

Key Biscayne Beach Nourishment, Florida

coastal engineering

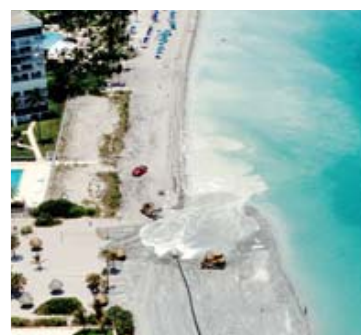


Coastal Systems International, Inc. developed a long-range beach management plan to address the erosional shoreline along the Village of Key Biscayne, Florida. In order to develop the plan, the engineering team analyzed the physical processes influencing the project such as winds, waves, tides and storm impacts. These processes were evaluated to determine the erosional patterns, design criteria, and design life. The resulting project expanded the beach and created a dune, which required approximately 120,000 cubic yards of sand obtained from an offshore borrow area. The newly constructed dune was vegetated with a variety of native dune species and now connects the dune systems of the state and county park north and south of the project site. Construction took place over the summer of 2002, during which Coastal Systems provided administration services.

The borrow area and project site are located within an area of dense seagrass. To minimize adverse impacts to local resources, the seagrass communities offshore of the site, near the borrow area, and along the pipeline corridor were mapped and categorized. The geographic locations of the offshore resources were utilized during the design phase to minimize impacts. These sensitive areas were also monitored prior to, during, and after construction to detect any impacts associated with the project.



Completed Renourishment



Stages of Construction

Client:	Village of Key Biscayne
Location:	Key Biscayne, Florida
Date of Completion:	2002
Construction Cost:	\$1,500,000

