

## Longboat Key Beach Health and History

***Healthy beaches are not only important to our quality of life but also protect people and property along the coasts from hurricanes and coastal storms.***

Barrier islands change shape and move constantly. It is how our natural environment behaves. As the name implies, barrier islands are “barriers” to waves and serve to protect the mainland. Longboat Key is such a barrier island – more than 10 miles long.

Some people now say, “You should never have built on a barrier island because of the high probability the island will shift and move. Your homes, roads and other *immovable* structures will not withstand this dynamic environment.”

Barrier islands, however, attract people that want to live there. They offer the most beautiful soft white sandy beaches, incomparable sunsets, water sports and wildlife. Although shoreline erosion was already being noted on Longboat Key (also on Lido Key and Anna Maria) in the 1950s, homes, buildings, roads and other public and private infrastructure was built at a rapid pace. Single family homes and multi-family condominiums were built very close to the shoreline, especially in the 1970s. When threatened with receding shorelines, many of these private owners resorted to constructing seawalls, revetments and other types of shoreline armoring to protect their beachfront investments (dwellings). It was a losing battle, the beach kept eroding and those seawalls ended up right against deep water. By 1980, 40 percent of the Longboat Key shoreline had been armored and/or covered with other hard coastal structures called groins.

In the mid-1950s 3,000 feet of groins were installed along Whitney Beach (6700 Gulf of Mexico Drive); the groins were damaged by storms and replaced with 3,500 feet of seawall in 1957, which was in turn destroyed by storms in the early 1960s but rebuilt yet again within a decade all the way south to Gulfside Road (6300 Gulf of Mexico Drive). Similar examples include a groin field over a mile long from Bayport (3850 Gulf of Mexico Drive) to Town Hall (2800 Gulf of Mexico Drive).

The vast majority of these structures and armoring were funded by private citizens whose properties were being threatened at the time by dynamic natural forces. Many of the structures were installed without the benefit of competent coastal engineering judgment and without consideration of the potential adverse impact to the adjacent properties and shorelines.

By the mid 1980s the Longboat Key Town Commission had amended its Code to regulate and manage its coastline. The Town’s Comprehensive Master Plan was re-written as a more comprehensive and a coastal permitting program was instituted that

included prohibition against any new seawalls and expanded setback line requirements for structures, such as houses, swimming pools, etc., along the beachfront.

Concurrently with these regulatory programs the Town embarked on its first shore protection project in 1993 by placing 3.3 million cubic yards of sand along the beachfront. As part of the original work the Town removed the existing groins and seawalls. A few seawalls were left in place – where older homes and buildings had been built very close to the shoreline. Stricter, beachfront development regulations and a regular engineered beach management program soon provided a relatively stable shoreline without the need of excessive hard erosion control structures. Still, certain small sections of the shoreline – the north end near Greer (Beer Can) Island, for example, have higher erosion rates than other beaches.

These “hot spots” have such high erosional rates that sand placed on them quickly moves away. For example, the Town in April/May 2011 placed 139,000 cubic yards of sand near and around the north end public access at a cost of \$4 million. A year later, while other non-erosive sections of the beach (cold spots) have been stable, this particular hot spot section of the beach had receded about 130 feet from the original 180 feet at the public beach access. All this happened without the gulf coast of Florida experiencing any significant storm events. To this day, it continues to erode at a fast pace. To continue to place sand on this hot spot, without erosion control structures to slow the rapid pace of sand movement, is not a financially sustainable approach to beach management.

The Town has worked closely with Manatee County, our neighbor to the North, to study the very complex and sometimes unpredictable conditions affecting this area and Longboat Pass. We have tasked our coastal engineers to use their knowledge of complex coastal processes and decades of experience in beach nourishment and coastal structures to recommend solutions to this problem. The Town wants to implement the least intrusive and least costly alternative that will meet our objectives and protect homes, facilities, and private and public infrastructure.

These barrier islands are important to the entire community. In fiscal year 2011 the barrier islands of Manatee County contributed \$24.6 million to Manatee County government and \$26.4 million to Manatee County schools. The County Sheriff’s Office receives over \$13 million from the residents and businesses of the four barrier island cities. The entire County benefits because the islands are developed and well maintained.

The benefits are not only measured in tax revenues. In addition to protecting infrastructure, a stable beach at the north end provides recreation opportunities at this

very popular public beach access and provides the only walking access to Greer (Beer Can) Island – a Manatee County owned park.

The benefits of wide sandy beaches also extend to this area's imperiled and threatened wildlife. Sea turtles, shorebirds and a myriad of other "critters" by providing habitat to nest, feed and congregate.