

APPLIED COASTAL

RESEARCH AND ENGINEERING, INC.



766 Falmouth Road, Suite A-1
Mashpee, MA 02649
<http://www.appliedcoastal.com>

Project: Historical Shoreline Analysis:
Satellite Beach To Fort Pierce
Inlet, Florida

Contact: Sebastian Inlet Tax District Commission
Surfbreak Engineering, Inc.
Bill Dally; (321) 733-2296

Repetitive surveys of historical shoreline position have been recognized as a primary data source for quantifying rates of erosion and accretion. Coastal scientists, engineers, and planners often use this information for estimating the magnitude and direction of sediment transport, monitoring engineering modifications to a beach, examining geomorphic variations in the coastal zone, establishing coastal erosion setback lines, and verifying shoreline change numerical models. For the proposed study, Applied Coastal personnel compiled and analyzed shoreline position data for five time periods to quantify shoreline response for the east coast of Florida from Satellite Beach to Fort Pierce Inlet.

A computer-based shoreline mapping strategy was used to compile and analyze changes in historical shoreline position between 1880/81 and 2000 for the Florida coast from Satellite Beach to Fort Pierce Inlet. The purpose of the study was to quantify changes in shoreline position using the most accurate data sources and compilation procedures to characterize areas of erosion and accretion as influenced by human modifications and natural processes. Because this information is critical relative to coastal development and property ownership, emphasis was placed on data accuracy and potential error estimates for gauging the significance of results.

