



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

November 26, 2002

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REGULATORY
WILMINGTON FIELD OFFICE

Colonel Charles R. Alexander, Jr.
District Engineer, Wilmington District
Department of the Army, Corps of Engineers
Regulatory Division
P. O. Box 1890
Wilmington, North Carolina 28402-1890

Attention: Mickey Sugg

Dear Colonel Alexander:

The National Marine Fisheries Service's (NOAA Fisheries) has reviewed **Action ID No. 200100632** dated October 12, 2002, which provides notice of intent to prepare an Environmental Impact Statement (EIS) for plans by the Town of Emerald Isle to relocate the Bogue Inlet channel, place dredged material in the existing inlet channel, and conduct beach nourishment on approximately four miles of ocean beach on the western end of Bogue Banks in Carteret County, North Carolina. The purpose of the project is to re-position the main ebb tide channel through Bogue Inlet for purposes of erosion abatement that threatens infrastructure in The Pointe subdivision. An unstated secondary purpose, is to provide sand to complete beach nourishment at Emerald Isle.

According to the information provided, a hydraulic pipeline dredge would be used to relocate the inlet by excavating an intertidal shoal and reestablishing the inlet channel at its late 1970's location. Specific dimensions for the new channel are not provided in the notice. An unspecified volume of dredged material would be placed in the existing inlet to divert water flow to the new alignment. An unspecified volume of dredged material would be placed on four miles of ocean front beach for shoreline renourishment. Work would be accomplished using a pipeline dredge and other heavy equipment.

NOAA Fisheries conducted an onsite inspection and participated in an October 29, 2002, scoping meeting to discuss issues to be addressed in the EIS. As noted at the scoping meeting, the project is located in an area identified by the South Atlantic Fishery Management Council (SAFMC) as Essential Fish Habitat (EFH) for red drum, cobia, brown shrimp, pink shrimp, and white shrimp. In addition, EFH for gag grouper, gray snapper, king mackerel and Spanish mackerel, is located in the project area. Categories of EFH for these species include marine and estuarine water column



including the ocean surf zone, intertidal shoals, emergent marsh, and sand/ mud bottoms. In addition, tidal inlets such as Bogue Inlet are designated as Habitat Areas of Particular Concern (HAPC) for shrimp and red drum. EFH for summer flounder and bluefish, which are under jurisdiction of the Mid-Atlantic Fishery Management Council (MAFMC) also occur in the project area. Categories of EFH for these species include estuarine and marine water column, intertidal flats, and marine and estuarine bottoms. Other species of commercial, recreational, and ecological importance found in the project area include Atlantic croaker, spot, Atlantic menhaden, striped mullet, and Florida pompano. These species serve as prey for species such as king mackerel, Spanish mackerel, cobia, and others that are managed by the SAFMC, and for highly migratory species (e.g., billfishes and sharks) that are managed by NOAA Fisheries.

Estuarine areas just inside of Bogue Inlet have been designated as a primary nursery area (PNA) for fishery resources managed by the North Carolina Division of Marine Fisheries. State designated fishery management areas are also identified in the fishery management plan amendments for the South Atlantic area as Geographically Defined Habitat Areas of Particular Concern. Detailed information on Federally managed fisheries and their EFH is provided in the 1998 amendments of the Fishery Management Plans of the South and Mid-Atlantic Regions prepared, respectively, by the SAFMC and the MAFMC. The amendments were prepared in accordance with provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)(P.L. 104-297).

NOAA Fisheries is concerned that the project may adversely affect EFH and associated fishery resources. Planned dredging of intertidal and subtidal areas in the inlet and the placement of dredged material in open water and submerged bottoms would eliminate existing benthic organisms which serve as food for Federally managed species. Indirect impacts to EFH and living marine resources are also possible. These impacts include elevated turbidity levels and changes in hydrologic flow patterns that may extend far beyond the limits of actual dredging and filling. These changes could adversely affect the extensive system of tidal creeks, marshes, and submerged aquatic vegetation (SAV) located to the north of the immediate project site. These areas are designated by the North Carolina Division of Water Quality as Outstanding Resource Waters which are high-quality waters that require a high level of protection. Shellfish resources, including bay scallop, also occur in SAV beds near the project site and could be subjected to increased stress or mortality if suspended sediment levels are substantially increased.

We are also concerned that placement of dredged material on four miles of Emerald Isle beach will add to the cumulative impact associated with the ongoing nourishment of 16.8 miles of beaches at Pine Knoll Shores, Indian Beach, and Emerald Isle. This new work would increase ongoing and planned beach nourishment on Bogue Banks to 20.8 miles over a three year period. NOAA Fisheries previously raised concerns during our review of planned beach nourishment regarding the compatibility of sediments placed on beaches at Pine Knoll Shores and Indian Beach. Studies of the impact of beach nourishment on invertebrate infauna such as coquina clam and mole crab are presently underway for previously nourished sections of Bogue Banks and initial results indicate that opportunistic species (e.g. polychaete worms) are repopulating the nourished beaches; however, after one season of sampling little recovery of coquina clam and mole crab a populations has been documented.

Results of studies of the effects of beach nourishment on fishery resources in the surf zone, funded by the Towns of Pine Knoll Shores and Indian Beach, are not yet available. In addition, studies of the effects of relocating Mason Inlet in New Hanover County are underway but incomplete and may not be available for use in predicting the biological response of aquatic organisms to inlet relocation at Bogue Inlet.

In view of the preceding, NOAA Fisheries recommends that the following issues and concerns be addressed in the EIS:

1. The purpose and need for the project should be clearly defined and alternative plans should be identified and addressed. In connection with this, construction techniques, including anticipated post-construction maintenance activities, should be fully described.
2. A description of the area of influence of the inlet should be provided. At a minimum, the study area for the project should include the ocean beaches at Hammocks Beach and Bogue Banks and the extensive system of tidal creeks, marshes, SAV, and PNAs located adjacent to the Atlantic Intracoastal Waterway in Bogue Sound.
3. Detailed geological and ecological descriptions of the subtidal and intertidal areas to be dredged and filled should be provided. The descriptions should contain information on the composition of the substrate including grain sizes, and distribution and associated flora and fauna should be described in terms of species composition, distribution, and abundance.
4. Incompatibility of grain size between borrow sites and beach nourishment sites has been problematic in connection with recent Bogue Banks beach nourishment projects. Efforts to avoid or minimize this situation should be fully described in the EIS and where sediment incompatibility is anticipated then associated environmental and ecological consequences should be fully described.
5. NOAA Fisheries is concerned over uncertainty of the effects of partial refilling of the existing inlet channel. If diversion of tidal waters to the new channel is incomplete, the inlet may experience instability and unforeseen consequences. The EIS should explain why a portion of the dredged material would be used for beach nourishment rather than inlet stabilization and erosion control.
6. An EFH Assessment that describes project-related impacts to EFH and the appropriate life history stage for associated species should be included in the EIS. Other fishes and invertebrate species found in the project area also must be described and an assessment of the project's effects on these resources should be provided.
7. Both direct and indirect impacts to the aquatic environment should be described. The EIS should address short-term, long-term, and cumulative impacts in conjunction with other ongoing beach nourishment projects on Bogue Banks and throughout coastal North Carolina.
8. Construction schedules should be addressed and the relationship between these activities and biological processes such as fish spawning and recruitment should be described. The potential

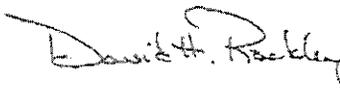
for cumulative impacts of multiple dredging and beach nourishment projects could possibly be reduced if sufficient time for recovery of other portions of Bogue Banks were provided prior to initiation of this work.

9. A hydrodynamic model, as needed to accurately predict changes in water flow patterns associated with inlet relocation, should be developed and predicted effects of hydrodynamic changes on living marine resources should be described.
10. Planned monitoring of changes in the biota and physical character of the project area should be performed and such plans should be reviewed and approved by NOAA Fisheries and the Corps of Engineers prior to initiation.
11. The project will impact EFH and NOAA Fisheries may recommend against granting Federal permits. As part of our evaluation of impacts close attention will be given to impact avoidance and minimization and mitigation that would be provided for unavoidable impacts to living marine resources.
12. The EIS should include a long-term inlet management plan that describes anticipated action and impacts associated with reoccurrence of inlet migration and shoreline erosion. In connection with this, the plan should identify planned measures to avoid, minimize, and offset adverse impacts to fishery resources involved with future maintenance activities.

These comments do not satisfy your consultation responsibilities under Section 7 of the Endangered Species Act of 1973, as amended. If any activity(ies) "may effect" listed species and habitats under the purview of NOAA Fisheries, consultation should be initiated with our Protected Resources Division at the letterhead address.

Thank you for the opportunity to provide these comments. Related questions or comments should be directed to the attention of Mr. Ronald S. Sechler at our Beaufort Office, 101 Pivers Island Road, Beaufort, North Carolina, or at (252) 728-5090.

Sincerely,



Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division