

## Beaches Are Good for You

We know going to the beach is fun but now there is proof that it is healthy. A trip to the beach reduces stress and leaves people feeling calmer, more relaxed, and more revitalized than visits to city parks or countryside according to a new study from the *European Centre for Environment and Human Health*. Lead author Dr. Ben Wheeler said research based on the entire population of Great Britain suggests there is a positive effect. *CNN Travel* agreed. In naming the world's 50 best beaches, *CNN* called beaches "the valium of the travel world - they soothe, they relax, they make you realize that 'real life' sometimes needs escaping."

*Helpguide.org* advocates enjoying nature and art. "Studies show that simply walking through a garden can lower blood pressure and reduce stress. The same goes for strolling through a park or an art gallery, hiking, admiring architecture, or sitting on a beach."



*StylishHealthandFitness.com* recommends beaches. Although it may be too "Zen" for some, in "Beach Energy is Good for Your Health," the website talks about how positive ions, such as microwaves, are bad for us. Negative ions neutralize positive ions and are good for us. It says the beach is a good source of negative ions. "The actual crash of a wave onto the shoreline releases negative ions into the air. The more time we spend at the ocean, the more exposure we get to the negative ions and the better balanced our bodies become. Negative ions

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## Red Tide Detection Goes Hi-Tech

Red Tide is a naturally occurring phenomenon and there is much research being conducted. This research has led to new, state of the art, hi-tech equipment to detect Red Tide and monitor its movement. An underwater robot, an Automated Underwater Vehicle, nicknamed Waldo, is used by Mote Marine Lab in Sarasota to gather information on its shape, size, and other characteristics. The robot



*Mote Marine staff launches Waldo*

carries a BreveBuster™ - a Mote-designed instrument that detects Florida Red Tide algae (*Karenia brevis*). Waldo can remain at sea for much longer periods than researchers on a boat and it can work in almost any kind of weather.

Florida's Red Tide is a higher-than-normal concentration of *K. brevis*. It may discolor the water red or orange but more often is a light or dark green or brown. Blooms can last days or weeks and can change daily depending on wind and current flow.

Even when Red Tide blooms are well offshore, people onshore can be impacted. The toxins in the blooms can become airborne and blown by the wind as much as two to three miles inland. Moreover, water-borne blooms may be brought onshore by water currents and tides. When this happens, the tell-tale signs of brown scum on the surface of the water or washed up in the sand are apparent.

Although Red Tide kills fish, birds, and marine mammals, humans are less severely impacted. Some may experience typical allergy-like upper airway symptoms. Those with asthma or more serious chronic lung disease may develop lower airway symptoms like

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## Dunes Protected Property from Sandy

Hurricane Sandy swept away entire beaches and houses with them. However, areas from coastal New Jersey to Maryland with restored beaches and dunes were spared the worst damage.

According to the *New York Times*, Long Island communities such as Point Lookout, Lido Beach, and Atlantic Beach withstood Sandy because they approved and funded an Army Corps of Engineers (ACOE) project to construct a 15-foot high dune. Nearby Long Beach City turned down the project and suffered an estimated \$200 million in losses. Joe Vietri, ACOE Director of Coastal and Storm Risk Management, said “the difference was dramatic for areas with vital and healthy dune systems, which did better than those that did not. You can see the evidence on Point Lookout and Lido Beach, which did much better than Long Beach.”



The dune saved these homes in Stone Harbor, NJ. (Photo courtesy Elizabeth Robertson/The Philadelphia Inquirer)

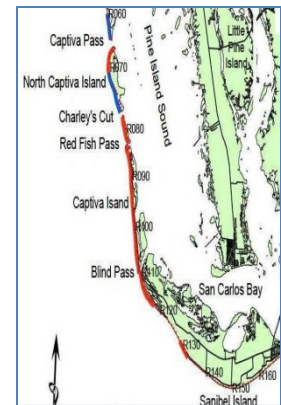
Throughout the affected area, even when flattened or breached, dunes still blunted Sandy’s 12- to 14-foot storm surge. South of Long Beach City in Bradley Beach, NJ, the waves flattened the dunes but the boardwalk and houses just 75 feet from the water remained intact. The town still suffered damage but it was far less than nearby unprotected communities, *The Times* reported. Plans to restore the Bradley Beach dunes are already under way.

In Atlantic City, it was a similar story: the worse impacted areas were those least protected by dunes and broad beaches. In AC’s inlet area, the towns of Margate and Longport, which also had declined to participate in the ACOE’s dunes project, suffered severe flooding. The central section of Atlantic City and most of Ventnor, where there were dune systems, suffered only minor damage. Stewart Farrell, Director of the Stockton Coastal Research Center, said the

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## Florida's Eroding Shoreline

In 1961 the Florida Legislature recognized that it is a governmental responsibility to properly manage and protect Florida beaches from erosion. Since 1986 the Florida Department of Environmental Protection (FDEP) has been charged with the responsibility to identify Florida beaches that are critically eroding and develop and maintain a beach management plan for their restoration. The first list of critically eroded beaches was developed in 1989 and included 217.6 miles of critically eroded beaches and 114.8 miles of noncritically eroded beaches. The early definition of critically eroded only included erosion problems in areas where the threat existed to development and recreational interests.



All 5 miles of Captiva’s Beach (in red) are critically eroded

Through the years, the list of eroded areas has been updated based upon the following FDEP adopted definition of critically eroded: “Critically eroded area is a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. Critically eroded areas may also include peripheral segments or gaps between identified critically eroded area which, although they may be stable or slightly erosional now, their inclusion is necessary for continuity of management of the coastal system or for the design integrity of adjacent beach management projects.”

The FDEP points out that for an erosion problem to be critical, there must exist a threat to or loss of one of four specific interests – upland development, recreation, wildlife habitat, or important cultural resources. In contrast to this definition, eroded areas that lack any threat to interests in need of protection are considered noncritically eroded beaches. These areas should be closely monitored

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help our bodies become stronger, more flexible and able to function at an optimal level.”

Care2.com recommends you:

- Walk barefoot in the sand. 200,000 nerve endings on the soles of your feet are stimulated much more than when walking in shoes; dead skins cells are exfoliated from your heels; muscles in your feet are strengthened.
- Spend time in the ocean. Seawater contains minerals that help the body heal and detoxify: iodine helps the body fight infection while boosting thyroid function; magnesium has a calming effect. Swimming decreases stress and increases a sense of well-being. Psoriasis and arthritis may improve after a swim. Seawater increases skin’s elasticity.
- Get some sun. The sun’s radiation can be harmful but it is also the best source of Vitamin D. D decreases depression by increasing serotonin, boosts immunity, and builds healthy bones and skin.

CEPD recommends shelling - it is good exercise if your back can take it. And shelling on Captiva is the best in the US. Whether for health or adding to your shell collection, time at the beach is time well spent.

## Board Approves DEP Grant Agreement

At a January 9<sup>th</sup> Board Meeting, CEPD Commissioners unanimously approved a grant agreement between the CEPD and the Florida Department of Environmental Protection (DEP) providing up to \$4.7 million of state funding for Captiva’s 2013 beach nourishment project. 68 funding requests totaling over \$82 million were received and evaluated by the DEP and ranked in priority order for consideration by the Florida Legislature and Governor. Ultimately, the State Legislature provided funding for only the top 7 beach projects on the priority list, including Captiva’s project. The DEP’s financial obligation in the initial agreement provided 17.88% of the non-federal project cost but was finalized upward to 22.8% following CEPD discussions with the DEP. In light of the challenges facing government budgets, the CEPD considers the grant a “win” for Captiva Island.

## Red Tide Detection Goes Hi-Tech (Continued from Page 1)

tightness in the chest, difficulty breathing, and shortness of breath. They should avoid areas where there is Red Tide and those who remain should wear shoes when walking on the sand to avoid suffering cuts. There is a chance of infection if the toxin or bacteria from dead fish gain entry into the body through ingestion or an open sore or wound. Consuming fish or shellfish sold at stores and restaurants



Red Tide bloom. (Photo courtesy of Florida Go Fishing)

is safe; shell fishing in impacted waters is prohibited.

Swimming is safe except for those with severe asthma or chronic lung disease. However, *K. brevis* can cause skin irritation and burning eyes. If these symptoms appear, swimmers should get out of the water and thoroughly wash off. Swimmers should also avoid water where there are dead fish. Bacteria associated with the decaying fish can be harmful. Anyone with open sores or cuts should stay out of the water.

With the help of Waldo, Mote Marine Lab and Florida’s Fish and Wildlife Service monitor beach conditions throughout southwest Florida. A report on conditions at 26 Florida Gulf Coast beaches is online at [www.mote.org/beaches](http://www.mote.org/beaches). Although Captiva has not had an alert since 2008, it never hurts to check.

## New Sign at Alison Hagerup Beach Park

Lee County Parks and Recreation replaced the old, faded sign at Alison Hagerup Beach Park at no cost to CEPD. The new sign, pictured at the right, conforms to new standards developed by the County to bring uniformity and consistency to signage throughout the County’s parks.



**Florida's Eroding Shoreline  
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in case conditions become critical.

The latest critical erosion list was completed in 2011. Florida's 825 miles of beach now include 397.0 miles of critically eroded beaches and 96.2 miles of noncritical eroded beaches. Lee County's 47.3 miles make the County #4 in the state among the 35 coastal counties with the greatest total miles of beach. Unfortunately, there are ten critically eroded beach areas in Lee County totaling 21.6 and four noncritically eroded beach areas totaling 5.3 miles. Lee County also ranks #4 among Florida's coastal counties in miles of critically eroded beaches.

All five miles of Captiva Island's gulf beaches are critically eroded. This entire segment is part of the planned 2013 CEPD beach restoration project.

**SAVE THE DATE**

2/13/13	Regular Board Meeting	1:00 pm
3/13/13	Regular Board Meeting	1:00 pm
4/10/13	Regular Board Meeting	1:00 pm
5/8/13	Regular Board Meeting	1:00 pm
6/12/13	Regular Board Meeting	1:00 pm
7/10/13	Regular Board Meeting	1:00 pm

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

**Dunes Protected Property from Sandy  
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dunes did their job. "The dunes worked - in Avalon, N. Wildwood, Stone Harbor. Where the dunes were wider and higher, no damage from the waves. Where they were low and thin and narrow, wipeout time."



*Sand dune protected these homes from Hurricane Sandy. To the north where there was no dune, homes were destroyed. Note new sand already added to replenish the dune to protect against the next storm. (Photo courtesy Emma Lee/NewsWorks)*

In Ocean City, MD, Mayor Rick Meehan said damage to his town would have been far greater if not for renourishment. During Hurricane Gloria, Ocean City lost its entire boardwalk and there was significant damage to ocean properties. "During this storm, we had no damage to the boardwalk, and probably just minimal, if any, damage along the oceanfront."

CEPD considers dunes a "surge protector" and includes renovation and restoration of dunes in all its project designs. Doing so lessens the chance of Captiva suffering the kind of major losses experienced in the northeast.

**Captiva Erosion Prevention District  
P.O. Box 365  
Captiva, FL 33924**

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