

FINDING OF NO SIGNIFICANT IMPACT
FOR THE INCREASE IN SAND QUANTITIES
FOR THE USE OF OUTER CONTINENTAL SHELF
SAND RESOURCES FOR
CAMINADA HEADLAND SHORELINE
RESTORATION PROJECT INCREMENT 2, LOUISIANA
BOEM NEGOTIATED AGREEMENT NO. OCS-G 35161

Introduction

Pursuant to the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's (CEQ) regulations implementing NEPA (40 CFR parts 1500-1508), the Louisiana Coastal Protection and Restoration Authority (CPRA), in coordination with the Bureau of Ocean Energy Management (BOEM), prepared a supplemental environmental assessment (SEA) to determine whether authorizing the use of Outer Continental Shelf (OCS) sand from the Ship Shoal sand body in South Pelto Blocks 13 and 14 would have a significant effect on the human environment and whether an environmental impact statement (EIS) should be prepared. The current SEA (Attachment 1) tiers from an earlier environmental assessment (EA) that was prepared for the Caminada Increment 1 project and an earlier site-specific SEA that was prepared for the Increment 2 shoreline extension of the Increment 1 footprint. Pursuant to the U.S. Department of the Interior's (DOI) regulations implementing NEPA (43 CFR part 46), BOEM has independently reviewed the SEA and has determined that the potential impacts of the proposed action have been adequately addressed.

The CPRA, as part of the Increment 2 project, has requested an increase in the authorized dredging volume from 6.1 million cubic yards to 8.8 million cubic yards. BOEM must consider whether new circumstances not previously analyzed or new information not previously analyzed will or may result in significantly different environmental effects (43 CFR § 46.120) before approving the volume increase.

The purpose of BOEM's proposed action is to respond to the request for the use of OCS sand under the authority granted to DOI 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)).

Proposed Action

BOEM's original proposed action was the issuance of a negotiated noncompetitive agreement (NNA) to authorize the use of sand from the Ship Shoal sand body in South Pelto Blocks 13 and 14, located approximately 27 nautical miles (31 miles; 50 kilometers) southwest of the Caminada Headland Beach and Dune Restoration Protection Project's fill area in Jefferson and Lafourche Parishes, Louisiana. That agreement was signed on March 13, 2014.

The original project plans called for approximately 6.1 million cubic yards of sand to be dredged from the Ship Shoal sand body in South Pelto Blocks 13 and 14. The sand would be transported by hopper dredges or scow barges approximately 31 miles (50 kilometers) to nearshore pump-out areas where it would be transported via pipeline to the beach fill area to create approximately 448 acres of beach and dune habitat.

Since the signing of the original negotiated agreement in March 2014, BOEM determined that, based on archaeological diver investigations, a previously identified potential cultural resource (avoidance area) adjacent to the borrow area was not significant and as such no longer needed to be avoided. In an effort to best manage the OCS sediment resources and improve project operations efficiency (decreasing cost and exposure time), the CPRA proposes to modify and expand the borrow area to include the former cultural resource avoidance area. This proposed change in the size of the borrow area will increase from 305 acres to 390 acres with a potential increase in volume of 2.7 million cubic yards.

BOEM's proposed action is the amending of the original March 2014 NNA to authorize the use of additional sand from the Ship Shoal sand body in South Pelto Blocks 13 and 14.

Alternatives to the Proposed Action

The only alternative to BOEM's proposed action is no action. However, the potential impacts resulting from BOEM's no action actually depend on the course of action subsequently pursued by the CPRA, which could include identification of a different offshore or upland sand source. In the CPRA's case, the no action alternative could result in a shortage of borrow material to complete the project and decreased project operations efficiency. The project purpose would not be realized and as such, efforts to reduce continued barrier shoreline and estuarine wetland habitat deterioration, coastal erosion, and the reduction of property damage from storm events would be lessened.

In past environmental analyses for this restoration project, a number of alternatives related to sand sources were considered. The alternatives have narrowed over time due to lack of sufficient volume, inferior sediment quality relative to the native beach sand, and/or the presence of preexisting oil and gas pipelines, oil and gas wells, and associated industry structures.

Environmental Effects

The Caminada Headland Project Increment 2 is a coastal ecosystem restoration project funded under the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund. The CPRA intends for the design and construction of the Caminada Headland Project Increment 2 to serve as a portion of the State of Louisiana's cost share towards the completion of the U.S. Army Corps of Engineers' (COE) Louisiana Coastal Area (LCA) Barataria Basin Barrier Shoreline Restoration (BBBS) Project. The BBBS Project was identified as a critical near-term restoration project in the LCA Ecosystem Restoration Plan and was federally authorized under the Water Resources Development Act of 2007. The COE completed its evaluation of potential environmental effects resulting from the proposed project in a 2012 report titled *Louisiana Coastal Area Barataria Basin Barrier Shoreline Restoration Construction Report and Environmental Impact Statement, U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District* (U.S. Dept. of the Army, COE, 2012).

The final EA for the Caminada Increment 1 was completed in June 2012. BOEM's Finding of No Significant Impact (FONSI) for the Caminada Increment 1 was signed on June 27, 2012. An SEA was prepared by the CPRA with BOEM's assistance for the Increment 2 project extension; it was completed in November 2013 and the FONSI was signed on December 18, 2013. The 2013 SEA for the Caminada Increment 2 incorporated by reference the entire June 2012 Caminada Increment 1 EA. The new SEA (Attachment 1) focuses on the revised borrow design and increased sand volume. This new SEA tiers from the earlier above-mentioned EA and SEA.

As noted in the current SEA, the Corps of Engineers issued a Section 10/404 Permit modification for the revised Caminada Increment 2 borrow design on August 19, 2015 (Attachment 2). Prior to permit issuance, the Louisiana Department Natural Resources (LADNR) amended the original coastal use permit on April 8, 2015 (Attachment 3) and issued a Consistency Determination for activities on the OCS on April 14, 2015 (Attachment 3). The COE also completed an Environmental Assessment/Decision Document (Attachment 4), in which it evaluated the entire project to include the proposed use of OCS sand resources. The LADNR's Coastal Use Permit/Consistency Determination and COE's Section 10/404 Permit and EA concluded that the proposed project modifications were minor and would not result in any significant long-term environmental impacts and that the project is the public's interest.

Based on the effects analysis presented in the Bureau of Ocean Energy Management's SEA (Attachment 1), no significant impacts were identified. The current SEA and the earlier EAs 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's jurisdiction, which are incorporated into the original NNA, will not be affected by the amended NNA.

Dredging activities started in March 2015; at present, a cutterhead dredge is being utilized within the approved borrow site. Since the approval of the current BOEM NNA, no new significant information was discovered that is relevant to evaluating reasonably foreseeable adverse impacts associated with this presently on-going project and the approval for additional sand quantities from the OCS approved borrow area.

Significance Review

Pursuant to 40 CFR § 1508.27, BOEM evaluated the significance of potential environmental effects considering both the Council on Environmental Quality (CEQ) context (such as society as a whole, human, and national; the affected region; the affected interests; and the locality) and intensity factors. The potential significance of environmental effects has been analyzed in both spatial and temporal contexts. The potential effects are generally considered reversible because they will be minor to moderate, localized, and short-lived. No long-term significant or cumulative adverse effects were identified. The primary factors noted below were considered in the original EA, the 2013 SEA, and the current borrow area expansion;

1. Impacts that may be both beneficial and adverse

The Caminada Headland is one of the most rapidly eroding shorelines in the Nation, with average rates of 35-55 feet/year (11-17 meters/year) during the past century. The OCS sand from South Pelto Blocks 13 and 14 of the Ship Shoal sand body will be used to introduce new sand to the sand-starved coastal system that extends laterally beyond the project area. The restoration will ensure the continuing geomorphic, hydrologic, and ecologic form and function of the landscape, providing protection to commercial, public, and private infrastructure from increased exposure to storms and wave energy associated with continued shoreline retreat and breaching. The project will create beach and dune habitat, and it will protect and maintain function of the vast interior wetland and estuarine habitat of the Barataria-Terrebonne National Estuary. The sand infusion at the Headland will ultimately benefit downdrift barrier islands to which the headland serves as an erosional sand source. Additionally, the project will also protect primary infrastructure that includes the only evacuation route for the Caminada Headland and Grand Isle (Louisiana Highway 1), as well as Port Fourchon and related petroleum storage and transport facilities, including the Fourchon Booster Station, the onshore component of the Louisiana Offshore Oil Port (LOOP) that supplies oil to the Clovelly Dome Storage Terminal. Port Fourchon supports 75 percent of the deepwater oil and gas production in the Gulf of Mexico as the point of departure for crewboats, equipment and supplies, rig components, and oil-field services.

The 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 temporary and reversible. Short-term adverse effects on fish habitat and fishes are expected within the dredged area due to the reduction of benthic habitat and changes in shoal topography and in the fill placement area due to the burial of existing benthic habitat. The potential effects to sea turtles, migratory birds, marine mammals, and cultural resources in the vicinity of operations have been reduced through tested mitigation including, but not limited to, surveys for and avoidance of nesting birds, sea turtle deflector use, sea turtle relocation trawling, marine mammal observers, and cultural resource buffers.

The effects to sea turtles, marine mammals, nesting and courting shorebirds, and water quality will be monitored. No impacts to hard bottom communities will occur. Temporary displacement of birds near the shoal site or beach shoreline/beach 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 they should have no lasting effects on bird populations in the area. 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 during construction in the vicinity of the dredging would occur. For safety reasons, navigational and recreational resources located in the immediate vicinity of the dredging operation would temporarily be unavailable for public use. No archaeological/cultural resources will be affected. A dredge with global positioning system (GPS) equipment will be used to ensure the dredge is operating in the authorized location. An unexpected finds clause will be implemented in case any potentially significant unrecorded archaeological/cultural resources are discovered during operations.

The increase in dredging volume may result in increased dredge operation; however, the additional volume can be mined in approximately 7-10 days. It is possible that the new borrow area design will actually increase dredging efficiency and decrease exposure time. Thus, if there is any additional temporal impact, it will be short term and localized.

2. *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; therefore, recreational activities will not be occurring in close proximity to operations. During dredging operations, watercraft access will be restricted in the dredging area in the interest of public safety. These restrictions would be of short duration and are expected to be minor to boat operators. During dredging and placement, the use of the area immediately surrounding the borrow area and the Caminada Headland in the vicinity of the shore restoration would be temporarily restricted due to public safety. The COE's Section 10/404 Permit also requires the CPRA's contractors to coordinate and develop a safety plan with the U.S. Coast Guard.

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. Also, there will be no significant impacts to critical habitat or essential fish habitat. The CPRA's dredge contractor and the pipeline corridors will be monitored for effects during dredging operations, pump-out, placement, and beach shaping operations.

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

No controversial effects are expected. Effects from beach nourishment projects, including dredging on the OCS, are well studied. The effects analyses in the EA and SEA have relied on the best available scientific information, including information collected by BOEM that is specific to this OCS borrow area, from past COE-contracted dredging and permitted dredging activities in and adjacent to the project area, and research conducted by CPRA in support of barrier island restoration projects. Negative effects of dredging and barrier shoreline restoration activities on shoreline change, benthic communities, nesting and swimming sea turtles, and shorebirds are expected to be minimal, localized, and short-term.

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

Coastal/shoreline restoration projects are a common solution to coastal erosion and land loss problems along the Louisiana coast. Federally authorized and permitted beach restoration and emergency shoreline sand nourishment actions have been ongoing since the mid 1990's and have increased since Hurricane Katrina in 2005. No significant adverse effects have been documented during or as a result of past operations. The COE has permitted numerous emergency shoreline restoration projects within the project area, in addition to several dune restoration/revegetation projects and an extensive fixed breakwater system. The project design is typical of beach restoration 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. *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 the use of OCS sand from the Ship Shoal sand body. BOEM considers each use of a borrow area on the OCS as a new Federal action. BOEM'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 proposed action when added to other past, present, and reasonably foreseeable future actions. The EA and SEA identify those actions and the potential impacts related to underlying activities. The EA, SEA, and previous NEPA/regulatory 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. Based on research and numerical modeling conducted by BOEM in anticipation of dredging activities at the Ship Shoal borrow location, the seafloor is expected to equilibrate and sediment will accumulate within borrow site, 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. *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 will not affect any significant scientific, cultural, or historic resources. Results of both terrestrial and open-water cultural resource surveys determined the absence of significant scientific, cultural, or historic resources within the area of potential effect. Section 106 coordination with the Louisiana State Historic Preservation Officer (SHPO) and the Chitimacha Tribe of Louisiana has been completed and no additional cultural resource investigations are warranted. All of these activities have been completed in accordance with the National Historic Preservation Act (NHPA), as amended; the Archeological and Historic Preservation Act (AHPA), as amended; and Executive Order 11593. The project is in full compliance with the NHPA as well as the AHPA and Executive Order 11593. Additionally, an "Unanticipated Discoveries Plan for Archaeological Properties including Human Skeletal Remains Caminada Headland Beach and Dune Restoration Project (BA-45)" has been prepared and approved by the Louisiana SHPO (Attachment 5).

9. *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*

This project was fully coordinated under the Endangered Species Act (ESA) and is in full compliance with the Act. The COE has consulted with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). The CPRA prepared an EA and Biological Assessment, which were submitted to BOEM and COE. The Biological Assessment was forwarded to FWS and NMFS during the COE Section 10/404 Permit evaluation period. The FWS, in a letter to COE dated November 7, 2012, defaulted to their earlier December 21, 2011, Biological Opinion associated with the Corp of Engineers' BBBS Project.

The FWS was initially concerned with the potential effects on the piping plover, its designated critical habitat, and the West Indian manatee. In the aforementioned Biological Opinion, FWS concurred with COE that the proposed project was not likely to adversely affect the West Indian manatee, not likely jeopardize the continued existence of the piping plover, and not adversely modify its designated critical habitat given the estimated piping plover take. Additionally, COE provided that appropriate mitigations (as noted in the FWS Biological Opinion) were incorporated as conditions in COE's Section 10/404 Permit and remain as a conditions in the current permit modification. The CPRA has and is working closely with FWS to implement a migratory bird abatement plan for the Caminada Increment 2 project.

The NMFS Protected Resources Division, in a letter dated April 8, 2013, stated that the existing September 2005 Biological Opinion issued to BOEM and titled "Hopper and Hydraulic Cutterhead Dredging Associated with Sand Mining for Coastal Restoration Projects Along the Coast of Louisiana Using Sand from Ship Shoal in the Gulf of Mexico Central Planning Area, South Pelto Blocks 12, 13, and 14 and Ship Shoal Block 88" (Consultation No. F/SERI2003/01247) entirely encompassed the scope of

the proposed Caminada Headland Increment 2 project and adequately addressed the issues associated with threatened and endangered species. They noted that, although lethal takes may occur via hopper dredging and/or relocation trawling during the Caminada Headland Increment 2 project, these takes have already been anticipated, analyzed, and accounted for in the earlier Ship Shoal opinion.

In anticipation that nonlethal take limits for relocation trawling might be reached or exceeded due to a high number of relocations early during hopper operations, BOEM reinitiated consultations with NMFS for the nonlethal takes for relocation trawling portion of the Biological Opinion. The NMFS informed BOEM that dredging and relocation trawling Caminada Headland Increments 1 and 2 could continue in accordance with the Biological Opinion for while NMFS worked to update the consultation. During the reinitiation process BOEM is providing NMFS the daily relocation logs as they are submitted to BOEM. The relocation trawling effort as a whole covered approximately 111 days of 12-hour trawling with 1,582 tows, 30-40 minutes in duration, being completed. This effort netted 157 relocations of 154 different sea turtles, including 83 Kemp's ridleys, 69 loggerheads, and 2 greens. The recapture rate was 2.54 percent. Three (3) of the recaptured turtles were loggerheads; one (1) was a Kemp's ridley. The number of days between the initial capture and the recapture ranged from 9 to 129 days. There were no turtle mortalities or injuries associated with relocation trawling on this Project.

In summary, FWS and NMFS concluded that these effects were not reasonably expected to jeopardize the continued existence of listed species or their critical habitat.

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

The COE's Section 10/404 Permit and LADNR's Coastal Use Permit require that the CPRA comply with all applicable Federal, State, and local laws and requirements. The COE and BOEM have completed required ESA and Marine Mammal Protection Act coordination with NMFS and FWS. A Coastal Use Permit and Consistency Determination from the LADNR and a Section 401, Clean Water Act Water Quality Certification from the Louisiana Department of Environment Quality has been issued for the proposed action. Through COE's Section 10/404 Permit, monitoring and mitigation efforts with regard to migratory birds have been coordinated with FWS and the Louisiana Department of Wildlife and Fisheries; an approved migratory bird abatement plan will be implemented. The project will be in compliance with these Acts. Monitoring and mitigation efforts with regard to migratory birds are being coordinated with FWS and the Louisiana Department of Wildlife and Fisheries; a migratory bird abatement plan will be implemented as conditioned in COE's Section 10/404 Permit (Attachment 2). The proposed action is in compliance with the Marine Mammal Protection Act. 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. A water quality certification has been issued by the LADNR, and water quality will be monitored to ensure State water quality standards are not violated.

Consultations and Public Involvement

The COE, serving as the lead Federal agency, posted a public notice with a 20-day comment period on October 8, 2012. At the request of FWS and NMFS, the comment period was extended an additional 10 days. The LADNR published a public notice in local newspapers and in the Baton Rouge *Advocate* on September 14, 2012. BOEM was listed in the point-of-contact information for both public notices. Both COE, serving as the lead Federal agency, and BOEM, serving as the lead agency on the OCS portion of the project, have coordinated with FWS, NMFS, the U.S. Environmental Protection Agency, the Natural Resource Conservation Service, the Louisiana SHPO, and the Chitimacha Tribe of Louisiana in support of this leasing decision. The COE permit was reviewed by FWS and NMFS prior to issuance, and all the appropriate mitigations were included as conditions within the permit. Additionally, to avoid, minimize, and/or mitigate any foreseeable OCS adverse impacts, BOEM incorporated appropriate terms and conditions (enforceable by BOEM) into the NNA that was signed on March 13, 2014.

For the proposed borrow area expansion, the LADNR issued an amended Coastal Use Permit on April 8, 2015. The COE transmitted an agency notification letter along with a revised Section 10/404 joint permit application and drawings. The Bureau of Ocean Energy Management's OCS regulatory authority and requirements were noted in the notification letter, as cited in the earlier Public Notice. The letter was transmitted to FWS, NMFS, the U.S. Environmental Protection Agency, and the Louisiana

SHPO on June 26, 2015 (Attachment 6). The FWS, in an email dated July 18, 2015, noted that the proposed project modifications did not modify the project to an extent that exceeded the effects considered in the 2011 or 2014 consultations (Attachment 7). With no additional comments or concerns resulting from the agency notification letter, the COE amended the original permit and forwarded an approval letter to CPRA on August 19, 2015.

After this FONSI is signed, a Notice of Availability of the FONSI and SEA will be prepared and published by BOEM in the *Federal Register* or by other appropriate means. The FONSI and SEA will be posted on BOEM's website at <http://www.boem.gov/Non-Energy-Minerals/Marine-Mineral-Projects.aspx>.

Conclusion

BOEM has considered the consequences of issuing an amended NNA to authorize the use of OCS sand from Ship Shoal. BOEM jointly prepared and independently reviewed the attached SEA (Attachment 1) and finds that it complies with the relevant provisions of CEQ and DOI regulations implementing NEPA and other Marine Mineral Program requirements.

Increasing sand quantities within the authorized borrow area will not result in any significantly different impacts beyond those previously considered and will ultimately not result in significant impacts.

The COE recently completed a NEPA evaluation, which included agency notification and comments, of the project in August 2015 and concluded that the environmental baseline conditions have not changed. On August 19, 2015, COE modified the original permit and approved the increase in sand quantities. Based on our review, BOEM has determined that there is no new information or circumstances suggesting an increased susceptibility to or greater risk of significantly different or more severe or significant impacts.

Based on NEPA and the consultation history of this project, which was coordinated cooperatively by COE, the CPRA, and BOEM, appropriate terms and conditions enforceable by BOEM were and are incorporated into the NNA to avoid, minimize, and/or mitigate any foreseeable adverse impacts. The COE's Section 10/404 Permit requirements include U.S. Coast Guard requirements that serve as additional safeguards to reduce risk and to minimize and mitigate foreseeable and unforeseen impacts.

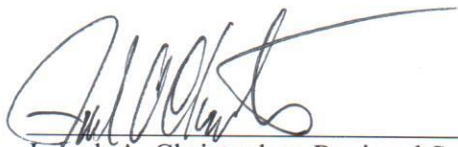
Based on the evaluation of the potential impacts and mitigating measures discussed in the current SEA (refer to Appendix A of the FONSI), increasing the volume of sediment dredged from the borrow area will not create any significant impacts on the OCS.

Concerning other environmental, cultural, and socioeconomic resources, there is no new information or circumstances suggesting an increased susceptibility to or greater risk of significantly different or more severe or significant impacts. As noted in the prior NEPA documents and the current SEA, the project and the use of OCS sand resources from the borrow area will not result in significant impacts, and the increase in volume of OCS sand resources requested does not alter these conclusions. The mitigation measures originally proposed in the 2012 EA and 2013 SEA remain relevant and applicable to the proposed action, and the environmental conditions included in the NNA (as amended) will remain unchanged.

BOEM finds that amending the existing NNA, 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.

Reference

- U.S. Dept. of the Army. Corps of Engineers. 2012. Louisiana Coastal Area: Barataria Basin Barrier Shoreline Restoration; Final Integrated Construction Report and Environmental Impact Statement. U.S. Dept. of the Army, Corps of Engineers, Mississippi Valley Division, New Orleans District, New Orleans, LA. Internet website: <http://www.lca.gov/projects/4/Default.aspx>. Accessed September 2, 2015



Joseph A. Christopher, Regional Supervisor
Office of Environment
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region

9/10/2015
Date

Attachments

1. Final Supplemental Environmental Assessment for the Issuance of a Noncompetitive Negotiated Agreement for the Use of Outer Continental Shelf Sand Resources for Caminada Headland Beach and Dune Restoration Increment 2 (BA-143), Lafourche and Jefferson Parishes, Louisiana
2. U.S. Department of the Army, Corps of Engineers, Section 10/404 Revised Permit
3. Louisiana Department of Natural Resources, Revised Coastal Use Permit/Consistency Determination (P20121150 & C20120338)
4. U.S. Department of the Army, Corps of Engineers, Decision Document/EA
5. Louisiana SHPO concurrence response
6. U.S. Department of the Army, Corps of Engineers, Agency Notification
7. U.S. Department of the Interior, Fish and Wildlife Service, ESA Consultation Correspondence

FONSI

Appendix A of the FONSI ("Mitigation, Monitoring, and Reporting Requirements")

APPENDIX A

MITIGATION, MONITORING, AND REPORTING REQUIREMENTS

The following mitigating measures, monitoring requirements, and reporting requirements are proposed by the Bureau of Energy Management (BOEM) to avoid, minimize, reduce, or eliminate environmental impacts associated with the proposed action (herein referred to as the "Project"). Mitigating measures, monitoring requirements, and reporting requirements in the form of terms and conditions are added to the lease (negotiated agreement between BOEM and CPRA) and are considered enforceable as part of the lease.

Plans and Performance Requirements

The CPRA will provide BOEM with a copy of the Project's "Construction Solicitation and Specifications Plan" (herein referred to as the "Plan") prior to solicitation and construction. No activity or operation authorized by the Lease at the borrow area shall be carried out until BOEM has had an opportunity to review the Plan, thus ensuring that each activity or operation is conducted in a manner that is in compliance with the provisions and requirements of the Lease. BOEM recommends that the CPRA include the Lease as a reference document in the advertised Plan. The CPRA will ensure that all operations at the borrow area are conducted in accordance with the final approved Plan and all terms and conditions in this Lease, as well as all applicable regulations, orders, guidelines, and directives specified or referenced herein.

The dredging method for removing sand from the borrow area will be consistent with those methods identified in the Project proposal analyzed in supporting National Environmental Policy Act (NEPA) documents, authorizing documents, and all associated State and Federal permits. The CPRA 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 shall be delivered in a timely fashion in order to not unnecessarily delay the CPRA's schedule and construction contract.

If dredging and/or conveyance methods are not wholly consistent with those evaluated in relevant NEPA documents and environmental and cultural resource consultations, and authorized by the U.S. Department of the Army, Corps of Engineers' (COE) 10/404 Permit and the Louisiana Department of Natural Resources' (LADNR) Coastal Use Permit (CUP), additional environmental review may be necessary. If the additional NEPA, consultations, or permit modifications would affect or otherwise supplement the provisions of the Lease, an amendment may be required.

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

Environmental Responsibilities and Environmental Compliance

BOEM is the lead Federal agency for the Outer Continental Shelf (OCS) portion of the project, and the COE is the lead for the coastal and terrestrial portions of the project. Both Federal agencies must ensure that the project complies with applicable environmental laws, including, but not limited to, the Endangered Species Act (ESA), Magnuson-Stevens Fishery Management and Conservation Act, Migratory Bird Treaty Act, National Historic Preservation Act, and Coastal Zone Management Act. The CPRA will implement recommended conservation measures and Terms and Conditions as specified in COE Permit No. MVN-2012-02134WPP and LADNR Permit No. P20121150, including implementation of all applicable monitoring and conditions, such as water quality monitoring, marine turtle conditions, shorebird monitoring, marine mammal special conditions, nearshore biological monitoring, the sediment quality control/quality assurance plan, and the physical monitoring plan. Additionally, the CPRA will instruct its contractor(s) to implement the mitigation terms, conditions, and measures required by the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), LADNR, COE, and BOEM pursuant to applicable Federal and State laws and regulations. The required mitigation terms,

conditions, and measures are reflected in the Biological Opinions and Conservation Recommendations. Construction shall not commence until the preconstruction requirements have been completed. Copies of all relevant correspondence, monitoring, and reporting shall be provided to BOEM within fourteen (14) days of issuance at dredgeinfo@boem.gov (including but not limited to observer and dredging reports).

Use of Hopper Dredges: Endangered and Threatened Species under National Oceanic and Atmospheric Administration, National Marine Fisheries Service's (NMFS) Protected Resources Division Jurisdiction

In its September 2005 Biological Opinion (NMFS 2005 BO) titled, *Hopper and Hydraulic Cutterhead Dredging Associated with Sand Mining for Coastal Restoration Projects Along the Coast of Louisiana Using Sand from Ship Shoal in the Gulf of Mexico Central Planning Area, South Pelto Blocks 12, 13, and 19 and Ship Shoal Block 88*. NMFS's Southeast Regional Office, Protected Resources Division authorized an annual incidental take level from hopper dredging for all projects using Ship Shoal sand covered under the NMFS 2005 BO. Note that these take allowances are not specific to the Caminada Headland Restoration Project Increment 2 and are spread across multiple planned projects that intend to use hopper dredges at Ship Shoal. On April 8, 2013, NMFS issued a letter to BOEM indicating that the 2005 Biological Opinion continues to adequately address the issues associated with threatened and endangered species under NMFS jurisdiction.

In keeping with the Endangered Species Act and the obligations and recommendations identified in the 2005 Biological Opinion, and if hopper dredges are used for the Project, the CPRA shall implement the following terms and conditions to minimize the impact of dredging within the borrow area authorized under the terms of the Lease and document any take, should any occur. During excavation of material within the borrow area covered under the Lease, the CPRA shall ensure that the following measures are followed to minimize incidental takes:

1. *Observers:* The CPRA should arrange for NMFS-approved endangered species observers (ESO) to be aboard the hopper dredges to monitor the hopper spoil, screening, and dragheads for sea turtles and their remains. One observer (50% coverage) shall be used for visually inspecting incoming dredge spoils for turtle remains. One observer shall be aboard each hopper dredge. The observer shall notify NMFS's Protected Resources Division immediately by phone at (727) 824-5312 or by fax at (727) 824-5309 and BOEM at dredgeinfo@boem.gov if the dredge takes a sea turtle.
2. *Screening:* One hundred percent inflow screening of dredged material is required and 100 percent overflow screening is recommended. If conditions prevent 100 percent inflow screening, inflow screening may be reduced gradually, as further detailed in the following paragraph, but 100 percent overflow screening is then required. The NMFS's Protected Resources Division must be consulted prior to the reductions in screening and an explanation must be included in the dredging report.
 - a. *Screen Size:* The hopper's inflow screens should have 4-inch by 4-inch screening. If the CPRA, in consultation with observers and the draghead operator, determines that the draghead is clogging and reducing production substantially, the screens may be modified sequentially: mesh size may be increased to 6-inch by 6-inch; then 9-inch by 9-inch; and then 12-inch by 12-inch openings. Clogging should be greatly reduced with these flexible options; however, further clogging may compel removal of the screening altogether, in which case effective 100 percent overflow screening is mandatory. The CPRA shall notify NMFS's Protected Resources Division and BOEM beforehand if inflow screening is going to be reduced or eliminated, and provide details of how effective overflow screening will be achieved.
 - b. *Need for Flexible, Graduated Screens:* The NMFS believes that this flexible, graduated-screen option is necessary since the need to constantly clear the inflow

screens will increase the time it takes to complete the project and therefore increase the exposure of sea turtles to the risk of impingement or entrainment. Additionally, there are increased risks to sea turtles in the water column when the inflow is halted to clear screens since this results in clogged intake pipes, which may have to be lifted from the bottom to discharge the clay by applying suction.

3. *Dredging Pumps*: Standard operating procedure shall be that dredging pumps shall be disengaged by the operator when the dragheads are not firmly on the bottom to prevent impingement or entrainment of sea turtles within the water column. This precaution is especially important during the cleanup phase of dredging operations when the draghead frequently comes off the bottom and could suck in turtles resting in the shallow depressions between the high spots the draghead is trimming off.
4. *Sea Turtle Deflecting Draghead*: Rigid deflector dragheads must be used at all times on all hopper dredges mining sand at the borrow areas.
5. *Dredge Take Reporting*: Observer reports of incidental take by hopper dredges must be faxed to NMFS's Southeast Regional Office, Protected Resources Division at (727) 824-5517 by the onboard endangered species observer within 24 hours of any observed sea turtle take. A report summarizing the results of the hopper dredging and detailing any documented sea turtle takes must be submitted to NMFS's Protected Resources Division and BOEM within 30 working days of completion of the dredging project. The report shall contain information on project location (specific area dredged), start-up and completion dates, cubic yards of material dredged, problems encountered, incidental takes and sightings of protected species, mitigative actions taken (if relocation trawling, the number and species of turtles relocated), screening type (inflow, overflow) used, daily water temperatures, name of dredge, names of endangered species' observers, percent observer coverage, and any other information the CPRA deems relevant.
6. *Sea Turtle Strandings*: The CPRA Project Manager or designated representative shall notify the Sea Turtle Stranding and Salvage Network (STSSN) State representative (contact information available at <http://www.sefsc.noaa.gov/seaturtleSTSSN.jsp>) of the start-up and completion of hopper dredging operations and ask to be notified of any sea turtle strandings in the project area that, in the estimation of STSSN personnel, bear signs of potential draghead impingement or entrainment. Information on any such strandings shall be reported in writing within 30 days of project end to the National Oceanic and Atmospheric Administration (NOAA) Fisheries' Southeast Regional Office. Because the deaths of these turtles, if hopper dredge or bed-leveler dredge-related, have already been accounted for in NMFS's jeopardy analysis and because of different possible explanations for and subjectivity in the interpretation of potential causes of strandings, these strandings will not be counted against BOEM's take limit.
7. *Reporting - Strandings*: The CPRA shall provide to NMFS's Southeast Regional Office, Protected Resources Division and BOEM a final report in writing within 30 days of project end detailing incidents, with photographs when available, of stranded sea turtles that bear indications of draghead impingement or entrainment. This reporting requirement may be included in the project completion report required in the Lease.
8. *Relocation Trawling*: The 24-hour relocation trawling shall be conducted subject to the following conditions:
 - a. Relocation trawling (a minimum of 12 hours/day) shall be conducted for the 3 days (72 hours) immediately prior to commencement of hopper dredging

operations to reduce the abundance of sea turtles in the project area. If no turtle is captured during this time period, then additional relocation trawling will not be required unless takes occur during dredging.

- b. If a sea turtle is taken by a relocation trawler during the 72-hour pre-dredging period, relocation trawling must be conducted for a minimum of 7 consecutive days following the take.
 - c. If no turtle is taken during relocation trawling and hopper dredging for 7 consecutive days, then relocation trawling may be discontinued. However, if a sea turtle is subsequently taken during hopper dredging, then relocation trawling will be immediately re-implemented for a minimum of 7 consecutive days; however, dredging may continue.
9. *Relocation Trawling Take Limits:* The NMFS 2005 BO covering this action authorizes the biennial take of 76 sea turtles (of loggerhead, green, Kemp's ridley, or combination of) and a limit of 152 sea turtles (of loggerhead, green, Kemp's ridley, or combination of) for all dredging projects covered under the NMFS 2005 BO, in association with all relocation trawling conducted by or contracted by the CPRA to reduce the abundance of sea turtles during the 72 hours immediately preceding the start of hopper dredging and during hopper dredging, subject to the following conditions:
- a. *Trawl Time:* Trawl tow-time duration shall not exceed 42 minutes (doors in - doors out) and trawl speeds shall not exceed 3.5 knots.
 - b. *Handling During Trawling:* Sea turtles captured pursuant to relocation trawling shall be handled in a manner designed to ensure their safety and viability, and shall be released over the side of the vessel, away from the propeller, and only after ensuring that the vessel's propeller is in the neutral, or disengaged, position (i.e., not rotating).
 - c. *Captured Turtle Holding Conditions:* Captured turtles shall be kept moist and shaded, whenever possible, until they are released.
 - d. *Weight and Size Measurements:* All turtles shall be measured (standard carapace measurements including body depth), tagged, and weighed when safely possible, prior to release. Any external tags shall be noted and the data recorded into the observers' log. Only NMFS-approved observers or observer candidates in training under the direct supervision of an NMFS-approved observer shall conduct the tagging/measuring/weighing/tissue sampling operations.
 - e. *Take and Release Time during Trawling:* Turtles shall be kept no longer than 12 hours prior to release and shall be released not less than 3 nautical miles (3.5 miles; 5.6 kilometers) from the dredge site. If two or more released turtles are later recaptured, subsequent turtle captures shall be released not less than 5 nautical miles (5.8 miles; 9.3 kilometers) away. If it can be done safely, turtles may be transferred onto another vessel for transport to the release area to enable the relocation trawler to keep sweeping the dredge site without interruption.
 - f. *Injuries and Incidental Take Limits:* Any protected species injured or killed during or as a consequence of relocation trawling shall count toward the incidental take limit. Minor skin abrasions resulting from trawl capture are considered non-injurious. Injured sea turtles shall be immediately transported to the nearest sea turtle rehabilitation facility.
 - g. *Flipper Tagging:* All sea turtles captured by relocation trawling shall be flipper-tagged prior to release with external tags, which shall be obtained prior to the

project from the University of Florida's Archie Carr Center for Sea Turtle Research (<http://accstr.ufl.edu/cmttp.html>) by contacting Alan Bolten, Archie Carr Center for Sea Turtle Research, University of Florida, P.O. Box 118525, Gainesville, Florida 32611, (352) 392-5194, abolten@ufl.edu. The NMFS 2005 BO serves as the permitting authority for any NMFS-approved endangered species observer aboard these relocation trawlers to flipper-tag captured sea turtles with external tags (e.g., Inconel tags). Columbus crabs or other organisms living on external sea turtle surfaces may also be sampled and removed under this authority.

- h. *PIT-Tag Scanning*: All sea turtles captured by relocation trawling (or dredges) shall be thoroughly scanned for the presence of PIT tags prior to release using a scanner powerful enough to read dual frequencies (125 and 134 kilohertz) and to read tags deeply embedded deep in muscle tissue (e.g., manufactured by Biomark or Avid). If scans show that a turtle has been previously PIT tagged it shall never the less be externally flipper tagged. The data collected (PIT-tag scan data and external tagging data) shall be submitted to the U.S. Dept. of Commerce, NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov.
- i. *Cooperative Marine Turtle Tagging Program (CMTTP)*: External flipper tag and PIT-tag data generated and collected by relocation trawlers shall also be submitted to the CMTTP on the appropriate CMTTP form at the University of Florida's Archie Carr Center for Sea Turtle Research.
- j. *Tissue Sampling*: All live or dead sea turtles captured by relocation trawling or dredging shall be tissue-sampled prior to release, according to the protocols described in Appendix III or Appendix IV of the NMFS 2005 BO. Tissue samples shall be sent within 60 days of capture to the U.S. Dept. of Commerce, NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov. The NMFS 2005 BO serves as the permitting authority for any NMFS-approved endangered species observers aboard relocation trawlers or hopper dredges to tissue-sample live- or dead-captured sea turtles without the need for an ESA Section 10 permit.
- k. *Cost Sharing of Genetic Analysis*: The CPRA shall pay for the collection, shipping, and analysis by NMFS scientists of up to 32 tissue samples taken during BOEM-authorized hopper dredging operations in the Gulf of Mexico. The cost of analysis is currently estimated by NMFS to be about \$100-\$150 per sample, or \$3,200-\$4,800. The CPRA funds shall be provided to Dr. Peter Dutton of NMFS's Southwest Fisheries Center within 6 months of completion of the project.
- l. *PIT Tagging*: The PIT tagging is not required or authorized for, and shall not be conducted by, ESOs who do not have (1) ESA Section 10 permits authorizing said activity and (2) prior training or experience in said activity. However, if the ESO has received prior training in PIT tagging procedures and is also authorized to conduct said activity by an ESA Section 10 permit, then the ESO must PIT tag the animal prior to release (in addition to the standard external flipper tagging). PIT tagging must then be performed in accordance with the protocol detailed at NMFS's Southeast Science Center's website at <http://www.sefsc.noaa.gov/seaturtlefisheriesobservers.jsp>. The PIT tags used must be sterile, individually

wrapped tags to prevent disease transmission. The PIT tags should be 125- kHz, glassen capsulated tags — the smallest ones made. Note: If scanning reveals a PIT tag and it was not difficult to find, then do not insert another PIT tag; simply record the tag number and location, and the frequency, if known. If for some reason the tag is difficult to detect (e.g., tag is embedded deep in muscle or is a 400-mHz tag), then insert one in the other shoulder.

- m. *Other Sampling Procedures:* All other tagging and external or internal sampling procedures (e.g., PIT tagging, bloodletting, laparoscopies, anal and gastric lavages, mounting satellite or radio transmitters, etc.) performed on live sea turtles are not permitted under the NMFS 2005 BO unless the observer holds a valid sea turtle research permit (obtained pursuant to Section 10 of the ESA from NMFS's Office of Protected Resources, Permits Division) authorizing the activity, either as the permit holder or as the designated agent of the permit holder.
 - n. *Handling Fibropapillomatose Turtles:* When handling sea turtles infected with fibropapilloma tumors, observers must either (1) clean all equipment that comes in contact with the turtle (tagging equipment, tape measures, etc.) with a mild bleach solution between the processing of each turtle or (2) maintain a separate set of sampling equipment for handling animals displaying fibropapilloma tumors or lesions.
10. *Training – Personnel on Hopper Dredges:* The CPRA must ensure that all contracted personnel involved in operating hopper dredges receive thorough training on measures of dredge operation that will minimize takes of sea turtles. Documentation of this training must be provided to BOEM prior to commencement of hopper dredging on the OCS. Operating procedures shall be consistent with those that have been used successfully by COE during hopper dredging in other regions of the coastal United States and that have proven effective in reducing turtle/dredge interactions. Therefore, the CPRA shall consult and coordinate with appropriate experts in the matter of hopper dredge operation training and in the installation, adjustment, and monitoring of the rigid deflector draghead assembly. Prior to the commencement of hopper dredging, a BOEM-approved inspector shall inspect specific sea turtle protection requirements. The list of inspections that the inspector will perform is identified on a sea turtle inspection checklist entitled "COE Sea Turtle Inspection Checklist for Hopper Dredges," which can be found at <http://el.erdc.usace.army.mil/seaturtles/index.cfm>. All identified deficiencies shall be corrected prior to the commencement of hopper dredging activities.
11. *Dredge Lighting:* From May 1 through October 31, which is sea turtle nesting and emergence season, all lighting aboard hopper dredges and hopper dredge pump-out barges operating within 3 nautical miles (3.5 miles; 5.6 kilometers) of sea turtle nesting beaches shall be limited to the minimal lighting necessary to comply with U.S. Coast Guard and/or Occupational Safety and Health Administration requirements. All nonessential lighting on the dredge and pump-out barge shall be minimized through reduction, shielding, lowering, and appropriate placement of lights to minimize illumination of the water to reduce potential disorientation effects on female sea turtles approaching the nesting beaches and sea turtle hatchlings making their way seaward from their natal beaches.

Preconstruction Notification of Activity In or Near the Borrow Area

The CPRA will invite BOEM to attend a preconstruction meeting that describes the CPRA and/or its agents' plan and schedule to construct the project.

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

Dredge Positioning

During all phases of the Project, the CPRA 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 a horizontal accuracy range of no more than plus or minus 3 meters (9.8 feet). The GPS must be installed as close to the cutterhead or draghead as practicable or use appropriate instrumentation to accurately represent the position of the cutterhead or draghead. Whenever dredging operations are underway, the location of the dredge shall be continuously monitored and its position within the borrow area shall be recorded in real time, in North American Vertical Datum of 1983 (NAD 83), and at intervals not to exceed 2 minutes. During dredging operations, the CPRA will notify BOEM within 24 hours at dredgeinfo@boem.gov if dredging occurs outside of the horizontal limits of the approved borrow area.

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

The CPRA will provide BOEM all dredging quality management (DQM) or equivalent data (positioning and production data) acquired during the project using procedures jointly developed by the COE's National Dredging Quality Management Data Program Support Center and BOEM. If the DQM procedure/support is not available to the CPRA, comparable data (in a format approved by BOEM prior to mobilization of dredging equipment to the OCS) will be submitted to BOEM at dredgeinfo@boem.gov on a biweekly basis. These biweekly dredge reports shall also include a summary of dredge excavator track lines, outlining any deviations from the original Plan. A color-coded plot of the excavator location will be submitted, showing any horizontal or vertical dredge violations. This map will be provided in Adobe PDF format. A complete DQM or equivalent dataset will be submitted within 45 days of completion of the Project. If available, the CPRA will also submit Automatic Identification System data for vessels qualifying under the International Maritime Organization's International Convention for the Safety of Life at Sea.

Dredge Operation

If hopper dredges are used, dredging will be performed so that the hopper dredge(s) excavate(s) material using relatively shallow, uniform passes to an overall cut depth not to exceed that which has been permitted.

Submittal of Production and Volume Information

The CPRA, in cooperation with the dredge operator, shall 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 position will be submitted, showing any horizontal or vertical dredge violations. The dredge track lines shall show dredge status: hoteling; dredging; transiting; or unloading. This map will be provided in Adobe PDF format.

The CPRA 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

The CPRA shall require its contractor(s) for the project to place a notice in the U.S. Coast Guard's 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

The CPRA 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 CFR part 300. All dredging and support operations shall be compliant with U.S. Coast Guard regulations and the U.S. Environmental Protection Agency's Vessel General Permit, as applicable. The CPRA will notify BOEM of any occurrences and remedial actions and will provide copies of reports of the incident and resultant actions to dredgeinfo@boem.gov.

Encounter of Ordnance

If any ordnance is encountered while conducting dredging activities at Ship Shoal, the CPRA will report the discovery within 24 hours to the Regional Supervisor, Office of Environment, Gulf of Mexico OCS Region at (504) 736-2759 and to dredgeinfo@boem.gov.

Bathymetric Surveys

In order to demonstrate that bottom-disturbing activity did not occur outside of the approved area and to ensure that dredging is consistent with borrow design and avoidance buffers, the CPRA will provide BOEM with pre- and post-dredging bathymetric surveys of the borrow area. The pre-dredging survey will be conducted within 60 days prior to dredging. The post-dredging survey will be conducted within 30 days after the completion of dredging. Additional bathymetric surveys are recommended in years 1 and 3 following the completion of dredging. Hydrographic surveys will be performed in accordance with COE's Hydrographic Surveying Manual EM 1110-2-1003 unless specified otherwise by BOEM. A 100-percent coverage using interferometric swath or multibeam bathymetry data is preferred over single-beam data. All bathymetric data shall be roll, pitch, heave, and tide corrected using best practices. Survey lines of the specific dredge area, within Ship Shoal, will be established at intervals necessary to provide 100-percent coverage. Three equidistant cross-tie lines will be established parallel to the same baseline. All survey lines will extend at least 100 meters (328 feet) beyond the edge of the dredge areas. All data shall be collected in such a manner that post-dredging bathymetry surveys are 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 the nature of post-dredging bathymetric change. Pre-dredge bathymetric survey transects shall be reoccupied during the post-dredging surveys. Surveys should be conducted using kinematic GPS referenced to the GPS base station occupying an established (North American Vertical Datum of 1988 [NAVD 88] vertical control) monument within 15 kilometers (9 miles) of the survey area or referenced to a water-level gauge deployed within the vicinity of the project area, unless alternative methods are approved by BOEM. Pre- and post-dredging surveys shall be referenced to the same water-level gauge, tide gauge, and/or benchmark, etc. An uncertainty or error analysis shall be conducted on each bathymetric dataset based on calculated differences of measured elevations (depths) at all transect crossings for that survey. A methods and uncertainty analysis report should be submitted to BOEM with the processed bathymetric data products for each survey.

Copies of pre- and post-dredging hydrographic data and relevant reports will be submitted to BOEM at dredgeinfo@boem.gov within 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 NAD 83 Louisiana State Plane south, U.S. survey feet. Vertical data will be provided in NAVD 88, U.S. survey feet unless otherwise specified. An 8.5" x 11" plan view plot of the pre- and post-construction data will be provided; these plots will show the individual survey points, as well as contour lines at appropriate elevation intervals. These plots will be provided in Adobe PDF format. Survey metadata and field notes will also be provided with each submission.

Oil and Gas Infrastructure

Oil and gas infrastructure are present in the immediate vicinity of the borrow area. BOEM has provided the CPRA with information delineating the locations of oil and gas pipelines, based on the survey documentation provided to BOEM by pipeline operators at the time of pipeline installation.

Magnetometer surveys conducted in 2011 by the CPRA provide more recent information delineating the locations of oil and gas pipelines in the area. The CPRA or their contractor(s) shall conduct a pre-dredging magnetometer survey within 60 days prior to mobilization of equipment to the OCS. This survey can be conducted simultaneously with the pre-dredge bathymetry survey and must be submitted to BOEM for approval prior to commencement of bottom-disturbing activities.

The CPRA shall notify Chevron Pipe Line Company or the current BSEE pipeline rights-of-way (ROW) permit holder(s) four (4) weeks prior to the commencement of dredging operations so that the ROW permit holder(s) may take precautions to mark its pipeline segment if they choose to do so. Documentation and outcome of communication between Chevron Pipe Line Company (or current ROW holder) and the CPRA must be provided to the Regional Supervisor, Office of Environment, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123 and to dredgeinfo@boem.gov before the commencement of dredging. It is incumbent upon the CPRA to request a current list of all oil and gas infrastructure, including, but not limited to, ROW permit holders, from BOEM at above contact in order to comply with the Lease.

During all dredging operations, the CPRA shall require its contractor to observe a minimum "no dredge" and no bottom-disturbing activity (including anchoring and spudding) setback distance of 1,000 feet (305 meters) from existing pipelines and all other oil- and gas-related infrastructure. The CPRA will immediately notify the Regional Supervisor, Office of Environment, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region at (504) 736-2759 and dredgeinfo@boem.gov if any oil and gas infrastructure on the OCS is disturbed during the course of the Project.

BOEM reserves the right to require additional pre-dredging shallow hazards surveys to locate the position of existing pipelines and other seabed infrastructure in the wake of a severe storm event or the availability of new information suggesting there may be hazards in the area.

Archaeological Resources

Onshore Prehistoric or Historic Resources

If the CPRA discovers any previously unknown historic or archaeological remains while accomplishing the Project onshore, then the CPRA will notify BOEM and COE of any findings. The CPRA 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. All parties shall follow NHPA Section 106 guidelines to determine and implement future actions that may include data recovery and resource avoidance.

Offshore Prehistoric or Historic Resources

An archaeological and hazard survey was conducted at the borrow area and these data were used to conduct an assessment of the potential for both historic and prehistoric resources within the borrow area. The survey results and interpretations did not result in identification of any potential cultural resources within the borrow area. In the event that the dredge operators discover any archaeological resource while conducting dredging operations at Ship Shoal or in the vicinity of pump-out operations, the CPRA shall require that dredge and/or pump-out operations be halted immediately within 305 meters (1,000 feet) of the area of discovery. The CPRA shall then immediately report the discovery to the Regional Supervisor, Office of Environment, Gulf of Mexico OCS Region at (504) 736-2759.

If investigations determine that the resource is significant, the parties shall together determine how best to protect it.

Project Completion Report

A project completion report will be submitted by the CPRA to BOEM within 120 days following completion of the activities authorized under the Lease. This report and supporting materials should be sent to the Regional Supervisor, Office of Environment, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region (GM 633D), 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123 and to dredgeinfo@boem.gov. The report shall contain, at a minimum, the following information:

- the names and titles of the project managers overseeing the effort (for the CPRA, engineering firm (if applicable), and contractor), including contact information (telephone 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;

Item	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 the CPRA;
- digital appendices containing the as-built drawings, beach-fill cross-sections, and survey data; and

- any additional pertinent comments.

Environmental and Reporting Compliance

The CPRA will designate, in advance of construction, a single point-of-contact responsible for facilitation of compliance with all lease requirements. The contact information will be provided to BOEM at dredgeinfo@boem.gov at least 30 days in advance of mobilization of dredging and construction equipment to the OCS.

Failure to reasonably comply with these requirements may be a basis for BOEM to refer compliance issues to BSEE.