

FINDING OF NO SIGNIFICANT IMPACT

Use of Outer Continental Shelf Sand from Morehead City ODMDS in the Carteret County (North Carolina), Bogue Banks Post-Irene Beach Renourishment Project

Introduction

Pursuant to the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508), Carteret County, North Carolina (NC), under the direction of the Bureau of Ocean Energy Management (BOEM), prepared an environmental assessment (EA) for BOEM to determine whether authorizing use of Outer Continental Shelf (OCS) sand from the Morehead City Ocean Dredged Material Disposal Sites (ODMDS) in the Bogue Banks Post-Irene Beach Renourishment Project would have a significant effect on the human environment and whether an environmental impact statement (EIS) should be prepared. Pursuant to the Department of the Interior (DOI) regulations implementing NEPA (43 CFR 46), BOEM has independently reviewed the EA and has determined that the potential impacts of the proposed action have been adequately addressed.

Proposed Action

Carteret County proposes to utilize the Morehead City ODMDS borrow area to complete a potential beach renourishment of 1,000,000 cubic yards (cy) along the approximate seven miles of project shoreline within Carteret County: (1) western Emerald Isle between survey transects 9-16 (approximately 265,000 cy along 2 mi); (2) eastern Emerald Isle between survey transects 35-46 (approximately 410,000 cy along 2.6 mi); and (3) PKS between survey transects 61-70 (approximately 317,000 cy along 2.5 mi) (EA Figures 2, 6 – 11). The Morehead City ODMDS is located in federal waters approximately 3 nautical miles (nm) offshore of eastern Bogue Banks in Carteret County, NC. (EA Figure 1

http://www.boem.gov/uploadedFiles/Bogue%20Banks%20Post-Irene_2012_EA.pdf).

BOEM's proposed action is the issuance of a negotiated agreement to authorize use of the Morehead City ODMDS so that the project proponent, Carteret County, can obtain up to 1,000,000 cy of sand resources for a beach nourishment project. The project is needed to restore sand volumes and elevations following Hurricane Irene storm impacts to Carteret County beaches. Similar post hurricane FEMA renourishment projects have been implemented in the past. Hurricane Isabel occurred in 2003 with renourishment in 2004 and Hurricane Ophelia occurred in 2005 with renourishment in 2007. The post-storm reconstruction will provide future storm protection and reduce future potential storm damage to the subaerial beach, protective berm, adjacent infrastructure, and coastal ecosystem.

The purpose of BOEM's proposed action is to respond to a request for use of OCS sand under the authority granted to the Department of the Interior by the Outer Continental Shelf Lands Act (OCSLA). The legal authority for the issuance of negotiated noncompetitive leases for OCS sand and gravel is provided by OCSLA (43 U.S.C. 1337(k)(2)).

Alternatives to the Proposed Action

Beach restoration along Bogue Banks began in 1978 with use of sediment from local harbor maintenance dredging projects. Since that time, there have been nineteen previous environmental

analyses which analyzed the potential impacts due to the placement of sand along Bogue Banks from 1978-2011 (EA Figure 3, Table 2). In past environmental analyses, a number of alternatives to beach nourishment and different sand sources have been considered. Beach fill using an offshore borrow area was previously chosen as the preferred alternative. Alternative sand sources are discussed below.

In 2001, an Environmental Impact Statement (EIS), *Final Bogue Banks Beach Restoration Plan* (EA Appendix A) was developed for a large scale, ten year review of beach renourishment projects along Bogue Banks (4,500,000 cy). Phase I (1,733,580 cy) of the Bogue Banks Beach Placement Project was analyzed in this EIS along with a 10 year plan for future placement. Phases II (1,867,726 cy) and III (690,868 cy) of the Bogue Banks Beach Renourishment Project was analyzed in the 2001 *Bogue Banks Beach Renourishment Project EA* which incorporated the 2001 EIS by reference (Appendix B). The USACE South Atlantic Wilmington District (SAW) prepared: (1) *Evaluation Report and Environmental Assessment/Finding of No Significant Impact for Morehead City Harbor Section 933 Carteret County, North Carolina*, (August 2003) (USACE 2003; EA Appendix C). This 2003 document addresses a two phase effort (2004 (699,282 cy) and 2007 (507,939 cy) by the USACE and Carteret County to beneficially use active maintenance and upland stockpiled dredge material for shoreline renourishment purposes. All of the aforementioned shoreline protection actions took place within and adjacent to the proposed project areas evaluated within the current EA but did not utilize the proposed borrow site, the Morehead City ODMDS. However, two previous FEMA sponsored actions (*FEMA Post-Isabel Sand Replacement EA 2004* (156,000 cy) and *FEMA Post-Ophelia Sand Replacement EA 2007*(~1,000,000 cy)) did utilize the ODMDS as their primary borrow site for sand placement along Bogue Banks (EA Tables 2-4).

Initially, in this project review, efforts were made to again coordinate beneficial use of USACE dredged material removed during annual maintenance (2012) from the Port of Morehead City's federal deep-draft navigation project. This proposed option was unavailable to the USACE as Carteret County's proposed project area is beyond the USACE's authorized disposal area. The project area is beyond the area of inlet influence, and the USACE is not authorized to remove material from the coastal system affected by the USACE's channel maintenance efforts. The alternatives have narrowed over time due to lack of sufficient volume of sand which meets the beach quality/grain size and consistency requirements.

The two practical alternatives proposed for this project were A) the No Action alternative and B) Authorization to use the OCS borrow area (proposed action described above). The authorization alternative includes mitigation and monitoring as part of the action. The first practical alternative to BOEM's proposed action is to not issue the negotiated agreement. The potential impacts resulting from BOEM's no action actually depend on the course of action subsequently pursued by Carteret County, which could:

- (a) Re-evaluate the project, choosing another alternative borrow location or offshore sand source to restore the three reaches, or
- (b) Locate onshore sources of comparable sand quantity and quality.
- (c) No project

Option (a) would not minimize overall environmental effects because of the imminent need to

protect the shorelines associated with the project by either constructing new or augmenting existing protection mechanisms for the beaches. In addition, the ODMDS borrow material includes highly compatible sand based on recent investigations (Alpine 2012). At this point, no other borrow areas have been identified, although there is ongoing work to locate and identify borrow sites for future use. Option (b) is not considered to be viable, as upland sources of needed quality and quantity are limited in the project vicinity. In the case of the no project option, coastal erosion would continue, sea turtle and shorebird nesting habitat would deteriorate, and the likelihood and frequency of property and storm damage would increase. Therefore, the no action alternative would not meet the Project's purpose and need.

Environmental Effects

This EA has been prepared to review potential environmental effects resulting from the issuance of a negotiated agreement, and to determine if the proposed action, in light of new information, would have a significant effect on the human environment and whether an EIS must be prepared. The connected actions of the conveyance and placement of the sand moved from the Morehead City ODMDS have been addressed in the current EA.

Based on the effects analysis presented in the EA and National Marine Fisheries Service (NMFS) Biological Opinion (BO)

(<http://www.boem.gov/uploadedFiles/Bogue%20Banks%20NMFS%20Biological%20Opinion.pdf>), no significant impacts were identified. The EA (pgs. 94-96), BO and Finding of No Significant Impact (FONSI) identify all mitigation and monitoring that is necessary to avoid, minimize, and/or reduce and track any foreseeable adverse impacts that may result from all phases of construction. A subset of mitigation, monitoring, and reporting requirements, specific to activities under BOEM jurisdiction, will be incorporated into the negotiated agreement to avoid, minimize, and/or reduce and track any foreseeable adverse impacts.

Significance Review

Pursuant to 40 CFR 1508.27, BOEM evaluated the significance of potential environmental effects considering both CEQ context and intensity factors. The potential significance of environmental effects has been analyzed in both spatial and temporal context. Potential effects are generally considered reversible because they will be minor to moderate, localized, and short-lived. No long-term significant or cumulatively adverse effects were identified. The ten intensity factors were considered in the EA and are specifically addressed below:

1. Impacts that may be both beneficial and adverse.

Potential adverse effects to the physical environment, biological resources, cultural resources, and socioeconomic resources have been considered. Adverse effects to benthic habitat and communities in the borrow area are expected to be reversible. Adverse effects on fish habitat and fishes are expected within the dredged area due to reduction of benthic habitat and changes in topography and in the fill placement area due to burial of existing benthic habitat. There would be beneficial impacts from a reduced risk of serious damage to economically-important infrastructure due to the increased area of the shoreline buffer zone. Furthermore, over the long-term, there would be newly created shorebird and sea turtle nesting habitat. Potential effects to sea turtles, migratory birds, and marine mammals in the vicinity of operations have been reduced through tested mitigation such as environmental construction windows, sea turtle deflector use,

and marine mammal observers. Further, the construction timing was specifically scheduled to occur outside the sea turtle nesting season, the West Indian manatee summer occurrence in NC, the piping plover (and other shorebirds) migratory and breeding seasons, and for the most part the seabeach amaranth flowering period.

Effects to sea turtles, marine mammals and water quality will be monitored. There will be no impacts to nearshore hardbottom habitat within the fill templates of the proposed project activities. Potential impacts to marine, unvegetated, sandy bottom and infaunal abundance will be minimized through the allowance of undisturbed space between the dredge cuts to allow the relatively intact benthic communities between the furrows to be a source of colonists to adjacent disturbed areas, thereby hastening recovery of the infaunal community

Temporary displacement of birds near the shoal site or beach placement could occur. Birds may be attracted to feeding near the hopper as it is being filled at the borrow area or near discharge pipelines on the beach. Impacts would be short-term, localized and temporary and should have no lasting effects on bird populations in the area. Potential impacts to the piping plover on the beach have been accounted for through mitigation measures, including compliance with beach fill standards and adherence to environmental windows, as outlined within the EA and consultation with the US Fish and Wildlife Service (USFWS) (EA Pages 84-85, Attachment 1). Temporary reduction of water quality is expected due to turbidity during dredging and placement operations. Small, localized, temporary increases in concentrations of air pollutant emissions are expected but the short-term impact by emissions from the dredge or the tugs would not affect the overall air quality of the area. A temporary increase in noise level and a temporary reduction in the aesthetic value offshore during construction in the vicinity of the dredging would occur. For safety reasons, navigational and recreational resources located in the vicinity of the dredging operation would temporarily be unavailable for public use. There are no known archaeological resources within the borrow site, the Morehead City ODMDS however, an unexpected finds clause would be implemented in the case an archaeological resource is discovered during operations.

2. The degree to which the proposed action affects public health or safety.

The proposed activities are not expected to significantly affect public health. Construction noise will temporarily increase ambient noise levels and equipment emissions would decrease air quality in the immediate vicinity of placement activities. The public is typically prevented from entering the segment of beach under construction, so recreational activities will not be occurring in close proximity to operations.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

No prime or unique farmland, designated Wild and Scenic reaches, or wetlands would be impacted by implementation of this project. No critical habitat for the listed species is located within the project area. The South Atlantic Fishery Management Council (SAFMC) has identified marine, unvegetated, sandy bottoms, such as the Morehead City ODMDS, as Essential Fish Habitat (EFH). Dredging may affect feeding success of EFH species due to turbidity and loss of benthic prey. Impacts to EFH would occur in the Morehead City ODMDS, but the

limited spatial and temporal extent of dredging suggests these impacts will not adversely affect EFH on a broad scale. There are no nearshore hardbottom areas within the proposed project area. NMFS has concurred with the finding that there would be no adverse effects to EFH within the proposed project area (Attachment 1).

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

No effects are expected that are scientifically controversial. Effects from beach nourishment projects, including dredging on the OCS, are well studied. The effects analyses in the EA has relied on the best available scientific information, including information collected from previous dredging and nourishment activities in and adjacent to the project area. Numerous studies and monitoring efforts have been undertaken along the southeast Atlantic Coast evaluating the effects of dredging and beach nourishment on shoreline change, benthic communities, nesting and swimming sea turtles, and shorebirds.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

Beach nourishment is a common solution to coastal erosion problems along the southeast Atlantic coast. Beach nourishment in Carteret County has been ongoing since 1978 (EA Figure 3, Table 2). No significant adverse effects have been documented during or as a result of these past operations. The project design is typical of beach nourishment activities. Mitigation and monitoring efforts are similar to that undertaken for past projects and have been demonstrated to be effective. The effects of the proposed action are not expected to be highly uncertain, and the proposed activities do not involve any unique or unknown risks.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

No precedent for future action or decision in principle for future consideration is being made in BOEM's decision to authorize re-use of the Morehead City ODMDS. BOEM considers each use of a borrow area on the OCS as a new Federal action. The Bureau's authorization of the use of the borrow area does not dictate the outcome of future leasing decisions. Future actions will also be subject to the requirements of NEPA and other applicable environmental laws.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Significance may exist if it is reasonable to anticipate cumulatively significant impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The EA identifies those actions and potential impacts related to underlying activities. The EA and previous NEPA documents conclude that the activities related to the proposed action are not reasonably anticipated to incrementally add to the effects of other activities to the extent of producing significant effects. Because the use of the ODMDS as a disposal site is on-going, the proposed project provides an incremental, but localized effect on the reduction of offshore sand resources. Although there will be a short-term and local decline in benthic habitat and populations, both are expected to recover within a few years. No significant cumulative impacts to benthic habitat are expected from the use of the borrow site.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

The proposed action is not expected to adversely affect historic resources. Seafloor-disturbing activities (e.g., dredging, anchoring, pipeline emplacement and relocation) may occur during proposed construction activities. An archaeological clearance survey was performed, and no historic or cultural properties identified in the ODMDS (Attachment 1) or the placement area. Therefore, no significant impacts to cultural resources in the project area (borrow, rehandling, placement or pump-out areas), as result of the proposed action, are anticipated.

BOEM will require a cessation of work, within 305 m (1000 ft) of the area of discovery, if an unexpected discovery occurs, and immediate notification to BOEM/Division of Historic Resources/State Historic Preservation Officer so they can determine if the resource is significant or not and make the determination of the best means to protect the resource. The proposed action is compliant with the requirements of the National Historic Preservation Act (NHPA), as amended; the Archeological and Historic Preservation Act (AHPA), as amended; and Executive Order 11593.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

Nesting and swimming sea turtles (loggerhead and green) present in the project area during and after construction operations may be adversely affected. BOEM will comply with all requirements of biological opinions and concurrences associated with this project provided under the ESA from both USFWS (Attachment 1) and NMFS.

NMFS has determined that the action is likely to adversely affect loggerhead and green sea turtles, but is not likely to jeopardize their continued existence. The BO conditions and any other turtle safety precautions would be maintained to also comply with the NMFS BO issued in accordance with Section 7 of the ESA of 1973, on BOEM's proposed action to issue an offshore sand lease to Carteret County. If a hopper dredge is used for the dredging operations, potential impacts to sea turtles could occur. To minimize the risk to sea turtles, standard sea turtle protection conditions will be implemented such as the use of a state-of-the-art rigid deflector draghead at all times, inflow and outflow screens, and/or monitoring of the operation. In addition, relocation trawling will be implemented to minimize entrainment of sea turtles in hopper dredges. According to the NMFS BO, Atlantic sturgeon, Humpback whales, Fin whales, Blue whales, Sei whales, and North Atlantic right whales occur within the project area but the proposed project is not likely to affect these species. The contractor will be required to abide by the 10-knot speed restriction during right whale calving season and follow NMFS' *Vessel Strike Avoidance and Reporting Guidelines*. With the implementation of these conservation measures, NMFS believes that the likelihood of these species will be affected is discountable.

Consultation with the USFWS under Section 7 of the ESA was completed on by letter on July 2, 2012 and by email on July 11, 2012. The USFWS determined that the placement of material on the Carteret County shoreline from the ODMDS may affect, but is not likely to adversely affect the manatee, piping plover, seabeach amaranth, and nesting sea turtles provided the incorporation of conservation recommendations (Attachment 1). The USFWS determined that

the conservation measures stated in their July 2, 2012 letter (excluding the requirement for monitoring sand coloration) are applicable to the project and must be followed for sea turtles, manatees, piping plover and seabeach amaranth (Attachment 1). With the inclusion of the USFWS conservation recommendations and additional conditions in the additional email confirmation (Attachment 1), the USFWS has determined that the proposed project may affect but is not likely to adversely affect these species.

This project was fully coordinated under the ESA and is in full compliance with the Act. Both the USACE and BOEM consulted with the resource agencies for work proposed to occur within their jurisdictional areas. Carteret County and the USACE have consulted with the USFWS and NMFS for all shoreline placement activities within the USACE's jurisdiction. Carteret County and BOEM prepared and submitted a Biological Assessment to the USFWS and NMFS for all activities associated with the use of the offshore borrow site for the renourishment project. If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action, consultation will need to be reinitiated.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Carteret County must comply with all applicable Federal, State, and local laws and requirements. BOEM and the USACE have acquired authorizations for ESA and Magnuson-Stevens Fishery Conservation and Management Act (MSA) from NMFS and USFWS. A NC Division of Coastal Management Coastal Area Management Act (CAMA) permit and USACE General Permit 291 have been issued for the proposed action (Attachment 1). The NC Division of Water Quality has authorized the proposed project under General Water Quality Certification (GWQC) No. 3900 (DWQ Project No. 20120512). The CAMA, GWQC, and USACE permits include mitigation and monitoring requirements that are applicable to the connected activities in state water.

The proposed action is in compliance with the Marine Mammal Protection Act (MMPA). Marine mammals are not likely to be adversely affected by the project and incorporation of safeguards to protect threatened and endangered species during project construction would also protect marine mammals in the area.

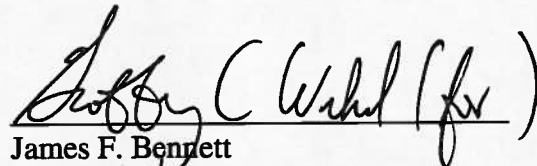
Consultations and Public Involvement

The proposed action was subject to public comment through the USACE notification and permit review process. BOEM's involvement in the project was clearly described. No specific comments were received. The USACE served as the lead Federal agency in coordinating with the USFWS, NC Division of Coastal Management, NC Division of Water Quality. BOEM served as the lead Federal agency in coordinating with NMFS and NC SHPO in support of this leasing decision. Pertinent correspondence with Federal and state agencies are provided in the EA, BO and Attachment 1. After signature of this FONSI, a Notice of Availability of the FONSI and EA will be prepared and published by BOEM in the Federal Register or by other appropriate means. The EA and FONSI will be posted to BOEM web site [<http://www.boem.gov/Non-Energy-Minerals/Marine-Minerals-Program.aspx>].

Conclusion

BOEM has considered the consequences of issuing a negotiated agreement to authorize use of OCS sand from the Morehead City ODMDS. BOEM independently reviewed the EA and finds that it complies with the relevant provisions of the CEQ regulations implementing NEPA, DOI regulations implementing NEPA, and other Marine Mineral Program requirements. Based on the NEPA and consultation process coordinated cooperatively by USACE and BOEM, appropriate terms and conditions enforceable by BOEM will be incorporated into the negotiated agreement to avoid, minimize, and/or mitigate any foreseeable adverse impacts.

Based on the evaluation of potential impacts and mitigating measures discussed in the EA, BOEM finds that entering into a negotiated agreement, with the implementation of the mitigating measures, does not constitute a major Federal action significantly affecting the quality of the human environment, in the sense of NEPA Section 102(2)(C), and will not require preparation of an EIS.


James F. Bennett
Chief, Division of Environmental
Assessment

10/23/2012
Date

Appendix A Mitigation, Monitoring, and Reporting Requirements

The following mitigation measures, monitoring requirements, and reporting requirements are proposed by BOEM to avoid, minimize, reduce, or eliminate environmental impacts associated with the Proposed Action (herein referred to as the "Project"). Mitigation measures, monitoring requirements, and reporting requirements in the form of terms and conditions are added to the negotiated agreement and are considered enforceable as part of the agreement.

Plans and Performance Requirements

Carteret County will ensure that all operations at the Morehead City ODMDS are conducted in accordance with the final approved Plan and all terms and conditions in this Lease, as well as all applicable statutes, regulations, orders and any guidelines or directives specified or referenced herein. Carteret County will send BOEM a copy of the plans and its modification when publically available.

The dredging method from the Morehead City ODMDS will be consistent with project proposal analyzed in the supporting NEPA documents, authorizing documents, and all associated State and Federal permits. Carteret County will allow BOEM to review and comment on modifications to the Plan that may affect the project area, including the use of submerged or floated pipelines to directly convey sediment from the borrow area to the placement site. Said comments will be delivered in a timely fashion in order to not delay Carteret County's construction contract or schedule.

If dredging and/or conveyance methods are not wholly consistent with that evaluated in relevant NEPA documents and environmental and cultural resource consultations, and authorized by the USACE and NC State Permits, additional environmental review may be necessary. If additional NEPA consultations, coordination and/or Federal Permits would impact or otherwise supplement the provisions of the Lease, an amendment may be required.

Prior to the commencement of construction, Carteret County will provide a summary of the construction schedule. Carteret County, at the reasonable request of BOEM or the Bureau of Safety and Environmental Enforcement (BSEE), will allow access, at the site of any operation subject to safety regulations, to any authorized Federal inspector and will provide BOEM or BSEE any documents and records that are pertinent to occupational or public health, safety, or environmental protection as may be requested.

Endangered Species Act (ESA) Compliance with NMFS Biological Opinion and Incidental Take Statement/Recommendations

BOEM is the lead agency on behalf of the Federal government to ensure the Project complies with all terms, conditions and recommendations of the NMFS Biological Opinion (dated October 3, 2012, available at <http://www.boem.gov/uploadedFiles/Bogue%20Banks%20NMFS%20Biological%20Opinion.pdf>). For all activities undertaken pursuant to the Project, Carteret County agrees to implement all terms, conditions and recommendations in the NMFS Biological Opinion, which are incorporated by reference as terms and conditions of the Lease. The County will instruct its

contractor(s) to implement those mitigation terms, conditions, and measures required or recommended by NMFS in the Biological Opinion. In the event that the USACE is not able to provide the required inspection of the turtle deflector equipment, the County will notify BOEM prior to conducting the activity and the County will be required to provide a NMFS-approved third party contractor to perform the inspection. In addition to any reporting requirements or recommendations in the Biological Opinion, copies of all relevant correspondence, monitoring, and reporting must be provided to BOEM within 14 days of issuance at dredgeinfo@boem.gov. The County agrees to respond to all reasonable requests from and cooperate with BOEM and NMFS in meeting their obligations under the ESA.

In addition to any terms and conditions, harm and avoidance measures, and reasonable and prudent measures specified in the NMFS BO, the County has agreed to the following requirements by BOEM to protect endangered species: Relocation trawling is required if any dredging is to be completed November 16 through December 31 and March 1 through March 31. Relocation trawling will be required in the months of January and February following one turtle take in those same months. If there have been no documented non-lethal turtle takes from relocation trawling within the last 7 days of dredging in December and the water temperature is below 55 degrees F then Carteret County may request from BOEM (dredgeinfo@boem.gov) that relocation trawling may be suspended for the months of January and February. If a total of four sea turtles are non-lethally taken through relocation trawling, the contractor(s) must halt all activities and contact BOEM immediately for further reinitiated Section 7 consultation.

In the case of any collision with or injury of a threatened or endangered species, including but not limited to sea turtles, Carteret County and/or its contractor(s) must stop all dredging operations and immediately contact the NMFS's Protected Resources Division (727-824-5312, fax 727-824-5309, or electronic mail takereport.nmfsser@noaa.gov), the local authorized sea turtle stranding/rescue organization (currently the North Carolina Wildlife Resources Commission, but an up-to-date list is provided at <http://www.sefsc.noaa.gov/species/turtles/strandings.htm>) and BOEM (dredgeinfo@boem.gov and 703-787-1215).

Carteret County acknowledges and agrees that, even where it is otherwise in compliance with the terms and conditions of this Lease and other required authorizations, incidental take of sea turtles or other endangered species by Carteret County or its authorized contractors, within federal waters, may require suspension of the Lease by BOEM and reinitiation of consultation with NMFS. The amount and severity of incidental take that will trigger suspension, and the need for any such suspension or reinitiated consultation will be determined in the sole discretion of BOEM. Depending on the results of an assessment of the take or reinitiated consultation, BOEM in its sole discretion may reinstate the Lease, revoke and terminate the Lease, negotiate with Carteret County an amendment to the existing Lease or enter into a new lease with additional terms and conditions to protect threatened or endangered species. Carteret County understands and agrees on behalf of itself, its agents, contractors, and other representatives, that no claim, legal action in equity for damages, adjustment, or other entitlement against BOEM will arise as a result as a result of any suspension or related action.

Environmental Compliance

BOEM must ensure that the project complies with applicable environmental laws, including but not limited to ESA, MSFCMA, MBTA, NHPA, and CZMA. Carteret County agrees to implement all proposed avoidance and minimization measures as outlined in the EA Pages 94-96 (http://www.boem.gov/uploadedFiles/Bogue%20Banks%20Post-Irene_2012_EA.pdf).

To minimize the severity of benthic impact, Carteret County will require dredge contractors to leave undisturbed space between the dredge cuts to allow the relatively intact benthic communities between the furrows to be a source of colonists to adjacent disturbed areas.

Carteret County is responsible for compliance with the Specific Conditions of the State CAMA and Water Quality Permits, including implementation of sediment compatibility and compaction monitoring, marine turtle conditions, marine mammal special conditions, and seasonal construction windows. Construction will not commence until the pre-construction requirements have been completed. Additionally, Carteret County will instruct its contractor(s) to implement the mitigation terms, conditions, and measures required by the U.S. Fish and Wildlife Service, NC Division of Coastal Management, NC Division of Water Quality, the U.S. Army Corps of Engineers, and BOEM, as appropriate, pursuant to applicable Federal and State laws and regulations. Required mitigation terms, conditions, and measures are reflected in the Biological Opinion and Conservation Recommendations. Construction must not commence until the preconstruction requirements have been completed. Copies of all relevant correspondence, monitoring, and reporting must be provided to BOEM within fourteen (14) days of issuance at dredgeinfo@boem.gov (including but not limited to observer and dredge reports).

Pre-Construction Notification of Activity in or near the Borrow Area

Carteret County will invite BOEM to attend a pre-construction meeting that describes Carteret County's and/or its agents' plan and schedule to construct the Project.

Carteret County will notify BOEM at dredgeinfo@boem.gov of the commencement and termination of operations at the ODMDS within 24 hours after Carteret County receives such notification from its contractor(s) for the Project. BOEM will notify Carteret County in a timely manner of any OCS activity within the jurisdiction of the DOI that may adversely affect Carteret County's ability to use OCS sand for the Project.

Dredge Positioning

During all phases of the Project, Carteret County will ensure that the dredge and any bottom disturbing equipment is outfitted with an onboard global positioning system (GPS) capable of maintaining and recording location within an accuracy range of no more than plus or minus 3 meters. The GPS must be installed as close to the cutterhead or draghead as practicable. During dredging operations, Carteret County and/or its agents will immediately notify BOEM at dredgeinfo@boem.gov if dredging occurs outside of the approved borrow area.

Anchoring, spudding, or other bottom disturbing activities are not authorized outside of the approved borrow area on the OCS.

Carteret County and/or its agents, in collaboration with the USACE, will provide BOEM all Dredging Quality Management (DQM) data (incorrectly identified in NMFS Biological Opinion as Silent Inspector data) acquired during the project using procedures jointly developed by the USACE's National Dredging Quality Management Data Program Support Center and BOEM. Carteret County will submit the DQM data to dredgeinfo@boem.gov biweekly. A complete DQM dataset, Dredge Pack, or equivalent data will be submitted within 45 days of completion of the Project. If available, Carteret County will also submit Automatic Identification System (AIS) data for vessels qualifying under the International Maritime Organization's (IMO) International Convention for the Safety of Life at Sea.

Submittal of Production and Volume Information

Carteret County and/or its agents, in cooperation with the dredge operator, will submit to BOEM on a biweekly basis a summary of the dredge track lines, outlining any deviations from the original Plan. A color-coded plot of the cutterhead or drag arms will be submitted, showing any horizontal or vertical dredge violations. The dredge track lines will show dredge status: hotelling, dredging, transiting, or unloading. This map will be provided in PDF format.

Carteret County and/or its agents will provide at least a biweekly update of the construction progress including estimated volumetric production rates to BOEM. The biweekly deliverables will be provided electronically to dredgeinfo@boem.gov. The project completion report, as described below, will also include production and volume information, including Daily Operational Reports.

Local Notice to Mariners

Carteret County and/or its agents will require its contractor(s) for the Project to place a notice in the U.S. Coast Guard Local Notice to Mariners regarding the timeframe and location of dredging and construction operations in advance of commencement of dredging.

Marine Pollution Control and Contingency Plan

Carteret County and/or its agents will require its contractor(s) and subcontractor(s) to prepare for and take all necessary precautions to prevent discharges of oil and releases of waste and hazardous materials that may impair water quality. In the event of an occurrence, notification and response will be in accordance with applicable requirements of 40 C.F.R. 300. All dredging and support operations will be compliant with U.S. Coast Guard regulations and the U.S. Environmental Protection Agency's Vessel General Permit, as applicable. Carteret County and/or its agents will notify BOEM of any occurrences and remedial actions and provide copies of reports of the incident and resultant actions at dredgeinfo@boem.gov.

Bathymetric Surveys

Carteret County and/or its agents will provide BOEM with post-dredging bathymetric surveys of ODMDS. As agreed to by the County, the County will provide any future bathymetric surveys completed by the County to BOEM. The post-dredging survey will be conducted within 30 days after the completion of dredging. Hydrographic surveys will be performed in accordance with the USACE Hydrographic Surveying Manual EM 1110-2-1003 unless specified otherwise. Interferometric swath or multibeam bathymetry data is preferred over single-beam data. All

bathymetric data will be roll, pitch, heave, and tide corrected using best practices. Three equidistant cross-tie lines will be established parallel to the same baseline. All survey lines will extend at least 50 m beyond the edge of the dredge areas. All data will be collected in such a manner that post-dredging bathymetry survey data is compatible with the pre-dredging bathymetric survey data to enable the latter to be subtracted from the former to calculate the volume of sand removed, the shape of the excavation, and nature of post-dredging bathymetric change.

Copies of pre-dredging and post-dredging hydrographic data will be submitted to BOEM via dredgeinfo@boem.gov within thirty (30) days after each survey is completed. The delivery format for data submission is an ASCII file containing x, y, z data. The horizontal data will be provided in the North American Datum of 1983 (NAD '83) North Carolina State Plane, U.S. survey feet. Vertical data will be provided in the North American Vertical Datum of 1988 (NAVD '88), U.S. survey feet unless otherwise specified. An 8.5x11" plan view plot of the pre- and post-construction data will be provided showing the individual survey points, as well as contour lines at appropriate elevation intervals. These plots will be provided in PDF format. Survey metadata will also be provided.

Archaeological Resources

Onshore Prehistoric or Historic Resources

If Carteret County discovers any previously unknown historic or archeological remains while accomplishing activity onshore, Carteret County will notify BOEM of any finding. Carteret County will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

Offshore Prehistoric or Historic Resources

In the event that the dredge operators discover any archaeological resource while conducting dredging operations in the ODMS or in the vicinity of pump-out operations, Carteret County will require that dredge and/or pump-out operations be halted immediately within 305 m (1000 ft) of the area of discovery. Carteret County will then immediately report the discovery to Mr. James F. Bennett, Chief, Division of Environmental Assessment, BOEM, at (703) 787-1660. If investigations determine that the resource is significant, the parties will together determine how best to protect it.

Project Completion Report

A project completion report will be submitted by Carteret County to BOEM within 120 days following completion of the activities authorized under this MOA. This report and supporting materials should be sent to: Chief, Leasing Division, BOEM, 381 Elden Street, HM 3120, Herndon, Virginia 20170 and dredgeinfo@boem.gov. The report will contain, at a minimum, the following information:

- the names and titles of the project managers overseeing the effort (for Longboat Key, the engineering firm (if applicable), and the contractor), including contact information (phone numbers, mailing addresses, and email addresses);

- the location and description of the project, including the final total volume of material extracted from the borrow area and the volume of material actually placed on the beach or shoreline (including a description of the volume calculation method used to determine these volumes);
- ASCII files containing the x,y,z and time stamp of the cutterhead or drag arm locations;
- a narrative describing the final, as-built features, boundaries, and acreage, including the restored beach width and length;
- a table, an example of which is illustrated below, showing the various key project cost elements;

	Cost Incurred as of Construction Completion (\$)
Construction	
Engineering and Design	
Inspections/Contract Administration	
Total	

- a table, an example of which is illustrated below, showing the various items of work construction, final quantities, and monetary amounts;

Item No.	Item	Estimated Quantity	Final Quantity
1	Mobilization and Demobilization		
2	Beach Fill		
3	Any beach or offshore hard structure placed or removed		

- a listing of construction and construction oversight information, including the prime and subcontractor(s), contract costs, etc.;
- a list of all major equipment used to construct the project;
- a narrative discussing the construction sequences and activities, and, if applicable, any problems encountered and solutions;
- a list and description of any construction change orders issued, if applicable;
- a list and description of any safety-related issues or accidents reported during the life of the project;
- a narrative and any appropriate tables describing any environmental surveys or efforts associated with the project and costs associated with these surveys or efforts;
- a table listing significant construction dates beginning with bid opening and ending with final acceptance of the project by Longboat Key;

- digital appendices containing the as-built drawings, beach-fill cross-sections, and survey data;
- any additional pertinent comments.

Environmental and Reporting Compliance

Carteret County and/or their agents will designate in advance of construction a single point of contact responsible for facilitation of compliance with all MOA requirements. The contact information will be provided to BOEM at least 30 days in advance of dredging and construction operations at dredgeinfo@boem.gov.

Failure to reasonably comply with these requirements may be a basis for BOEM to refer compliance issues to BSEE for appropriate enforcement measures. Failure to comply with these requirements in a timely and responsible fashion may delay future requests from the Carteret County to BOEM for an authorization to use OCS sand resources.

**Attachment 1: Supplemental Information
for the Environmental Analysis**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
July 2, 2012

Ms. Christy Wicker
U. S. Army Corps of Engineers
Wilmington Regulatory Field Office
P. O. Box 1890
Wilmington, North Carolina 28402-1890

Subject: Action ID #SAW- 2012-00026; Town of Emerald Isle/Town of Pine Knoll Shores
Carteret County, NC

Dear Ms. Wicker:

This letter provides the comments of the U. S. Fish and Wildlife Service (Service) on the subject Public Notice, dated May 31, 2012. The applicants, the Towns of Emerald Isle and Pine Knoll Shores, have applied for a Department of the Army (DA) permit to conduct beach nourishment activities in three areas in Emerald Isle and Pine Knoll Shores, Carteret County, North Carolina. These comments are submitted in accordance with the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661-667d). Comments related to the FWCA are to be used in your determination of compliance with 404(b)(1) guidelines (40 CFR 230) and in your public interest review (33 CFR 320.4) in relation to the protection of fish and wildlife resources. Additional comments are provided regarding the District Engineer's determination of project impacts pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Project Area, Proposed Activities, and Anticipated Impacts

The project area is the oceanfront in Emerald Isle and Pine Knoll Shores and the adjacent Atlantic Ocean. The waters of the project area are classified as SB. The area is not designated as a Primary Nursery Area (PNA) and is not closed to the taking of shellfish. The substrate of the project area is primarily sand.

The applicant proposes to use a hopper dredge to remove 1 million cubic yards of material from the Morehead City Harbor Ocean Dredged Material Disposal Site (ODMDS). The material is proposed to be placed along three stretches of beach along the Bogue Banks shoreline: the shoreline at western Emerald Isle between Ocean Oaks and Mangrove Drive, eastern Emerald Isle between Park Drive and 4th Street, and Pine Knoll Shores between Coral Shores and Dogwood Circle. The total length of oceanfront

to be nourished is approximately 7.1 miles. The applicant indicates that the construction activities will be scheduled to occur between November 16 and March 31, outside of the sea turtle nesting season, the West Indian manatee summer occurrence in NC, the piping plover migratory and breeding seasons, and for the most part the seabeach amaranth flowering period.

Federally Protected Species

The permit application and Additional Information Attachment (AIA) provide no preliminary determination of effects to Federal protected species. The Service has reviewed available information on federally-threatened or endangered species known to occur in Carteret County. Our review indicates that several species may occur in the project area, including the West Indian manatee (*Trichechus manatus*), piping plover (*Charadrius melodus*), seabeach amaranth (*Amaranthus pumilus*), and the Kemp's Ridley (*Lepidochelys kempi*), hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*), loggerhead (*Caretta caretta*), and green (*Chelonia mydas*) sea turtles. Whales, shortnose sturgeon (*Acipenser brevirostrum*), Atlantic sturgeon (*Acipenser oxyrinchus*), and sea turtles in the water are under the jurisdiction of NOAA Fisheries' Protected Species Division. We look forward to ESA Section 7 consultation on this project.

West Indian Manatee

Manatees, designated as federally endangered, move along the Atlantic Coast during summer months and are seasonal transients in North Carolina, primarily from June through October. Manatees may be found in water over one meter (3.3 feet) deep. The species moves extensively when in North Carolina waters and past occurrence records cannot be used to precisely determine the likelihood that it will be present at a particular construction site. Manatees may migrate through the project area during the warmer month of the year, primarily from June through October. If the construction activities occur between November 16 and March 31, outside of the West Indian manatee summer occurrence in NC, then the Service would concur with a determination that the project is not likely to adversely affect the West Indian manatee.

Piping plover

Piping plovers, designated as federally threatened, are known to occur in the project area. The project area is approximately 1.5 miles northeast of Critical Habitat Unit NC-10 for the piping plover, as described in 50 CFR Part 17 (66 FR 36087). Piping plovers nest above the high tide line on coastal beaches; on sand flats at the ends of sand spits and barrier islands; on gently sloping foredunes; in blowout areas behind primary dunes

(overwashes); in sparsely vegetated dunes; and in overwash areas cut into or between dunes. The species requires broad, open, sand flats for feeding, and undisturbed flats with low dunes and sparse dune grasses for nesting. Piping plovers from the federally endangered Great Lakes population, as well as birds from the threatened populations of the Atlantic Coast and Northern Great Plains, overwinter on North Carolina beaches, including Bogue Banks. Piping plovers arrive on their breeding grounds in late March or early April. Following establishment of nesting territories and courtship rituals, the pair forms a depression in the sand, where the female lays her eggs. By early September both adults and young depart for their wintering areas.

Seabeach Amaranth

Seabeach amaranth is an annual plant that exists adjacent to inlets, along beaches between dunes and the high tide line, and in areas of extreme overwash. The plant helps trap sand and build dunes. The species is listed as threatened by both the federal government and the State of North Carolina. Suitable habitat for this plant occurs in the project area, and previous monitoring efforts indicate that seabeach amaranth is often found in large numbers along the Bogue Banks beaches. Seabeach amaranth begins to flower as soon as plants have reached sufficient size, sometimes as early as June, but more typically commencing in July and continuing until the death of the plant in late fall. Seed production begins in July or August and peaks in September during most years, but continues until the death of the plant. The Service recommends that sediment be placed during the winter months (after the first frost), when only seeds are present. Sediment placement may bury seeds on the beach and delay germination the following year, but the seeds are likely to remain viable and may germinate when the imported sand washes away. The main long-term threat to this plant in the project area would be an increased frequency of large-scale sediment placements. As sea level continues to rise, major portions of the beach may need additional sand on an annual basis. If buried seeds are not given an opportunity to germinate and produce seeds, the population of the threatened plant on Bogue Banks could be reduced in the future. If the construction activities occur outside of the seabeach amaranth growth and flowering period, then the Service would concur with a determination that the project is not likely to adversely affect the seabeach amaranth.

Sea Turtles

Sea turtle nesting habitat is present within the proposed project area. Of the five sea turtle species, the loggerhead, green, Kemp's ridley, and leatherback sea turtle may nest in the project area. The ESA Section 7 evaluation can be limited to these four turtle species. As the Service has stated in previous correspondence on this project (June 4,

2010), the most important aspects of the beach construction effort are the construction schedule and the quality of the material imported for beach fill. On page 19, the AIA states that the proposed project will adhere to the Services two most important conservation measures: sand quality and construction scheduling.

Sediment placement on the beach may have both direct and indirect impacts on sea turtle reproduction. Disposal operations and subsequent grading during the sea turtle nesting and incubation season (May 1 through November 15) may result in the burial or crushing of nests or hatchlings or loss of sea turtles through disruption of nesting activity.

In general, the applicant indicates that the material will be compatible because it will meet the North Carolina Sediment Criteria Rule (technical standards for beach fill projects - 15A NCAC 07H .0312). This rule sets standards for allowable variations in gravel, silt, and shell content between the recipient beach and the borrow source. However, the state rule does not include criteria for mineral content, organic content, and color, factors that may also influence sea turtle nesting success. Munsell color value is not one of the parameters determined for the native beach samples nor the material samples taken at the ODMDS. On page 21, the AIA states that the typical color of the ODMDS sediments is "light to medium to dark gray to brown." This is a rather broad description, and it is not possible to determine whether the color of the nourishment material will be compatible with quality sea turtle nesting habitat. We note in Appendix D (geological logs) that the vibracore data do not provide information on Munsell color. However, some of the borings appear to be rather dark. Wet sand with a value of less than 5 would be darker than what the Service considers acceptable for normal sea turtle incubation, because the darker color may cause higher incubation temperatures and greatly skew the sex ratio towards female (Mrosovsky et al. 1984, Mrosovsky & Provancha 1992). We understand that color monitoring of the material dredged from the navigation channel has been conducted in the past, and that the material was found to be compatible. However, there is no information provided in the AIA to assure that this proposed borrow material will also be compatible.

The Service recommends that the DA permit include minimal standards for beachfill color that compares the Munsell color value of the nourishment materials with the native beach material. As stated above, a wet sand value of less than 5 should not be considered compatible. A remediation plan should be developed to correct any placement of incompatibly-colored sand on the beaches. In general discussions concerning other beach nourishment projects, we note that there is a general belief on the part of several agencies that darker-colored materials often "bleach out" within a few months, and therefore do not pose a compatibility problem. However, the Service has not seen any studies to support these statements. We recommend that the DA permit also require a 3-year

program to monitor how Munsell color value may change over time throughout the project area. Munsell color data should be collected monthly, and should include several sample sites in each of the three nourished beach stretches. At each sample location, general observations of changes in color or other sediment characteristics should be made. Color evaluations should extend beyond the upper few inches which may be bleached by sunlight or covered by lighter, windblown sand. A representative core sample, at least 18 inches deep, should be evaluated for Munsell color. Color should be determined at two or more points along the core sample (at least within a few inches of the top, and within an inch of the bottom). Also, any areas of color change throughout the horizons should be measured separately.

The Service also recommends that monitoring of the beach nourishment area be required for both compaction and escarpment formation at the end of the construction period, and prior to the next three sea turtle nesting seasons.

The Service appreciates the opportunity to comment on this PN. We look forward to the ESA Section 7 consultation for this project. If you have questions regarding these comments, please contact Kathy Matthews at 919-856-4520, ext. 27 or by e-mail at <kathryn_matthews@fws.gov >.

Sincerely,



Peter Benjamin
Field Supervisor

cc:

Ron Sechler, NOAA Fisheries, Beaufort, NC
Molly Ellwood, NC Wildlife Resources Commission, Wilmington
Doug Huggett, NC Division of Coastal Management, Morehead City, NC

References:

Holloman, Kristin T. and Matthew H. Godfrey. 2008. Sea Turtle Monitoring Project Report: Bogue Banks, North Carolina. 2002-2007 Final Report. North Carolina Wildlife Commission.

Mrosovsky, N. and J. Provancha. 1992. Sex ratio of hatchling loggerhead sea turtles: data and estimates from a 5-year study. *Can. J. Zool.* 70: 530-538.

Mrosovsky, N., P.H. Dutton, and C.P. Whitmore. 1984. Sex ratios of two species of sea turtle nesting in Suriname. *Can. J. Zool.* 62: 2227-2239.

From: Culbertson, Jennifer
To: Culbertson, Jennifer (Jennifer.Culbertson@boem.gov)
Subject: FW: FW: Emerald Isle Hotspot, SAW-2012-00026, CAMA Major App, GP291, Request for Federal Comments (UNCLASSIFIED)
Date: Monday, July 30, 2012 11:42:22 AM

From: Kathryn Matthews@fws.gov [mailto:Kathryn_Matthews@fws.gov]
Sent: Wednesday, July 11, 2012 9:38 AM
To: Timpy, David L SAW; christine.w.wicker@usace.army.mil
Cc: doug.huggett@ncdenr.gov; mickey.t.sugg@usace.army.mil; garnett.jeffrey@epa.gov; Layton Bedsole; maria.dunn@ncwildlife.org; gagliano.paul@epa.gov; fritz.rohde@noaa.gov
Subject: Re: FW: Emerald Isle Hotspot, SAW-2012-00026, CAMA Major App, GP291, Request for Federal Comments (UNCLASSIFIED)

Dear Dave,

Thanks for forwarding the May 31, 2012 email concerning Emerald Isle and Pine Knoll Shores' proposed nourishment of Emerald Isle Hotspots (SAW-2012-00026), which makes a determination that the project may affect federally listed endangered or threatened species or their formally designated critical habitat. This morning, I also spoke with you by phone, and also with Layton Bedsole (Dial Cordy), consultant for the applicant.

As you know, the U.S. Fish and Wildlife Service provided comments on the public notice for this project in a letter dated July 2, 2012. This email serves as notice that if the conservation recommendations of the letter are incorporated as conditions of the DA permit, then the Service can concur that the project may affect listed species, but is not likely to adversely affect the manatee, piping plover, seabeach amaranth, and the Kemp's Ridley, hawksbill, leatherback, loggerhead, and green sea turtles.

The Service would accept one change to the conservation recommendations for the sea turtles: the last paragraph on pages 4 and 5, concerning color compatibility and requiring a three-year monitoring program of the color bleaching process, may be omitted from the permit conditions. However, the applicant should realize that the issue of color compatibility and questions about the bleaching process must be addressed during the project review for the Bogue Banks Beach Programmatic Shoreline Management Plan.

Please feel free to call me with any additional questions or concerns.

Kathy Matthews
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
P.O. Box 33726
Raleigh, NC 27606-3726

Phone: 919-856-4520, x27
Fax: 919-856-4556
Email: kathryn_matthews@fws.gov
Web: <http://www.fws.gov/raleigh/>



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

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
(727) 824-5317; FAX (727) 824-5300
<http://sero.nmfs.noaa.gov/>

June 14, 2012

F/SER4: RS/pw

(Sent via electronic mail)

Jennifer Culbertson, Ph. D
Bureau of Ocean Energy Management
Division of Environmental Assessment
381 Elden Street
Herndon, VA 20170-4817

Dear Dr. Culbertson:

NOAA's National Marine Fisheries Service (NMFS) reviewed the essential fish habitat (EFH) assessment, dated March 2012, submitted by the Bureau of Ocean Energy Management (BOEM) for the nourishment of approximately 7.1 miles of oceanfront within the Towns of Emerald Isle and Pine Knoll Shores, Carteret County, North Carolina, with approximately 1 million cubic yards of sand obtained from 197 acres of the northeastern corner of the Morehead City Ocean Dredged Material Disposal Site (ODMDS), which is about 6900 acres and 3 miles south of Beaufort Inlet. These beaches were impacted by Hurricane Irene, and the Federal Emergency Management Agency has confirmed that approximately 1.3 million cubic yards of sand was lost from the top of the dune out to a depth of -12 feet. Because BOEM's role in this project is limited to authorizing mining sand from the Morehead City ODMDS, NMFS' current review is limited to BOEM's portion of the overall project and does not include placing sand along the beach, which would be done under an authorization from the U.S. Army Corps of Engineers (USCAE) and require a separate EFH consultation (USACE initiated this coordination on May 31, 2012 under public notice SAW-2012-00026). BOEM's initial determination is the proposed use of the Morehead City ODMDS would not adversely impact EFH or associated fisheries managed by the South Atlantic Fishery Management Council, Mid-Atlantic Fishery Management Council, or NMFS. As the nation's federal trustee for the conservation and management of marine, estuarine, and diadromous fishery resources, the following comments and recommendations are provided pursuant to the authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

The EFH assessment adequately describes EFH and federally managed fishery species in the area of the Morehead City ODMDS. This ODMDS is currently used by the USACE and permitted by the Environmental Protection Agency for dredged material from Beaufort Inlet and Morehead City Harbor channel reaches. A hopper dredge would likely be used to mine the sand. The dredging would create shallow furrows approximately two to five feet deep, and the furrows would be oriented in longitudinal patterns along the seabed. When loaded, the dredge would then travel to a temporary, offshore mooring and the sand pumped to the beach via a submerged pipeline.

EFH at the Morehead City ODMDS is marine, unvegetated, sandy bottom. The EFH assessment notes dredging within the Morehead City ODMDS would significantly reduce the abundance of infauna fed



upon by fishery species and their prey; BOEM expects this reduction to last no more than one to three years. To minimize the severity of this impact, BOEM would require dredge contractors to leave undisturbed space between the dredge cuts to allow the relatively intact benthic communities between the furrows to be a source of colonists to adjacent disturbed areas, thereby hastening recovery of the infaunal community. Cumulatively, the area between the dredge cuts is expected to be 15 to 20 percent of the 197-acre mining area. NMFS agrees with this approach to minimizing impacts to the infaunal community, however we know of no cases where it has been studied.

Based on the information provided, NMFS concludes the project would not adversely impact EFH and no EFH conservation recommendations are provided. NMFS may provide EFH conservation recommendations in the future based on new information or changes in the project design that show adverse impacts would occur to EFH or federally managed fishery species. When available, NMFS requests a copy of BOEM's authorization of the mining within the Morehead City ODMDS and the post-dredging monitoring data collected to document the orientation and distance between dredge cuts.

Finally, in accordance with section 7 of the Endangered Species Act of 1973, as amended, it is the responsibility of the lead federal agency to review and identify any proposed activity that may affect endangered or threatened species and their habitat. Determinations involving species under NMFS jurisdiction should be reported to 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 Sechler at our Beaufort Field Office, 101 Pivers Island Road, Beaufort, North Carolina 28516-9722, or at (252) 728-5090.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:

BOEM, Jennifer.Culbertson@boem.gov
COE, David.L.Timpy@usace.army.mil
COE, Christine.W.Wicker@usace.army.mil
USFWS, Pete_Benjamin@fws.gov
NCDCM, Doug.Huggett@ncmail.net
EPA, Fox.Rebecca@epa.gov
SAFMC, Roger.Pugliese@safmc.net
F/SER4, David.Dale@noaa.gov
F/SER47, Ron.Sechler@noaa.gov



United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

Mr. Peter B. Sandbeck
State Historic Preservation Office
North Carolina Department of Cultural Resources
109 East Jones Street
Raleigh, North Carolina 27601

MAR 27 2012

Dear Mr. Sandbeck:

The Bureau of Ocean Energy Management (BOEM) received a request dated July 8, 2011 for a negotiated agreement to utilize approximately 1,000,000 cubic yards of beach compatible sand from the Morehead City Offshore Dredged Material Disposal Site (ODMDS) located in the Federal Outer Continental Shelf (OCS) approximately 3 nautical miles (nm) off the coast of North Carolina. The sand will be utilized to restore beaches along 7.1 miles of shoreline that were significantly impacted by Hurricane Irene. Sand from off-shore borrow areas, shall be dredged via hopper dredge, transported to a pump out area, and pumped to shore via pipeline where land-based equipment such as bulldozers will then shape the beach fill.

BOEM and the U.S. Army Corps of Engineers (USACE) are working collaboratively to ensure effective implementation of the required National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA). BOEM has determined that the proposed action, dredging activities associated with the ODMDS, is an undertaking pursuant to Section 106 of the NHPA. BOEM's responsibilities under the NHPA are for the ODMDS site only; the USACE will be responsible for NHPA coordination with the SHPO for the rehandling, pumpout, and placement areas in state waters.

BOEM considers the area of potential effect (APE) to consist of the Morehead City ODMDS area (see attached map), which is a U.S. Environmental Protection Agency (USEPA) designated dredged material disposal site. The site is utilized by the USACE as a disposal area for material dredged during maintenance of the Morehead City Harbor navigation channels. Disposal is limited to dredged materials that have been evaluated and approved in accordance with USEPA Ocean Dumping Regulations and Criteria (40 CFR 227). The ODMDS occupies an area of approximately eight square nautical miles (nm) offshore of eastern Bogue Banks. The inner boundary of the ODMDS is just over three nm from shore, and the outer boundary is approximately 11 nm from shore. Depths range from approximately -31 to -55 feet mean low water. Sand from the ODMDS has been used during previous renourishment projects on Bogue Banks, including the 2004 Post-Isabel and the 2007 Post-Ophelia sand replenishment projects that placed sand on or adjacent the proposed Project beaches. This project does not propose to dredge in excess of the original bottom contour of the ODMDS.

While it is unlikely that significant submerged cultural resources would be contained within the previously dredged material of the ODMDS, Moffat and Nichol Engineers contracted with Mid-Atlantic Technology and Environmental Research, Inc. to conduct an archaeological remote sensing survey in the Morehead City ODMDS dated September 8, 2011. The conclusions of the report are as follows:

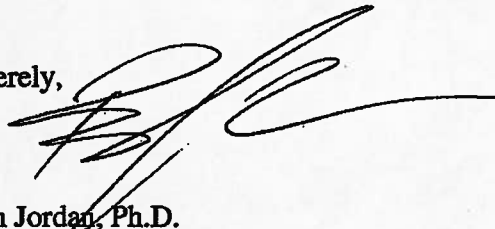
All of the targets identified during this project were found to be associated with modern debris that is either related to the present day Ocean Dredge Material Disposal Site or past artificial reef systems such as the tire reefs created in the 1970s.

Given the nature of re-deposited dredge material, the results of the 2011 archaeological survey indicating that no historic properties are present, and the fact that no original seafloor under the disposal site will be disturbed, BOEM has reached a determination of No Historic Properties Affected, pursuant to 36 CFR 800.4(d)(1). BOEM invites comments regarding BOEM's finding and any questions that this undertaking may raise. Should you have any questions about this undertaking, you may contact me at (703) 787-1748 or Brian.Jordan@BOEM.gov. Written correspondence may be sent to the following address:

Bureau of Ocean Energy Management
Division of Environmental Assessment, HM 3107
381 Elden Street
Herndon, VA 20170

Thank you in advance for your timely response and cooperation. I look forward to receiving your response within 30 days of receipt of this letter in accordance with 36 CFR 800.3(c)(4).

Sincerely,



Brian Jordan, Ph.D.
Federal Preservation Officer
Headquarters Archaeologist

Attachment

cc (with attachment):

Mr. David Timpy
U.S. Army Corps of Engineers
Wilmington District
Regulatory Division
69 Darlington Avenue
Wilmington, North Carolina 28403

Mr. Charlie Broadwater
Bureau of Ocean Energy Management, Leasing Division

Mr. Layton Bedsole
Dial Cordy and Associates

Mr. Gregory Rudolph
Carteret County Shore Protection

Attachments (1)

PROJECT 1122 CANTON COUNTY, GEORGIA
 EMERALD LAKE & PINE KNOLL WOODS
 RECREATION DEVELOPMENT PROJECT
 41 RICK, WOODS RD
 MARIETTA, GA 30067

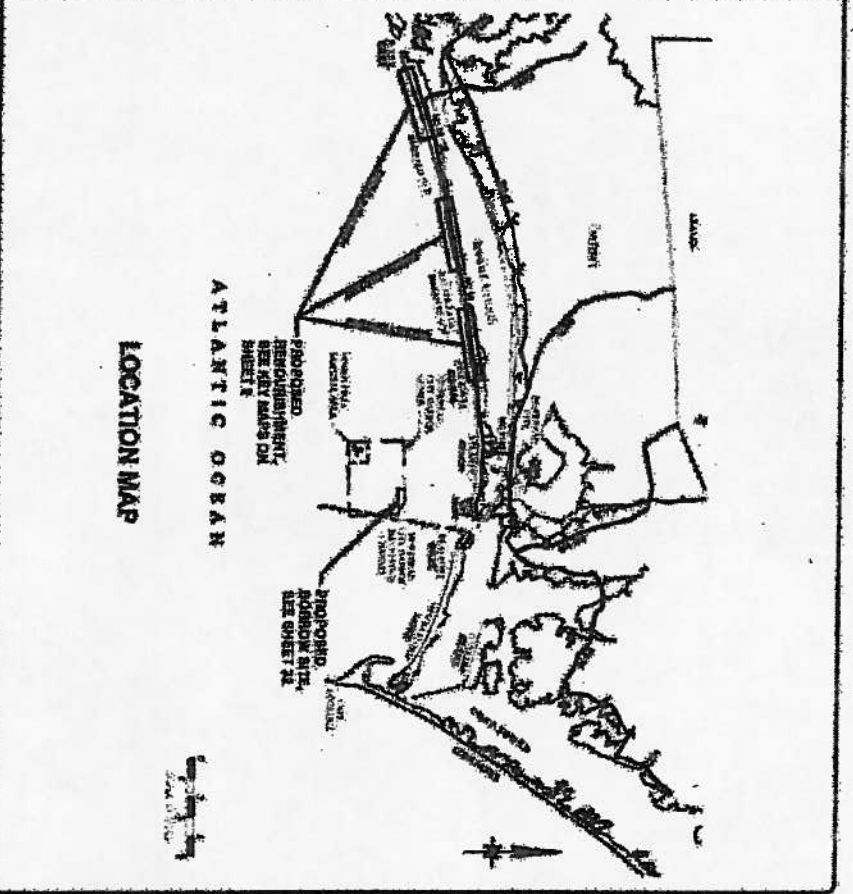
PROJECT 1122 CANTON COUNTY, NORTH CAROLINA
 41 RICK, WOODS RD
 MARIETTA, GA 30067

PROJECT 1122 CANTON COUNTY, NORTH CAROLINA
 41 RICK, WOODS RD
 MARIETTA, GA 30067

PROJECT 1122 CANTON COUNTY, NORTH CAROLINA
 41 RICK, WOODS RD
 MARIETTA, GA 30067



VICINITY MAP



LOCATION MAP

Permit Class
NEW

Permit Number
86-12

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

Excavation and/or filling pursuant to NCGS 113-229

Issued to Town of Emerald Isle and Town of Pine Knoll Shores, 7500 Emerald Drive, Emerald Isle, NC 28594

Authorizing development in Carteret Counties at Atlantic Ocean, at Emerald Isle West and East and Pine Knoll Shores, as requested in the permittee's application dated 3/9/12, attached AEC Hazard Notice dated 3/28/12, and attached workplan drawings (10), all dated February 2012

This permit, issued on July 26, 2012, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

- 1) In order to protect threatened and endangered species and to minimize adverse impacts to offshore, nearshore, intertidal and beach resources, no excavation or beach nourishment activities shall occur from April 1 to November 15 of any year without prior approval from the Division of Coastal Management in consultation with the Division of Marine Fisheries, the North Carolina Wildlife Resources Commission, and the US Army Corps of Engineers.

Excavation

- 2) All excavation shall take place entirely within the areas indicated on the attached workplan drawings.

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

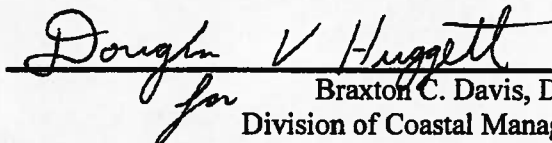
Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

December 31, 2015

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.


for Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

Signature of Permittee

ADDITIONAL CONDITIONS

- 3) Excavation shall not exceed -52' NAVD (50' depth of excavation with a 2' overdredge allowance).
- 4) Excavation shall be accomplished by a hopper dredge. Use of any other method of excavation shall require modification of this permit.

Beach Nourishment

- 5) This permit authorizes beach nourishment activities to be carried out one (1) time along the entire reach of the requested project area. Any request to carry out additional activities within an area where nourishment activities have been completed under this permit shall require a modification of this permit.
- 6) Prior to the initiation of beach nourishment activity along each section of beach, the existing mean high water line shall be surveyed and a copy provided to the Division of Coastal Management.

NOTE: The permittee is advised that the State of North Carolina claims title to most currently submerged lands and future lands that are raised above the Mean High Water level as a result of this project.

- 7) Prior to the initiation of any beach nourishment activity above the mean high water contour line within the limits of the permittee's jurisdiction, easements or similar legal instruments shall be obtained from all affected property owners.
- 8) The seaward nourishment limit shall be conducted in accordance with the attached work plats labeled figure 6, figure 8, and figure 10.
- 9) Temporary dikes shall be used to retain and direct flow of material parallel to the shoreline to minimize surf zone turbidities. The temporary dikes shall be removed and the beach graded in accordance with approved profiles upon completion of pumping activities in that particular section of beach.
- 10) Should the dredging operations encounter sand deemed non-compatible with 15A NCAC 07H .0312 (Technical Standards for Beach Fill Projects), the dredge operator shall immediately cease operation and contact the Division of Coastal Management. Dredge operations shall resume only after resolution of the issue of sand compatibility.
- 11) In order to prevent leakage, dredge pipes shall be routinely inspected. If leakage is found and repairs cannot be made immediately, pumping of material shall stop until such leaks are fixed.
- 12) Once a section is complete, piping and heavy equipment shall be removed or shifted to a new section and the area graded and dressed to final approved slopes.
- 13) Land-based equipment necessary for beach nourishment work shall be brought to the site through existing accesses. Should the work result in any damage to existing accesses, the accesses shall be restored to pre-project conditions immediately upon project completion in that specific area.

NOTE: The permittee is advised that any new access sites would require a modification of this permit.

ADDITIONAL CONDITIONS

- 14) Where oceanfront development exists at elevations nearly equal to that of the native beach, a low protective dune shall be pushed up along the backbeach to prevent slurry from draining towards the development.
- 15) Dune disturbance shall be kept to a minimum. Any alteration of existing dunes shall be coordinated with the Division of Coastal Management as well as the appropriate property owner(s). All disturbed areas shall be restored to original contours and configuration with reference to the surveyed normal high water line and shall be revegetated immediately following project completion in that section of beach.

Mitigation and Monitoring

- 16) Unless specifically altered herein, the permittee shall implement all mitigation and monitoring commitments made in the permit application, and in the "proposed conservation measures" submitted with the permit application.
- 17) Immediately after completion of the beach nourishment project, and prior to the next three sea turtle nesting seasons, beach compaction shall be monitored and tilling shall be conducted as deemed necessary by the Division of Coastal Management, in coordination with appropriate review agencies.
- 18) Immediately after completion of any phase of the beach nourishment project, and prior to the next three nesting seasons, monitoring shall be conducted to determine if escarpments are present that would adversely affect nesting sea turtles and/or public access. If such escarpments are present, the permittee shall coordinate with the Division of Coastal Management for necessary remediation.
- 19) Routine beach surveillance will be conducted during construction to prevent unintentional damage to sea turtles and their nesting areas. If a nest or a turtle crawl is identified in the project area, the permittee will immediately stop all beach disposal activities and contact the Wilmington District to determine appropriate action.
- 20) In the event an incidental sea turtle take occurs by a dredge, the permittee shall stop all dredging operations and contact the US Army Corps of Engineers for consultation to determine the appropriate action, including the immediate implementation of sea turtle conservation measures that must be taken.

Cultural Resource Protection

- 21) There exists the possibility that the authorized activities may unearth a beached shipwreck or other archaeological resources. Should such a finding occur, the permittee shall immediately move to another area. The NCDCCR Underwater Archaeology Branch shall be contacted at (910) 458-9042 to determine appropriate response procedures.

NOTE: Prior to any excavation or beach nourishment activities, the permittee is encouraged to contact the NCDCCR Underwater Archaeology Branch at (910) 458-9042 to determine the location of any significant historical resources located within the project area to assure avoidance and incidental impacts during operations.

ADDITIONAL CONDITIONS

US Army Corps of Engineers Requirements

- 22) Dredging activities authorized by this permit shall not in any way interfere with those operations of the Corps civil works dredging and navigation projects. Specifically, there shall not be any interference with the Corps maintenance dredging activities in the vicinity of the project.
- 23) The permittee will provide two copies of the as-built surveys of the ODMDS dredged area during this project and beach fill areas within 30 days of project completion to the Wilmington Regulatory Field Office.
- 24) The Outer Continental Shelf Lands Act (OCSLA) (43 U.S.C. 1337(k)(2)) grants the sole legal authority to BOEM for the issuance of negotiated noncompetitive leases for the use of OCS sand and gravel. The permittee shall obtain written authorization from the Bureau of Ocean Energy Management (BOEM) for use of sand from the Morehead City Offshore Dredge Material Disposal Site, located on the Outer Continental Shelf (OCS) prior to construction of this project. This permit does not alleviate the need for the permittee to abide by any terms and conditions required through the BOEM lease issuance that are related to any operations and activities on the OCS.
- 25) The permittee shall ensure that an inspector is present during all beach disposal activities. The inspector shall immediately report to the US Army Corps of Engineers should any potentially incompatible material be placed on the beach. During dredging operations, material placed on the beach shall be inspected daily to ensure compatibility. During dredging operations, a sediment analysis of the material placed on the beach, including shell content (calcium carbonate) percentage shall be submitted to the Wilmington District, Regulatory Division, Wilmington Regulatory Field Office, on a weekly basis until completion of the project. If during the sampling process non-beach compatible material, including large amounts of shell, is or has been placed on the beach all work shall stop immediately and the Corps be notified by the permittee and/or its contractors to determine the appropriate plan of action.

General

- 26) This permit shall not be assigned, transferred, sold, or otherwise disposed of to a third party without the written approval of the Division of Coastal Management.
- 27) The permittee and his contractor shall schedule a pre-construction conference with the Division of Coastal Management and the US Army Corps of Engineers prior to the initiation of any activities authorized by this permit.
- 28) No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work.

NOTE: The permittee's contractor is advised to contact the U.S. Coast Guard at (910) 815-4895, ext. 108 to discuss operations and appropriate lighting, markers, etc. for all dredge equipment.

- 29) The permittee and/or his contractor shall provide for proper storage and handling of all oils, chemicals, hydraulic fluids, etc., necessary to carry out the project.

ADDITIONAL CONDITIONS

- 30) The N.C. Division of Water Quality has authorized the proposed project under General Water Quality Certification No. 3900 (DWQ Project No. 20120512), which was issued on 7/9/12. Any violation of the Water Quality Certification shall also be considered a violation of this CAMA Permit.
- 31) No sand shall be placed on any sand bags that have been determined by the Division of Coastal Management to be subject to removal under 15A NCAC 07H .0308(a)(2). In order to ensure compliance with this condition, the Division of Coastal Management shall be contacted at (252) 808-2808 prior to project initiation so that Division staff may meet on site with the permittee and/or contractor.

NOTE: The permittee is advised that the Division of Coastal Management shall regulate the removal of existing sandbags and the placement of new sandbags in accordance with 15A NCAC 07H .0308(a)(2), or in accordance with any variances granted by the N.C. Coastal Resources Commission.

NOTE: This permit does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

NOTE: Future nourishment activities may require a modification of this permit. The permittee shall contact a representative of the Division at (252) 808-2808 prior to the commencement of any such activity for this determination.

NOTE: The U.S. Army Corps of Engineers authorized the proposed project under COE Action Id. No. SAW 2012-00026, which was issued on 7/17/12.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

September 10, 2012

Regulatory Division

Action ID No. SAW-2012-00026
State Permit No. 86-12

Mr. Frank Rush
Town of Emerald Isle
7500 Emerald Drive
Emerald Isle, North Carolina 28594

Mr. Brian Kramer
Town of Pine Knoll Shores
100 Municipal Circle
Pine Knoll Shores, North Carolina 28512

Dear Messers Rush and Kramer:

Reference your application for Department of the Army authorization to restore sand volumes and shoreline elevations lost during Hurricane Irene along the projects approximate 267 acres or 7.1 miles of oceanfront placing up to 1,000,000 (92,000) cubic yards (cy) of beach compatible sand at Emerald Isle, Carteret County, North Carolina.

Your proposal has been reviewed and found to be consistent with the provisions and objectives of the CAMA-Corps Programmatic Permit process for construction activities that receive authorization from the State of North Carolina. Therefore, you may commence construction activity in strict accordance with applicable State authorization and the approved plan. Failure to comply with the State authorization or conditions of the Federal permit could result in civil and/or administrative penalties.

If any change in your work is required because of unforeseen or altered conditions or for any other reason, plans revised to show the change must be sent promptly to this office and the North Carolina Division of Coastal Management prior to performing any such change or alteration. Such action is necessary as revised plans must be reviewed and the authorization modified. Your Department of the Army permit will expire December 31, 2015.

Questions or comments may be addressed to Ms. Christy Wicker, Wilmington Field Office, Regulatory Branch, telephone (910) 251-4637.

Sincerely,



Christy Wicker
Regulatory Specialist

Enclosures

Copy Furnished (with enclosures):

Mr. Layton Bedsole
Dial Cordy and Associates Inc.
201 N. Front Street, Suite 307
Wilmington, North Carolina 28401

Copies Furnished (without enclosures):

Ms. Karen Higgins
NCDENR-Webscape Unit
1650 Mail Service Center
Raleigh, North Carolina 27699-1650

Jeffrey Garnett
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, Georgia 30303-8960

Mr. Doug Huggett
Division of Coastal Management
North Carolina Department of
Environment and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Mr. Pace Wilber
NMFS, Habitat Conservation Division
219 Fort Johnson Road
Charleston, South Carolina 29412-9110

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Joanne Steenhuis
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North Carolina Department of
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127 Cardinal Drive Extension
Wilmington, North Carolina 28405

Mr. Doug Huggett
Morehead City Regional Office
North Carolina Division of Coastal
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400 Commerce Avenue
Morehead City, North Carolina 28557-3421