



Record of Decision

**Use of Outer Continental Shelf Sand Resources in the
Bogue Banks Master Beach Nourishment Plan,
Carteret County, North Carolina**

February 2019

**U.S. Department of the Interior
Bureau of Ocean Energy Management**

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2-11-2019
Date

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I. Introduction

Carteret County, North Carolina (County) has requested that the Bureau of Ocean Energy Management (BOEM) authorize the use of up to 2,000,000 cubic yards (CY) of Outer Continental Shelf (OCS) sand resources in the initial construction provided for in the Bogue Banks Master Beach Nourishment Plan (MBNP). The project proponent proposes a long-term (50-year) plan to manage approximately 25 miles of coastline of Bogue Banks, an Atlantic-facing barrier island in Carteret County, North Carolina.

This plan proposes the use of multiple sources of sand, one of which is a borrow area under BOEM's jurisdiction, the Current Ocean Dredged Material Disposal Site (ODMDS). The proposed action considered in this Record of Decision (ROD) is BOEM's authorization of the use of OCS sand resources in the MBNP. Nourishment would occur in three-year intervals, with placement volumes ranging from approximately 200,000 CY to 1.7 million CY per cycle. The 50-year project may use up to a total of 6.8 million CY from the Current ODMDS over the project lifecycle. In addition to scheduled maintenance events, there is a possibility that a storm event would trigger an unplanned nourishment cycle.

The "Final Environmental Impact Statement (EIS), Bogue Banks Master Beach Nourishment Plan" was prepared in 2018 by the U.S. Army Corps of Engineers (USACE) and a third-party contractor, Dial Cordy and Associates, Inc. Pursuant to 40 CFR 1506.3 and 43 CFR 46.120, BOEM independently reviewed and adopted the Final EIS to comply with the requirements of NEPA and the Council on Environmental Quality (CEQ) regulations. BOEM served as a cooperating agency during the development and review of the document. This document was made available for public review, and BOEM has determined that it does not need to be recirculated. In addition to analyzing BOEM's action of entering a negotiated agreement under 43 U.S.C. § 1337(k)(2), the Final EIS analyzed the USACE's action of permitting the Bogue Banks MBNP under Section 10 of the River and Harbors Act (RHA) and Section 404 of the Clean Water Act (CWA). The Final EIS evaluates various alternatives that meet the project need of a long-term plan for shoreline stabilization. In accordance with 40 CFR 1502.9 and 43 CFR 46.120, BOEM has reviewed all NEPA documents and independently determined that existing environmental analyses adequately assess impacts of the proposed action and alternatives.

The USACE issued a Record of Decision (ROD) in October 2018 (available [here](#)) and adopted all mitigation and monitoring components identified in the Final EIS. The USACE ROD also includes detailed responses to comments received after the Final EIS. None of the comments were explicitly related to this specific BOEM action or its impacts. In this ROD, BOEM documents the bureau's consideration and decision to enter into a negotiated agreement. This decision applies to the 2018 request to use OCS sand for the Bogue Banks Project in 2018-2019. BOEM anticipates that the Final EIS will serve to inform its decisions on future nourishment cycles, provided BOEM determines it is still adequate and supplementation is not warranted.

II. Purpose and Need for the Proposed Action

The purpose and need for the Bogue Banks MBNP is to:

- Provide long-term shoreline stabilization along a 25-mile oceanfront and inlet shorelines
- Protect residential and commercial structures, as well as tourism infrastructure
- Manage and improve natural resources and beaches
- Maintain navigation conditions, particularly through inlets
- Consolidate regional resources and provide consistent funding to the project

BOEM's connected action responds to the County's request to use OCS sand under the authority granted to the Department of the Interior by the Outer Continental Shelf Lands Act (OCSLA). BOEM's issuance of an agreement would serve the purpose identified in the Final EIS by enabling Carteret County to provide storm damage protection to structures that would otherwise be threatened by chronic shoreline retreat and storm-induced beach erosion and to maintain an area suitable for recreation and wildlife habitat by performing periodic beach nourishment along the 25-mile project reach.

III. Authority

The legal authority for the issuance of negotiated noncompetitive agreements for OCS sand and gravel is provided by OCSLA (43 U.S.C. § 1337(k)(2)). In 1994, OCSLA was amended to allow BOEM to convey, on a noncompetitive basis, the rights to OCS sand, gravel, or shell resources for use in a program for shore protection, beach restoration, or coastal wetlands restoration undertaken by a Federal, state, or local government agency (43 U.S.C. § 1337(k)(2)(A)(i)).

IV. Project Location and Setting

Bogue Banks is an approximately 25-mile-long barrier island located entirely within Carteret County on North Carolina's central coast. The island faces the Atlantic Ocean to the south and is bound to the east by Beaufort Inlet and to the west by Bogue Inlet. Fort Macon State Park occupies the easternmost 1.4-mile portion of the island. Political subdivisions on the remainder of the island include from east to west: Atlantic Beach; Pine Knoll Shores; Indian Beach; the unincorporated community of Salter Path; and Emerald Isle. The offshore project area encompasses state waters out to the 3 nautical mile (nm) limit as well as adjoining federal waters and the underlying OCS out to a depth of approximately -50 to -60 feet (ft).

V. Alternatives Including the Proposed Action

The Corps' 2018 Final EIS considered a range of alternatives to implement the Bogue Banks MBNP from the Corps' standpoint. The alternatives included: 1) no action (no long term management plan, or status quo), 2) relocation and abandonment of structures, rather than beach nourishment, 3) nourishment only, 4) nourishment and non-structural Bogue Inlet management, and 5) nourishment and structural Bogue Inlet management. Of these, Alternative 2 analyzes the impact of BOEM not issuing a lease (making it BOEM's No Action Alternative). The other alternatives (Action Alternatives) involve BOEM entering into a use agreement. Alternative 1, described as a "no action" in the Final EIS, is analyzed as the status quo, is the Corps' current management approach. In this alternative, BOEM would enter into a use agreement for the Current ODMDS, though it would be as-needed, rather than according to a long-term plan.

Alternatives 3, 4, and 5 consider implementing different versions of a 50-year management plan. The preferred alternative in the Final EIS included nourishment and non-structural management (i.e., Alternative 4). This alternative includes sand from the Current ODMDS, which is why the County has submitted a request to BOEM. BOEM's authorization of a lease or use agreement would be required for Alternatives 1, 3, 4 and 5. Accordingly, from BOEM's perspective, the alternatives fall into two categories: (1) Action Alternatives (e.g., entering into a negotiated agreement) and (2) No Action.

Action Alternatives – Enter into a Negotiated Agreement

BOEM would negotiate an agreement with Carteret County that would allow use of up to 2,000,000 CY of OCS sand from the Current ODMDS for placement on Bogue Banks, as detailed in the Final EIS. The agreement will be in the form of a 2-party Lease Agreement between Carteret County and BOEM. As previously described, the County's proposed action in the 2018 Final EIS evaluates a 50-year project plan, consisting of nourishment events at 3-year intervals with variable sand volumes for each event. Under Alternatives 3, 4, and 5, the Current ODMDS in BOEM's jurisdiction would be used for the same frequency and volume of sand. These alternatives differ in the proposed use of other sand sources and structures. BOEM may also enter into a negotiated agreement that is not associated with a long-term management plan, as analyzed in Alternative 1 (the "no action," or status quo). Accordingly, for BOEM's decision on this particular request for a lease from Carteret County, Alternatives 3, 4, and 5 have essentially the same impacts as Alternative 1. However, Alternative 1 differs from Alternatives 3, 4, and 5 over the long term since these latter alternatives would lead to more consistent management and less coastal erosion. The County has committed to implementing the mitigation measures and monitoring requirements identified in this 2018 ROD. BOEM will also require implementation of the mitigation measures, monitoring, and reporting requirements identified in this ROD that are under its jurisdiction (i.e., beyond 3 nm).

No Action Alternative – Deny Request for Use of OCS Sand

Under BOEM's No Action alternative (i.e., Alternative 2 of the Final EIS), an agreement for use of OCS sand would not be negotiated. Without this agreement, the County would be unable to use OCS sand from the Current ODMDS borrow area, and the nourishment of Bogue Banks would be jeopardized. If the Bogue Banks MBNP is not or only partially constructed, the barrier beach can be expected to continue to erode and coastal infrastructure would be increasingly vulnerable to storm damage. Negative impacts to tourism, the local economy, and nesting animals would be expected because of a narrowing beach; without any nourishment in the case of Alternative 2, relocation of structures on the beach or their abandonment may be necessary.

VI. Environmental Consequences

The 2018 Final EIS provides a detailed summary of potential environmental effects that could result from the different alternatives.

Action Alternatives

The beach fill would have a beneficial effect in terms of reducing erosion along Bogue Banks. Restoration of the beaches and dunes would reduce storm damages, increase recreational opportunity, and restore habitat for nesting sea turtles and shorebirds.

A short-term increase in turbidity during the placement of sediment would have a short-term effect on beach and surf zone fauna. Air quality and noise effects would be highly localized and short-term. Upland noise levels would be monitored to ensure they remain below accepted levels. Temporary noise disturbances from construction machinery could adversely affect beach nesting and foraging birds. There also could be adverse effects from a short-term reduction in available food sources during and after the placement of sand on the shoreline. Over the long-term, there would be newly created sea turtle and shorebird nesting habitat.

Dredging within the Current ODMDS would change seafloor topography and could adversely affect benthic communities, fish habitat, and seabird foraging areas. However, impacts would not be significant because this is a previously disturbed area, with an abundance of shoals or comparable habitat on a regional scale. Additionally, specific mitigations for dredging related activities would be implemented to minimize biological and physical impacts and allow for rapid recruitment and quick recovery of the benthic invertebrate community. No dredging is expected to occur in the immediate vicinity of sensitive hardbottom habitat; a buffer would be established around any such feature if detected to minimize or avoid impacts from other operations. Adverse effects are expected to occur to bottom-dwelling communities within the dredging area; however, a rapid recovery would be expected after the project is completed.

Short-term disturbance to the recreational use of beach area would occur, but longer-term improvements to recreation outweigh that disturbance. There could be some temporary minor adverse effects on commercial and recreational fishing due to dredge entrainment, elevated turbidity levels, sedimentation, and disruption of fish and benthos. However, the scale of impacts would be short-term and recoverable.

Potential adverse impacts on marine mammals may occur due to physical disturbance of habitat and increased noise from vessels. With the implementation of endangered species observers, avoidance requirements, and speed restrictions, any adverse impacts to protected marine mammals would be minimized to the extent possible. Marine mammals may show some avoidance behavior due to underwater noise. Marine mammal observers would be onboard the dredge ship to ensure North Atlantic right whales are not present within 500 yards of the dredge to avoid injury from noise or vessel strike.

Adverse impacts, including sublethal and lethal injury, to protected sea turtles and Atlantic sturgeon could occur during dredging. The U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) have concluded that the Proposed Action would not jeopardize the continued existence of sea turtle species at this time. Loggerhead critical habitat in water is not likely to be adversely affected, but on land, critical habitat is likely to be adversely affected. Effects would be mitigated using draghead deflectors to minimize the risk of dredge-turtle interactions, onboard endangered species observers to document activities, and coastal monitoring of nesting activities. NMFS concluded that the proposed action does not jeopardize the continued existence of Atlantic sturgeon, assuming mitigation measures are applied.

Temporary adverse impacts on shorebirds (including temporary sublethal effects to piping plovers and red knots, both threatened), seabirds, and migratory birds known to breed, nest, and forage along Bogue Banks are possible. To minimize impacts, the County would avoid the majority of the shorebird and colonial nesting season in NC and monitor nesting during construction activities. Piping plover critical habitat is likely to be adversely affected during project activities. Over the long term, however, an increase in potential habitat is possible because of the increase in beach area.

Archaeological surveys relevant to the proposed action were previously conducted to clear both state and OCS borrow areas, including the Current ODMDS. Six targets in the Current ODMDS were found to be associated with modern dredged material disposal activity or 1970s artificial reef activity. The targets are not considered as a historic property. Dredging for the Bogue Banks MBNP would target existing dredged material mounds and not extend below the original seabed; therefore, impacts to cultural resources are not expected.

No Action

Under the No Action alternative (i.e., Alternative 2), BOEM would not authorize use of OCS sands from the Current ODMDS. Carteret County could choose to increase their planned use of other sand sources (e.g., state borrow areas, navigation channels, and upland sources) for beach fill. The beach area effects are comparable to those described above. Effects associated with transporting upland sand to the beach area, such as increased traffic, air emissions, and noise levels from heavy trucks, would be greater. If the County chose another borrow area for the beach fill, including any other distant area on the OCS not already considered, the area would need to be thoroughly reviewed and analyzed for environmental impacts. The County may also choose not to pursue a long-term management plan and minimize efforts to prevent erosion on Bogue Banks (as described in Alternative 2).

Without construction, the environmental impacts of dredging on the Current ODMDS would be eliminated. Other disturbance effects could occur in the vicinity of alternative upland or state borrow areas, or navigation channels. Shorter-term adverse and longer-term beneficial impacts along the shoreline from beach fill could be reduced or eliminated. The Bogue Banks shoreline would likely continue to retreat, resulting in a notable decrease in storm damage protection, the continued deterioration of the quality of bird and turtles nesting habitat, loss of recreational beaches, as well as potential structural damage or destruction.

VII. Consultation and Coordination

The proposed project was fully coordinated with the U.S. FWS, NMFS, U.S. Environmental Protection Agency, North Carolina Division of Coastal Management (NCDCM), and other state agencies. In initiating consultations, USACE served as lead agency for proposed activities within 3 nm, while BOEM served as the lead agency for proposed activities outside of 3 nm. All resource agencies were notified of USACE and BOEM's roles.

All nondiscretionary mitigation under the terms of the ESA Section 7 Biological Opinions (BOs) and associated incidental take statements issued by NMFS and FWS will be implemented. The ESA Section 7 consultation with NMFS was completed under Consultation Number SER-2017-

18882. The FWS applied the State Programmatic Biological Opinion (SPBO) to the project. The USACE and BOEM consulted with NMFS on Essential Fish Habitat (EFH). NMFS did not provide any EFH conservation recommendations. Pursuant to Section 106 of the National Historic Preservation Act (NHPA), cultural resources surveys were conducted. No significant or potentially significant cultural resources were identified in the Current ODMDS borrow area, so the USACE and BOEM made a no effect determination. The NC State Historic Preservation Officer reviewed this conclusion and agreed that they were not aware of any historic resources that may be affected by the project.

Additionally, USACE and the County completed all required consultation/coordination with the State of North Carolina, which included a coastal zone Consistency Determination and Water Quality Certification. The County addressed most state-level regulations through a Coastal Area Management Act (CAMA) permit (No. 91-18) for this project, which expires 31 December 2021. This included a determination that the proposed work is consistent with the State's Coastal Management Program. A CWA Section 404 permit was issued by USACE, while Section 401 permits were issued by the State (Certification No. 20180944, expiring with the 404 or CAMA Permit).

VIII. Mitigation, Monitoring, and Reporting

BOEM is adopting through this ROD, as identified below, all means deemed practicable by USACE and BOEM to avoid, minimize, reduce, or eliminate adverse environmental effects that could result from the proposed activities. These mitigation, monitoring, and reporting requirements were developed through consultation and coordination with Federal and state governmental agencies, and on the basis of BOEM's experience with similar beach nourishment projects.

The first section, below, identifies the mitigation, monitoring, and reporting requirements for the activities specifically authorized by BOEM. These were not specifically identified in the EIS. They will be adopted as terms of the negotiated agreement. The second part summarizes mitigation and monitoring measures that were identified in the EIS. Not all of these measures are BOEM-enforceable requirements, but all of them are identified here because they are relevant in addressing impacts to the whole project. The USACE will be responsible for implementing and enforcing all other mitigation and monitoring commitments as adopted in their ROD.

BOEM Requirements

BOEM is responsible for authorizing activity that will occur outside 3 nm, and BOEM's negotiated agreement with the County will indicate that the County is responsible for ensuring that activities comply with applicable environmental laws outside of 3 nm. Within 3 nm, USACE is the lead Federal agency. The County will instruct the contractor(s) to implement the mitigation terms, conditions, and measures required by the USFWS, NMFS, and NCDRCM pursuant to applicable Federal and state laws and regulations. The terms and conditions, as well as notification and reporting requirements, will be incorporated into the negotiated agreement.

Use of the Current ODMDS Borrow Area

BOEM will require USACE to continuously record dredge location, draghead depth, and dredge activity data and transmit the data to BOEM on a biweekly basis. USACE will provide the dredge track lines and draghead depths in a format so that BOEM can ensure the activity is limited to the approved area and dredging cut depths. The County will be required to undertake pre- and post- bathymetric surveys to document the nature of seafloor changes in the Current ODMDS borrow area. BOEM also recommends that the County perform additional bathymetric surveys one year and three years after construction to document morphologic changes within the borrow area.

Based on the best available science, BOEM will require the County to develop a dredging plan designed to minimize adverse effects to the extent practicable and that would incorporate the applicable mitigation and monitoring measures described below. Dredging will occur preferentially in naturally accreting areas and dredging will be avoided in erosional areas of the shoal to the extent practicable. If practicable, dredging will not exceed a cut depth of 2-3 meters. Anchoring, spudding, or other bottom-disturbing activity is otherwise prohibited outside the approved borrow area. The County must immediately notify BOEM if dredging occurs outside of the approved borrow area.

Water Quality

The County will be required to prepare and implement a marine pollution control plan to address and ensure proper treatment of waste and prevent intentional or accidental release of debris offshore.

Cultural Resources

No cultural resources have been identified in or within the immediate vicinity of the borrow area. If an unanticipated discovery of archaeological resources occurs on the OCS, the dredge would immediately halt operations within 305 meters (1,000 ft) of the area of the discovery. The County must report the discovery to BOEM. If investigations determine that the resource is significant, the parties must together determine how best to protect it.

Additional Notification and Reporting

Prior to construction, the County will be required to submit a final construction plan and contract specifications, including design drawings, to BOEM. During construction, the County or their agents, at the reasonable request of BOEM, will allow BOEM or the Bureau of Safety and Environmental Enforcement (BSEE) access at the site of any operation subject to safety and environmental regulations and will provide BOEM or BSEE any requested documents and records that are pertinent to occupational or public health, safety, or environmental protection. The County will notify mariners of construction activities through a Local Notice to Mariners, report all pollution incidents should any accidentally occur, and report findings of ordnance or munitions on the OCS. Upon completion of construction operations, the County will prepare and submit to BOEM a detailed project completion report, describing all phases of construction, including duration, equipment use, and project costs. The completion report will be accompanied by as-built drawings, dredged and placed volume calculations, pre- and post-bathymetric comparison, and all environmental reports.

Mitigation and Monitoring Identified in the EIS

The 2018 Final EIS included a list of mitigation and monitoring measures by resource and phase of construction that the County agreed to undertake. These measures are intended to avoid, minimize, reduce, or otherwise monitor effects to water quality, coastal habitat, essential fish habitat, shorebirds, nesting and in-water sea turtles, marine mammals, and cultural resources. BOEM is not responsible for the implementation or enforcement of mitigation or monitoring requirements for activities in state waters and at the beach placement site. However, the negotiated agreement will include provisions requiring the County to perform all activities on the OCS as they were analyzed in the EIS, consisting of all of the mitigation and monitoring measures described in the EIS that are applicable to activities approved in the agreement. In October 2018, USACE adopted all mitigation and monitoring components identified in the Final EIS in its ROD. For consistency, BOEM recommends the applicant use forms provided by USACE in Appendix C of their ROD for operations and monitoring work for submissions to BOEM required in the agreement. Key mitigation and monitoring components that will apply to activities both on the OCS and within the state are identified below.

- All dredging, placement, and construction would occur within an environmental window (16 November-30 April) to avoid or minimize potential impacts on West Indian manatees, sea turtles, birds, seabeach amaranth, fishes, and benthic invertebrates.
- Construction equipment, storage, and activities would avoid or minimize disturbance of onshore habitat, dunes, and the surf zone.
- Dredges would be required to maintain speeds of ten knots or less during North Atlantic right whale calving season to minimize vessel strike risk.
- Dredging would comply with West Indian manatee guidelines.
- Rigid draghead deflectors would be used on all hopper dredges to minimize the risk of sea turtle and sturgeon entrapment.
- Relocation trawling would be used according to NMFS' BO Terms & Conditions to reduce impacts to sea turtles and sturgeon.
- An endangered species observer would record and report all protected species interactions. Dredging operations would cease if a North Atlantic right whale is observed within 500 yards of the vessel; if in transit, the vessel would reduce speed and maintain a distance of 500 yards.
- At the placement site, sediment would be monitored for compaction and escarpments, with remedial action applied as needed.
- Adaptive management will be incorporated periodically to review and address any unforeseen impacts or circumstances over the life of the project.

Adoption of All Practical Means to Minimize Environmental Harm

BOEM has determined that all practical means have been adopted to avoid or minimize environmental harm from the Proposed Action.

IX. Environmentally Preferable Alternative

BOEM's environmentally preferable alternative is the No Action alternative (alternative 2). Negative environmental impacts would generally be less under the No Action alternative, since

no OCS sand would be used and dredging would not occur on the OCS. Therefore no dredging-related changes to the physical, biological, and cultural resources of the OCS would be expected. However, if the Bogue Banks MBNP is not constructed because of BOEM's decision not to authorize access to OCS sand resources, the infrastructure and coastal environment on Bogue Banks would continue to be at risk from storm damage and coastal erosion. The availability and quality of nesting of the barrier island would likewise be expected to continue to deteriorate. The environmentally preferred alternative would not meet the County's purpose and need, and after consideration of the beneficial and adverse environmental consequences of both alternatives and the available mitigation measures to be implemented under the County's Proposed Action, BOEM has decided that the County's Proposed Action is the preferable option in this ROD.

X. Decision

It is my decision to enter into a negotiated agreement with Carteret County and authorize use of OCS sand in the Bogue Banks MBNP.

BOEM finds that the potential environmental effects of the Proposed Action are generally reversible or recoverable over the long term, because effects will be limited in intensity, localized, and short-lived. Potential longer-term beneficial effects include improved storm damage reduction, improved recreational opportunity, and increased nesting and foraging habitat for protected sea turtles and shorebirds, especially with the sea-turtle friendly beach template and nearshore mitigation plan. Beach restoration using dredged material from the proposed Current ODMDS offshore borrow area would provide an important component of beach-compatible sand in combination with other sources, such as state borrow areas and upland borrow sources. A suite of mitigation and reporting requirements will be incorporated into the negotiated agreement to avoid, minimize, and/or reduce and track any foreseeable adverse impacts.

November 02, 2020 Errata to
BOEM’s February 2019 Record of Decision
Use of Outer Continental Shelf Sand Resource in the
Bogue Banks Master Beach Nourishment Plan,
Carteret County, North Carolina

Page 2, line 16. Substitute “The plan proposes to use multiple sources of sand, including the Current Ocean Dredged Material Disposal Site (ODMDS) and a portion of the Old ODMDS on the OCS” for existing sentence

- 2, — 21. Amend “from the Current ODMDS” to “of OCS sand from the Current and Old ODMDS”
- 3, — 45. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 4, — 3. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 4, — 11. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 4, — 15. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 4, — 32. Replace “OCS sand from the Current ODMDS” with “the OCS portion of the Old ODMDS and Current ODMDS”
- 5, — 14. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 6, — 11. Add “Old ODMDS and” before “Current ODMDS” in the first instance; add “OCS portion of the Old ODMDS and” before “Current ODMDS” in the second instance
- 6, — 19. Add “Old ODMDS or” before “Current ODMDS”
- 6, — 29. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 7, — 5. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 8, — 1. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 8, — 6. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”
- 10, — 21. Add “OCS portion of the Old ODMDS and” before “Current ODMDS”