



United States Department of the Interior

FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES FIELD STATION
100 OTIS STREET, ROOM 224
ASHEVILLE, NORTH CAROLINA 28801

File

January 29, 1986

SURNAME

Fidell

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Colonel Wayne A. Hanson
District Engineer
U.S. Army Corps of Engineers
Wilmington District
P.O. Box 1890
Wilmington, North Carolina 28402-1890

RE: 4-2-85-436

Dear Colonel Hanson:

This letter presents the biological opinion of the U.S. Fish and Wildlife Service relative to the potential for impact to the threatened loggerhead sea turtle (*Caretta caretta*) from a proposed beach nourishment and erosion control project on Figure Eight Island, New Hanover County, North Carolina, as presented in permit application SAWC086-N-065-0012 of Mr. Hal McNeely. It responds to your request for formal consultation dated January 16, 1986, received January 21, 1986. This opinion does not address requirements of environmental laws other than the Endangered Species Act (Act).

Project and Consultation History

This office of the Service was not contacted during the initial permitting process for this project. However, a review of material requested from the Corps of Engineers (Corps) on May 1, 1985, and received May 28, 1985, which described the project and permitting history, indicates that the project was originally permitted as non-structural sand nourishment only. The applicants, Mr. Charles Winston et al., proposed to excavate sand from an existing channel in Middle Sound, Mason Inlet, and hydraulically pump this material onto the south end of Figure Eight Island where it would be used to renourish approximately 2,400 linear feet of eroded beach front (SAWC086-N-065-0012). The applicant offered two alternatives for renourishing the beach. One involved the placement on the beach of long, sand-filled fabric tubes, measuring approximately 200 feet in length and 8 feet in diameter, along with anchoring sheets bonded to the tubes, for the purpose of stabilizing the backfill on the upper portions of the beach. The other alternative was sand nourishment only.

By letter of November 29, 1984, the Corps notified the applicant that a review of the permit application indicated it to be a candidate for Federal authorization under general permit No. SAWC080-N-000-291 which provides

Federal authorization for construction activities that receive authorization from the State of North Carolina. Therefore, a separate Corps permit would not be necessary. The state issued a permit for the project on February 2, 1985, and conditioned the permit (Condition [2]) to avoid interference to sea turtle nesting activities by prohibiting beach nourishment work during the period of May 1 to October 15 of any year.

As non-structural beach nourishment, with a permit restriction against beach work during the sea turtle nesting season, the project represented a "no effect" situation and requirements of Section 7 of the Act were satisfied. However, with implied Corps concurrence, on March 21, 1985, the state issued the applicant another permit allowing the placement of the tubes on the beach. In addition, the Corps, by letter of May 3, 1985, stated that they had no objection to the removal of the May 1 to October 15 date restriction. These actions by a Federal agency are subject to review under Section 7 of the Act and represent a "may affect" situation for sea turtles, since sea turtles have been documented to nest on the island. As a "may affect" situation, they require formal consultation. However, we received no request for consultation regarding these actions.

After being informed of this during telephone conversations with personnel from this office, representatives of the Corps conducted a site inspection of the still on-going project on May 13, 1985, at which time the Corps decided to halt the project for at least the remainder of the turtle nesting season. Following the site inspection the Corps contacted this office and relayed the following information:

1. The fabric tubes had been put in place over approximately two-thirds of the originally proposed project area.
2. The tubes were quickly receding into the beach, with the first ones placed then being approximately 3 to 4 feet deep in the sand.
3. Approximately half a mile of beach had been eliminated as turtle nesting habitat, at least temporarily, depending on how long the tubes lasted.

Our office responded by letter of June 14, 1985, informing the Corps that they had violated the Act by not consulting on this project, that we do not consult on "after the fact" situations such as this, but that we would welcome the opportunity to meet with representatives of the Corps later in the summer to ascertain the fate of the tubes. If the tubes became a barrier to sea turtles attempting to nest on the beach, we recommended their removal. (This letter should be consulted for further information regarding the history of this consultation.)

We received no further contact until September 18, 1985, at which time the Corps notified our office by telephone that the tubes were in need of repair and that the landowners were wishing to conduct further beach nourishment work. During that telephone conversation, the Corps requested an on-site meeting between our office and theirs. The meeting took place on October 8, 1985. Also attending the meeting was a representative of the Figure Eight Island landowners. At that time the tubes were exposed throughout the entire length of the project area, and in several places where the tubes had ruptured, sheets of fabric completely covered the beach from the scarp to below the high tide line. During the meeting we informed the Corps and Mr. McNeely that unless the tubes and tube remnants were removed from the beach and future beach work prohibited during the sea turtle nesting season, Section 7 consultation would need to be completed prior to the commencement of any further beach nourishment work. This meeting was followed up by our letter of October 22, 1985, to the Corps.

On October 31, 1985, we received the Corps' public notice, dated October 28, 1985, concerning Mr. McNeely's permit application to continue the beach nourishment work on Figure Eight Island (SAWCO86-N-065-0012). Our office responded to the public notice by letter of November 8, 1985, stating that comments provided in our October 22, 1985, letter still applied. By a letter dated November 7, 1985, Moffat and Nichol, Engineers, working in conjunction with Mr. McNeely and the property owners, submitted a modification to Mr. McNeely's permit application. A copy of this letter was provided to our office by the Corps on November 8, 1985. The present proposal is to excavate additional material from Mason Inlet and pump it onto the south end of Figure Eight Island. The project will be extended to the northeast by approximately 400 feet and shortened on the southeast end by the same amount. The applicant is proposing to leave the existing tubes in place. The excavated material will be pumped onto the beach in three rows and then will be graded to provide escarpment protection. A biological assessment of the proposal and request for formal consultation was submitted by the Corps by letter of January 16, 1986, received January 21, 1986. During telephone conversations on January 16, 1986, and January 21, 1986, between Mr. Cliff Winefordner of the Corps and Mr. John Fridell of my staff, the Corps confirmed our interpretation that their determination was "may affect" with regard to the loggerhead sea turtle.

Biological Opinion

After reviewing the information presented by the Corps and the applicant, it is our understanding that no new tubes will be placed on the beach and the existing tubes will be covered with approximately 10 feet of sand. In addition, our office has received verbal commitments from the Corps, during January 21, 1986, and January 28, 1986, telephone conversations between

Mr. Cliff Winefordner of the Corps and Mr. John Fridell of my staff, that no beach nourishment work will be permitted during the sea turtle nesting season of May 1 through November 1 of any year, and that prior to commencement of the proposed renourishment activities on Figure Eight Island, all remnants of the broken tubes will be removed from the beach. Based on these commitments, it is our biological opinion that the issuance of this permit to allow beach nourishment on the south end of Figure Eight Island will not jeopardize the continued existence of the loggerhead sea turtle.

In meeting the provisions of "incidental take" in Section 7(b)(4) of the Act, we have reviewed the biological information and other available information relative to this action. Based upon our review, incidental take is not authorized for the loggerhead sea turtle during implementation of this action.

Conservation Recommendations

It is our belief that the tubes are and will continue adversely impacting sea turtles. Judging from the results of the initial project, we are doubtful that they will remain covered with sand. Exposed or even partially covered, the tubes and their supporting aprons will form an effective barrier to sea turtles attempting to nest by eliminating access to nesting sites and preventing the excavation of egg pits. They may also lead to erosion problems on adjacent property by diverting currents and restricting natural sand movement, thereby impacting additional nesting habitat.

If adequate depths of sand are maintained above and behind them to allow turtles to successfully nest, we are concerned that the tubes may adversely impact hatching success by affecting moisture levels, gaseous diffusion, or other aspects of the micro-habitat within the nest cavity.

Because of their potential to impact sea turtles, we recommend that the tubes be removed from the beach. The only erosion control technique which we can recommend at this time as being basically compatible with sea turtles is sand pushing (without structural retainers), outside the sea turtle nesting season.

We also recommend that the source of the fill material for the project be carefully evaluated prior to commencement of the project. The sand used to nourish the beach should match the existing substrate on nesting beaches in this area so that nests will not be adversely affected by compaction and reduced gas exchange, which could result from improper material being applied as overburden.

This concludes Section 7 consultation on this action. However, if any modifications or changes in this action are made which were not a part of this consultation, or if other information reveals impacts of this action which may affect listed species or critical habitat in a manner not previously considered, consultation must be reinitiated with this office.

We hope this opinion will be useful to you in fulfilling your obligations under the Act. If you have any questions concerning this opinion, contact John Fridell or Nora Murdock at FTS 672-0321.

Sincerely yours,



V. Gary Henry
Acting Field Supervisor

cc:

Ms. Deborah S. Paul, North Carolina Wildlife Resources Commission,
Raleigh, NC

Director, North Carolina Natural Heritage Program, Raleigh, NC

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