATE

|           |                       |         |
|-----------|-----------------------|---------|
| 1/14/2015 | Regular Board Meeting | 1:00 pm |
| 2/11/2015 | Regular Board Meeting | 1:00 pm |
| 3/11/2015 | Regular Board Meeting | 1:00 pm |
| 4/15/2015 | Regular Board Meeting | 1:00 pm |
| 5/13/2015 | Regular Board Meeting | 1:00 pm |
| 6/10/2015 | Regular Board Meeting | 1:00 pm |
| 7/15/2015 | Regular Board Meeting | 1:00 pm |
| 8/12/2015 | Regular Board Meeting | 1:00 pm |

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

### Beaches Need New Level of State Funding

(Continued from page 2)

for Florida's 825 miles of beaches, of which 399 miles are critically eroded, is justified.

- The State sales tax directly paid by beach tourists in 2012 was almost \$1 billion (\$972M). (Stronge)
- The 2012 economic benefits of beach tourism were \$55.2 billion in sales added to Florida's economy. (Stronge)



- For every dollar the state appropriated for beach projects (FY 2012/13), it received \$48.60 in revenues.
- 528,000 jobs were created in Florida by beach tourism in 2012. This is twice the number of jobs created at the bottom of the recession in 2009, suggesting investing in beaches is a worthy component of any economic recovery strategy. (Stronge)

Economist William Stronge, Ph.D. suggests that we contrast the economic impact of out-of-state beach tourism and the contribution of out-of-state beach tourists to state sales tax revenue (about \$1 billion) with state grants to beach projects of about \$47 million this year. Beach projects provide far greater benefits to Florida's economy than cost to taxpayers.

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