

APPENDIX C
SOUTHERN PALM BEACH ISLAND COMPREHENSIVE
SHORELINE STABILIZATION PROJECT
2013 ACROPORA SURVEY REPORT
(PBC-ERM, 2013)

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SOUTHERN PALM BEACH ISLAND COMPREHENSIVE SHORELINE STABILIZATION PROJECT ACROPORA SURVEY – October 22, 2013

Reconnaissance surveys were completed on October 22, 2013, on the nearshore reefs located between R monument 127 and 141 to determine the distribution and abundance of the federally listed coral (*Acropora* spp). The survey also included the seven coral species proposed for listing (*Dendrogyra cylindrus*, *Montastrea annularis*, *Montastrea faveolata*, *Montastrea franksi*, *Mycetophyllia ferox*, *Agaricia lamarcki*, and *Dichocoenia stokesi*) under the Endangered Species Act (ESA) since it is anticipated that these species may be listed prior to commencement of the proposed project. The purpose of this survey was to perform the preliminary visual reconnaissance for locating listed species colonies per the NOAA protocol outlined in the “*Recommended Survey Protocol for Acropora spp. in Support of Section 7 Consultation*” document.

The survey encompassed the area from approximately 2000 ft north of the proposed project area (R-127) to approximately 3500 ft south of the proposed project area (R-141). Benthic habitat maps of the nearshore hardbottom in the survey area show highly ephemeral hardbottom habitat located mostly landward of the 10 ft (3 m) depth contour and generally within 500 ft (150 m) from shore. The survey area included all hardbottom habitat located seaward of the 6 ft depth contour and omitted areas that consistently contained unconsolidated sediment based on available aerial analyses; however, these areas were visually verified as unconsolidated sediment during the survey to ensure no potential habitat was omitted. The project is proposed as a truck-haul and therefore the offshore reef resources were not surveyed as they are well outside the proposed project area.

METHODS

Four ERM staff conducted the inspections. Dr. Janet Phipps, ERM’s Coral Reef Ecologist, oversaw and participated in the surveys. Prior to the surveys, surveyors reviewed the protocol and visual identification of the coral species. As depths were less than 15 ft (5 m), surveyors were able to snorkel and thus cover the entire linear distance during the survey. The four surveyors were spread in an east-west orientation and swam north visually covering the majority of the exposed hardbottom areas.

RESULTS

Exposed hardbottom, where present, averaged 175-200 ft (53-61 m) in width with maximum width of 265-275 ft. (81-84 m) The survey area was slightly less than 3 miles (4.8 km) in length; however, exposed hardbottom was present in the southern 1.8 miles (2.9 km) (see figure). Depths ranged from 8 to 15 ft (2-5 m). Seas were 1 ft (0.3 m) with a moderate southeast wind. As the day progressed, the winds increased in strength increasing the seas, but visibilities remained the same.

The exposed hardbottom was present between 26° 35.98 / 80° 02.14 (R-132) and 26° 34.44 / 80° 02.23 (R-141). Between R-127 and 132, unconsolidated sediment was present and verified.

No target coral species were observed during this reconnaissance survey of the nearshore hardbottom reefs.

The reef appeared to have been uncovered relatively recently, and much of the area had a sand veneer present. Aerial surveys show that the last time this hardbottom was exposed was in 2006. The attached figure shows reef exposures for 2009-2011.

Average sizes of gorgonians (*Eunicea* sp., *Pseudopterogorgia* sp., *Pterogorgia citrina*, *P. anceps*, and *Leptogorgia miniata*) and fire coral (*Millepora alcicornis*) were 1-3 in (2.5-7.6 cm) and *Sidestrea siderea* corals were less than 1 inch (2.5 cm) in diameter. Several *S. siderea* colonies greater than one inch (2.5 cm) were present, but they were bleached/dead, indicating prior burials. Algae hydroid (*Thyroscyphus ramosus*) colonies were maximum 4-5 inches (10-12.7 cm) and in one location a bed of *Padina* was present, but each colony was less than one inch (2.5 cm) in size. Thirty-eight species of fish representing 16 families were noted. All fish species were typical of the depth zone, but one unusual sighting was a juvenile blue-spotted cornetfish (*Fistularia tabecaria*) that was approximately 12 in. (0.3 m) in size.

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