United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

March 29, 2006

Lawrence C. Evans
U.S. Army Corps of Engineers
Jacksonville Regulatory Office
Post Office Box 4970
Jacksonville, Florida 32232-0019

Attention: Mike Nowicki

Service Log No.: 4-1-04-F-8338
Application No.: SAJ-1997-5200 (IP-MN)
Dated: January 12, 2006
Project: Beach Nourishment
Applicant: Charlotte County Board of County Commissioners
County: Charlotte

Dear Mr. Evans:

The Fish and Wildlife Service (Service) has reviewed the U.S. Army Corps of Engineers' (Corps) January 12, 2006, request to reinitiate consultation regarding modification of a proposed beach nourishment located on Manasota Key, Charlotte County, Florida, and its effects on the threatened loggerhead sea turtle (*Caretta caretta*), and the endangered green sea turtle (*Chelonia mydas*). The Corps' Department of the Army permit referenced above is valid until March 3, 2013. This letter amends the Service's March 23, 2005, amended Biological Opinion (Service Log Number 4-1-04-F-8338) concerning the construction of a groin field and is provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

The Applicant proposes to modify the existing project to include dredging an additional 45,000 cubic yards (cy) of sand from the ebb tidal shoal of Stump Pass. The hydraulically dredged sand will be placed on 1,500 feet of beach located between monuments R-16.5 and R-18 on Manasota Key (Figure 1). This section of beach will also be used for pipeline placement to transfer sand from Stump Pass to the project site. The source of the fill material is the project's permitted borrow area which, according to an August 2005 bathymetric survey, will provide 400,000 cy of beach compatible sand. The time frame for construction is approximately 5 days.

The Corps determined this modification "may affect" nesting sea turtles in a letter received January 17, 2006. The remainder of the November 15, 2002, Biological Opinion remains intact.

THREATENED AND ENDANGERED SPECIES

The 2004 and 2005 sea turtle nesting seasons were severely affected by multiple hurricanes which caused coastal erosion and/or sand accretion in the project area. Data collected during the 2003, 2004, and 2005 nesting season by the Coastal Wildlife Club, recorded a decrease in the number of documented loggerhead sea turtle nests from 2003 to 2005 along the shoreline of the proposed project area (Coastal Wildlife Club 2003, 2004, 2005). All nests were laid by loggerhead sea turtles, with the exception of one green turtle false crawl in 2005 (Coastal Wildlife Club 2005). In addition, there was an increase in the number of loggerhead sea turtle nests that were washed over by tides on one or more occasions during their incubation, and a slight decrease in nests partially or completely lost from 2003 to 2005 (Coastal Wildlife Club 2003, 2004, 2005). From 2003 to 2005, there was a decrease in the number of hatched eggs, unhatched eggs, dead pipped eggs, and live pipped eggs, with an overall decrease in the total number of loggerhead sea turtle eggs in the proposed project area (Table 1).

The proposed modification has the potential to adversely affect nesting females, nests, and hatchlings within the proposed project area. Potential effects include destruction of nests deposited within the boundaries of the proposed project, harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities, and behavior modification of nesting females due to escarpment formation within the project area during a nesting season resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs. The quality of the placed sand could affect the ability of female turtles to nest, the suitability of the nest incubation environment, and the ability of hatchlings to emerge from the nest.

Research has shown the principal effect of beach nourishment on sea turtle reproduction is a reduction in nesting success, and this reduction is most often limited to the first year following project construction. Research has also shown the impacts of a nourishment project on sea turtle nesting habitat are typically short-term because a nourished beach will be reworked by natural processes in subsequent years, and beach compaction and the frequency of escarpment formation will decline. Although a variety of factors, including some that cannot be controlled, can influence how a nourishment project will perform from an engineering perspective, measures can be implemented to minimize impacts to sea turtles. The proposed modification adds 1,500 linear feet (0.28 mile) of beach fill (45,000 cy) to that which the Service consulted on previously. This represents 0.02 percent of the approximately 1,400 miles of available sea turtle nesting habitat in the southeastern U.S. Given the scope and duration of the proposed modification we believe impacts to nesting sea turtles will be minor.

AMOUNT OR EXTENT OF TAKE AS AMENDED

The Service anticipates 1,500 linear feet of nesting beach habitat could be taken as a result of this proposed modification. The take is expected to be in the form of: (1) destruction of all nests that may be constructed and eggs that may be deposited from March 1 through April 30 and from September 1 through September 30 and missed by a nest survey and egg relocation program within the boundaries (footprint) of the proposed project; (2) destruction of all nests deposited during the period when a nest survey and egg relocation program is not required to be in place within the boundaries of the proposed project; (3) reduced hatching success due to egg mortality during relocation and adverse conditions at the relocation site; (4) harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities; (5) misdirection of hatchling turtles on beaches adjacent to the construction area as they emerge from the nest and crawl to the water as a result of project lighting; (6) behavior modification of nesting females due to escarpment formation within the project area during a nesting season, resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs; and (7) destruction of nests from escarpment leveling within a nesting season when such leveling has been approved by the Service.

Incidental take is anticipated for only the 1,500 linear feet of beach that has been identified for sand and pipeline placement under the proposed modification. The Service anticipates incidental take of sea turtles will be difficult to detect for the following reasons: (1) the turtles nest primarily at night and all nests are not found because [a] natural factors, such as rainfall, wind, and tides may obscure crawls and [b] human-caused factors, such as pedestrian and vehicular traffic, may obscure crawls, and result in nests being destroyed because they were missed during a nesting survey and egg relocation program; (2) the total number of hatchlings per undiscovered nest is unknown; (3) the reduction in percent hatching and emerging success per relocated nest over the natural nest site is unknown; (4) an unknown number of females may avoid the project beach and be forced to nest in a less than optimal area; (5) lights may misdirect an unknown number of hatchlings and cause death; and (6) escarpments may form and cause an unknown number of females from accessing a suitable nesting site.

The level of take of these species, however, can be anticipated by the disturbance and renourishment of suitable turtle nesting beach habitat because: (1) turtles nest within the project site; (2) beach renourishment may occur during a portion of the nesting season; (3) the renourishment project will modify the incubation substrate, beach slope, and sand compaction; and (4) artificial lighting will deter and/or misdirect nesting females and hatchlings.

This concludes consultation under section 7 of the Act with the Service for this project. As required by 50 CFR 402.16, reinitiation of formal consultation is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may impact listed species or critical habitat in a manner, or to an extent not considered in this biological opinion; (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this biological opinion or (4) a new

species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation in the effort to protect fish and wildlife resources. Should you have additional questions or require clarification, please contact Jeff Howe at 772-562-3909, extension 283.

Sincerely yours,

for James J. Slack
Field Supervisor
South Florida Ecological Services Office

cc:
Coastal Tech Corporation, Vero Beach, Florida (Lois Edwards by fax)
DEP, Bureau of Beaches and Wetland Resources, Tallahassee, Florida (Lainie Edwards)
FWC, Bureau of Protected Species Management, Tallahassee, Florida (Robbin Trindell)
NOAA Fisheries, St. Petersburg, Florida (Mark Sramek)
Service, Jacksonville, Florida (Sandy MacPherson – Species Lead – Sea Turtles)

LITERATURE CITED

Coastal Wildlife Club. 2003. Sea Turtle Nesting Beach Monitoring Report, Stump Pass Project - 2003, 8 p.

Coastal Wildlife Club. 2004. Sea Turtle Nesting Beach Monitoring Report, Stump Pass Project - 2004, 8 p.

Coastal Wildlife Club. 2005. Sea Turtle Nesting Beach Monitoring Report, Stump Pass Project - 2005, 11 p.

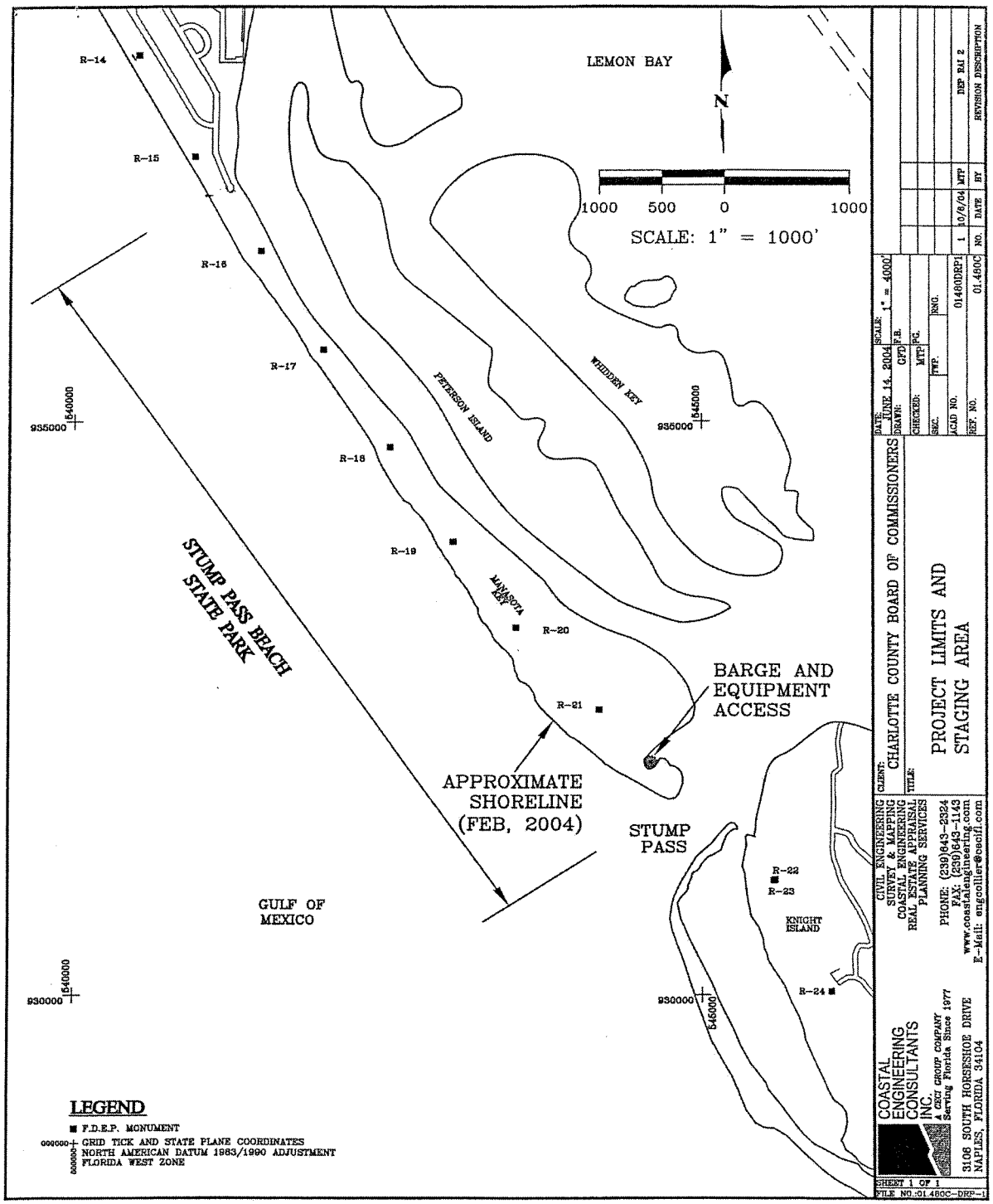

Figure 1. Location of the proposed beach nourishment modification between monuments R-16.5 and R-18 on Manasota Key, Charlotte County,

Table 1. Loggerhead sea turtle nesting data documented along the shoreline of the proposed project area from 2003 to 2005.

	Year		
	2003	2004	2005
Documented Nests	48	25	30
Nests washed over one or more times	18	12	29
Nest partially or completely lost	10	3	9
Marked nests affected by predators	13	3	7
Marked nests affected by poaching	3	1	2
Marked nests affected by vandalism	1	0	1
Hatched eggs	1,830	1,204	1,474
Dead pipped eggs	64	104	62
Live pipped eggs	5	5	0
Unhatched eggs	1,268	677	701
Damaged eggs	107	0	159
Total number of eggs	3,274	1,990	2,396