

# Lessons from our lighthouses



As shown at left, the beach had eroded away from the Cape St. George Lighthouse by the 2004-05 storm season, but has rebuilt as shown at right in a view from 2013. The arrow points to a shed. The upper arrow points to the same shed that is still standing; the lower points to the lighthouse awash in the surf.

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By James Hargrove

No matter how much we might prefer a different outcome, all barrier islands and coastal areas move and reshape over time. This is a fact that coastal geologists now understand very well, but it was not at all apparent when the United States was a young republic and Apalachicola was founded.

When Florida became a territory of the United States in 1821, the federal government accepted responsibility for building lighthouses and for placing buoys as aids to coastal navigation. At the time, the Department of the Treasury was in charge of lighthouse construction, and the duty of locating sites for lighthouses fell to the local customs collector, who also served as Superintendent of Lighthouses. In a

sense, the history of Apalachicola began when President Monroe set up a Customs District under the supervision of Charles Jenkins, who built a customs house at the mouth of the river in 1823.

In 1831, Congress passed a bill to appropriate \$11,400 for “building a lighthouse on the west end of Saint George Island, near the entrance of the Apalachicola bay.” Even though the new customs collector, Gabriel Floyd, knew West Pass was not a suitable location, the Secretary of the Treasury bought 10 acres of land there for \$52.

Superintendent Floyd argued that the lighthouse should be sited on Cape St. George, but Congress refused to appropriate more funding, and Massachusetts resident Winslow Lewis won the contract to build the lighthouse and keeper’s dwelling at West Pass. Not only did the first lighthouse lack a foundation of pilings, but the sand moved with every major storm. Just four years after the first lighthouse was built, the hurricane of 1837 demonstrated the fragility of our barrier islands when it opened a channel into the bay that was appropriately called “New Inlet.” The new channel remained open until a series of hurricanes from 1900 to 1906 filled it again.

Sea captains continually complained about the poor location and quality of the 1833 light, and funds were finally appropriated to move it in 1847. With the new appropriation, the Apalachicola Land Company hired Franklin County resident H.F. Simmons to survey the island, and sold about eight acres on the Cape to the U.S. government for \$150. The second lighthouse was completed at Cape St. George in 1848.

Although tides and currents move sand along barrier island beaches, sand that moves offshore with one storm usually moves back with the next one, unless the next one is a major hurricane. This was the rule when the major hurricane of 1851 struck Franklin County and threw down the lighthouses at Cape St. George, Dog Island, and Cape San Blas. The next lighthouse on Cape St. George was built several hundred feet inland on strong pilings, and lasted for over 150 years

until a succession of hurricanes from 1994 to 2005 caused it to be abandoned and finally collapse into the Gulf.

Although hurricanes tend to move sand from the beach side of barrier islands into the bay, and often rearrange tidal inlets, the sand tends to move back during periods between major storms. Every resident of Franklin County knows that no hurricane has struck the area since 2005 (knock on wood, and fast), and during that time, the beach at Cape St. George has built up again. A new delta of sand has formed due to ebb tide currents combined with westward movement of sand along the shore. Had the lighthouse on Cape St. George survived 2005, it would still be standing on the Cape!

In the long term, the dynamics of coastal change suggest that the old lighthouse would have collapsed sooner or later. No one who was alive in territorial days had any idea how much sea level can change. It rose almost imperceptibly back then, but the U.S. began keeping records of coastal sea levels around 1900, and that evidence suggests that mean sea level rose about six inches during the 20th century. On a daily basis, the small changes make little difference to most people most of the time. Then a hurricane strikes again, and a storm surge comes ashore at a higher level than anyone remembers.

Similar scenarios have occurred throughout the Florida Panhandle and Peninsula. Of the 16 lighthouses that were built during the Territorial Period (1821-1845), only the structure at Amelia Island is still standing. The rule seems to be, if you live in a lighthouse, be prepared to move!

James Hargrove retired from the University of Georgia in 2012 and now resides on St. George Island. An amateur naturalist and historian, he volunteers as a docent at the Cape St. George Lighthouse Museum, and is working on a pictorial history of the lighthouse with leaders of the St. George Lighthouse Association.