

ABSTRACT

Beginning in the early 1990s, an increase of coastal storm activity brought about a growing concern over the protection of cultural resources along, or within close proximity to, Cumberland Island, Georgia's back-barrier shore. Such storm activity has exacerbated the erosion problem along several segments of the shoreline already experiencing net long-term erosion. Furthermore, there is increasing concern over the possible effects of sea-level rise on the fate of these sensitive areas along the back-barrier shore. Recently, the National Park Service at Cumberland Island National Seashore began to assess impacts of erosion on several archaeological sites along the back-barrier shore of Cumberland Island. A year-long study was conducted from 2004 to 2005 that involved obtaining and analyzing digital shoreline data spanning the time period from 1857 to 2002 and making observations at various field sites within the study area. The primary objective of the study was to gain a better understanding of the spatial and temporal trends of back-barrier erosion along the back-barrier shore. Results from the study were used to assist the National Park Service in their search for options to mitigate future shoreline erosion and potential loss of important archaeological sites. A generalization of aerial photography and historical maps suggests that greater than half of the back-barrier shoreline had a 145 year history of erosion between 1857 and 2002. Currently, methodologies developed in this study are being used to update shoreline change studies of all of Georgia's barrier islands, with the potential for global application in the future