



IN REPLY REFER TO:

**FILE** *log # 1081*  
United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Field Office



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March 29, 2001

Colonel James G. May  
District Engineer  
U.S. Army Corps of Engineers  
Panama City Regulatory Field Office  
475 Harrison Avenue, Suite 202  
Panama City, Florida 32401

Attn: Don Hambrick

Re: FWS Log No. 4-P-97-108  
Amendment No. 5 to Biological Opinion  
Panama City Beach Nourishment  
199701891 (IP-DH)  
Bay County, Florida

Dear Colonel May:

This letter constitutes amendment no. 5 to the April 8, 1998, biological opinion on the offshore dredging and beach nourishment of Gulf of Mexico beaches in Bay County, Florida (permit 199701891 (IP-DH) and modifications). The Fish and Wildlife Service (Service) received your letter dated January 29, 2001, requesting reinitiation of consultation related to modification of the subject permit based on the applicant's request for relief on the compaction measurement and tilling requirements. The applicant has requested the following changes in the permit.

1. Decrease in the number of compaction sampling locations at each along shore point from three to two centered between the mean high water line and the toe of the dune and decrease the number of along shore stations from 186 (every 500 feet) to 25, or a lower number.
2. Changing the method and standard for determining if tilling is required.
3. Elimination of the tilling requirement for Panama City Beach based on its unique situation.

In effect, the applicant has requested that the compaction measurements be reduced in number, and the tilling requirement for the project be waived for 2001. Our review of the Beach Tilling and Compaction Study (Study) report and the Sea Turtle Nesting Activity on Panama City Beach, 2000 report indicates that the nests laid in the tilled areas had higher hatch and emergence success than those nests laid in the untilled area. The sand compaction found on Panama City Beach is not considered unique when compared to other Florida Gulf Coast beaches. Gulf Coast beaches in general have higher compaction readings than Florida Atlantic Coast beaches. The Service is looking at whether a change in the tilling threshold for Gulf Coast beaches is needed and if so, what would be the new threshold. The results of the Beach Tilling and Compaction Study will assist us in making that determination but does not provide enough data to make a final decision at this time.

In addition to hatch and emergence success, there are other data needs that have not been collected related to soil compaction and sea turtle nesting. They include observations of adult turtles as they excavate a nest (digging time, correct nest formation) and hatchlings as they hatch and emerge from the nest. Turtle Watch volunteers "rescued" 84 hatchlings from a nest in the untilled area where a crust had formed on the nest surface and the hatchlings were unable to crawl out.

Therefore, given the results of the Study and the findings of the sea turtle monitoring in 2000, the tilling requirement should not be waived per modification no. 4 of the biological opinion. Also in accordance with the biological opinion, compaction measurements do not have to be taken prior to the tilling. However, the Study provided interesting findings regarding sea turtle nesting in tilled and untilled areas, and replication of the Study for 2001 would be appropriate. The Study incorporates the changes requested by the applicant in no. 1 above concerning the reduction of the compaction sampling numbers and lines.

We would not anticipate implementation of either action above (tilling the entire beach or replication of the Study) would exceed the level of incidental take that would occur from the original and previously modified project. However, to address both options, Terms and Conditions 5 of our December 18, 2000, amendment no. 4 to the original biological opinion dated April 8, 1998, will change. (Terms and Conditions 1, 4, and 5 were changed in amendment nos. 1 and 2; Terms and Conditions 5 was changed again in amendment no. 3 and 4). All other Terms and Conditions and Reasonable and Prudent Measures remain in effect for the subject modification.

#### Terms and Conditions

*Please note:* Because of the extensive modifications to this Terms and Conditions, it is being rewritten without showing revisions (strikeouts and additions) as in previous Service correspondence.

5. Prior to March 30, 2001, and March 15, 2002, sand compaction shall be monitored in the area of beach nourishment in accordance with the protocol provided under a. and b. below. If tilling is required, tilling to a depth of 24 inches (61 cm) shall be required for the years 2001 and 2002. Tilling shall begin at the western end of the project area in the years 2001 and 2002. The

Tilling shall begin at the western end of the project area in the years 2001 and 2002. The completion date for all tilling shall be April 15 in both 2001 and 2002. A report on the results of compaction monitoring shall be submitted to the Service prior to any tilling actions being taken. An annual summary of compaction surveys and the actions taken shall be submitted to the Service. This condition shall be evaluated annually and may be modified, if necessary, to address sand compaction problems identified during the previous year. Tilling may be conducted without taking compaction measurements to determine if tilling would be required.

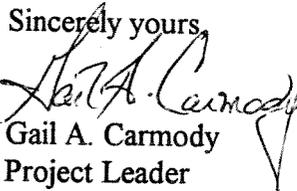
a. Compaction sampling stations shall be located at 500-foot (152-m) intervals along the project area. One station shall be at the seaward edge of the dune/bulkhead line (when material is placed in this area) and one station shall be midway between the dune line and the high water line (normal wrack line).

At each station, the cone penetrometer shall be pushed to a depth of 6, 12, and 18 inches (15.2, 30.5, and 45.7 cm) three times (three replicates). Material may be removed from the hole, if necessary, to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lay over less compact layers. Replicates shall be located as close to each other as possible, without interacting with the previous hole and/or disturbed sediments. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports shall include all 18 values for each transect line, and the final 6 averaged compaction values.

b. If the average value for any depth exceeds 500 psi (35 kg/cm<sup>2</sup>) for any two or more adjacent stations, then that area shall be tilled prior to April 15. If values exceeding 500 psi (35 kg/cm<sup>2</sup>) are distributed throughout the project area, but in no case do those values exist at two adjacent stations at the same depth, then consultation with the Fish and Wildlife Service shall be required to determine if tilling is required. If a few values exceeding 500 psi (35 kg/cm<sup>2</sup>) are randomly present within the project area, tilling shall not be required.

c. In lieu of the compaction sampling protocol in 5 a. and b. above, replication of the Beach Tilling and Compaction Study conducted in 2000 may be accomplished. If the study is conducted in 2001, it shall be completed and delivered to the Florida Department of Environmental Protection, COE, Florida Fish and Wildlife Conservation Commission, and the Service by October 15, 2001, so that results of the study can be reviewed and a determination made by January 15, 2002, as to whether tilling the beaches would be required in the year 2002.

If you have any questions, please contact Lorna Patrick of this office at ext. 229.

Sincerely yours,  
  
Gail A. Carmody  
Project Leader

cc:

FWS, JAFL, (McPherson)

FWC, Bureau of Protected Species Mgmt., Tallahassee, FL (Trindell)

FDEP, Beaches and Coastal Systems, Tallahassee, FL (Brantley)

RMA, Panama City, FL (Watson)

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