

Broward County Artificial Reefs, Florida

marine environmental



Coastal Systems International Inc. performed the design/build construction of 10 acres of artificial reefs offshore Dania and Hollywood beaches in Broward County. The construction was performed by Coastal Systems Development (CSD) with engineering support from Coastal Systems International (CSI). The mitigation was required for hard-bottom impacts from the planned Segment III (south of Port Everglades) beach restoration. The limerock boulders will closely resemble natural reef substrate and will provide a good habitat for encrusting and boring organisms as well as fish life. Algae that will colonize the rocks are food for grazing sea turtles. Stony corals from the potentially impacted areas will be transplanted to the mitigation area to protect the organisms from shifting beach sand.

CSI provided an engineered approach towards the artificial reef construction. CSD placed 66,000 tons of limerock boulders utilizing a crane barge outfitted with precise DGPS positioning equipment and software. All project assets were monitored/tracked using web-enabled GPS (Global Positioning Systems) positioning and project management and reporting were facilitated using a secure on-line system. The boulders were transported using barges from a quarries in Freeport on Grand Bahama Island. The crane barge was anchored in 15 - 20 feet of water approximately 500' off of the beach utilizing special floating lines and a pile anchor system to maintain barge position in between the sensitive reefs in the nearshore zone.



Barge Dropping Rocks



Reef Construction in Progress

Client:	Broward County Department of Planning and Environmental Protection
Location:	Broward County, Florida
Date of Completion:	2003
Construction Cost:	\$6,000,000

