

Hillsboro/Deerfield Beach Renourishment, Florida

coastal engineering



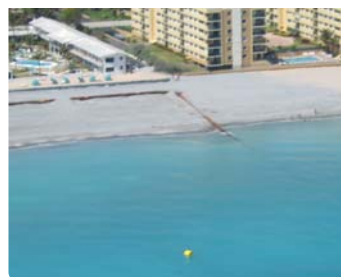
Coastal Systems has provided continuing beach management consulting services since 1996 for the Town of Hillsboro Beach. The 2011 Hillsboro/Deerfield beach nourishment project was designed and permitted with approximately 340,000 cubic yards of beach compatible fill placed on 7,175 feet of shoreline in the northern mile of Hillsboro Beach and a portion of southern Deerfield Beach. Environmental permits were processed through the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, and Broward County Environmental Protection and Growth Management Department.

Extensive field work was completed by Coastal Systems including marine resource surveys of nearshore and offshore reefs. A biological evaluation was completed for the federally listed threatened and endangered species including *Acropora cervicornis* and *Acropora palmatta* as well as *swimming sea turtles* that use the nearshore hardbottom as habitat. The mapped data was utilized to design the beach fill template and construction methodology to avoid impacts to the hardbottom. Coastal Systems also managed the updated geological evaluation of the offshore borrow area that included vibracoring.

Construction plans and specifications incorporated the use of float line connected to the submerged dredge discharge line to extend over the section of nearshore reef to avoid impacts. Furthermore, the project utilized rock screens on the dredge cutterhead as well as on the pipe discharge at the beach to screen the beach fill for ¾-inch rock. Coastal Systems assisted the Town through the bidding process and provided site engineering services throughout construction to ensure conformance with plans, specifications and permits. Coastal Systems will be conducting biological and physical monitoring of the project performance over the next four years as required in the environmental permits.

Previous work completed for the Town of Hillsboro Beach includes the following:

- 2008 - Truck Haul Renourishment Project - designed and permitted a renourishment project utilizing an upland excavation source from a project-of-opportunity. The upland sand was screened, and 8,700 cubic yards was placed to stabilize an erosional hot-spot.
- 1998 - Beach Renourishment Project - design and permitting of 550,000 cubic yard project over 6,120 feet of shoreline, with 55,000 cubic yards placed in the southern area of Deerfield Beach. Conducted four years of post-construction monitoring with reporting.
- 1997 - Long Range Beach Management Plan - conducted coastal engineering study to prepare recommendations for beach management.



Client: Town of Hillsboro Beach

Location: Broward County, Florida

Date of Completion: Ongoing
(Construction completed in 2011)

Construction Cost: \$6M (2011)

