

## **FINDING OF NO SIGNIFICANT IMPACT**

### **Issuance of a Negotiated Agreement for the Use of Outer Continental Shelf Sediment Resources in the Raccoon Island Shore Protection/Marsh Creation Phase B Project**

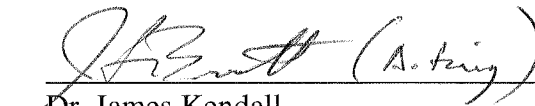
Phase B of the Raccoon Island Shore Protection/Marsh Creation Project (TE-48) involves the creation of 68 acres of emergent marsh on the bayside of the westernmost barrier island of the Isles Dernieres in Terrebonne Parish, Louisiana. Phase B, authorized for planning and funding under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), is being jointly undertaken by the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) and the Louisiana Coastal Protection and Restoration Authority (CPRA). The project is needed to protect an important rookery and colonies of seabirds from an encroaching shoreline and create additional avian habitat for the nesting, staging, resting and feeding of local species. The NRCS proposes to hydraulically dredge and transport up to 750,000 cubic yards of Outer Continental Shelf (OCS) sediment from a borrow area approximately 3 nautical miles south of Raccoon Island for fill material. The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the Minerals Management Service (MMS), proposes to issue a negotiated agreement to authorize the project proponents to obtain sediment resources from an offshore borrow area for use in the marsh creation project.

In 2009 the MMS adopted an environmental assessment (EA) prepared by the NRCS to determine whether the proposed action would have a significant effect on the human environment and whether an environmental impact statement (EIS) should be prepared. The MMS served as a cooperating agency during the preparation of the EA. The MMS issued a Finding of No Significant Impact (FONSI) on May 20, 2009. Prior to the Macondo Well blowout on April 20, 2010, the MMS was in the process of finalizing a three-party Memorandum of Agreement (MOA). When the project area was first subject to oiling in May 2010, the BOEMRE initiated an adequacy review of the existing NEPA document to determine whether it should be supplemented in light of new environmental information and/or any significant changes in the proposed action. While the condition of most environmental resources in the project area remain unchanged from what was evaluated in 2009, the BOEMRE determined that some environmental resources may have changed due to naturally occurring processes and the oil spill and ensuing spill response operations. Given the changes, the BOEMRE evaluated the potential for different environmental effects from the proposed activities due to changes in environmental conditions caused by the spill and spill operations. In addition, the NRCS modified their proposed action to include the potential use of a pipeline and booster pump to convey sediment from the borrow area to the placement site. Environmental effects related to pipeline conveyance were not previously analyzed.

Pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations implementing NEPA (40 CFR 1500) and Department of the Interior (DOI) regulations implementing NEPA (43 CFR 46), the BOEMRE has prepared another EA to determine whether the issuance of the negotiated agreement would have any significant effects different from those previously analyzed. New information was identified that further supports or elaborates on the existing analysis, but the information did not change any effects conclusions. New potential environmental effects associated with pipeline conveyance and changed

environmental conditions were identified, but those effects were not significant. Although potential effects are generally considered reversible because they will be minor to moderate, localized, and short-lived, terms and conditions will be incorporated into the negotiated agreement to avoid, minimize, and/or mitigate any foreseeable adverse impacts. As discussed in the 2009 EA and associated FONSI, the natural resource benefits anticipated from implementing this project will enhance and sustain dune, swale, and inter-tidal habitat within the project area. The proposed action will increase critical avian habitat and both quality and acreage of back-barrier fisheries habitat. In addition, the preferred project will result in increased storm surge and wave protection for natural environments and infrastructure on and behind the barrier islands to be restored.

Based on the evaluation of potential effects and mitigating measures (Attachment 1) discussed in the attached EA (Attachment 2), the BOEMRE finds that entering into a negotiated agreement, with the implementation of 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.

  
\_\_\_\_\_  
Dr. James Kendall  
Chief, Environmental Division

12/7/10  
\_\_\_\_\_  
Date

Attachments

## **MITIGATION MEASURES**

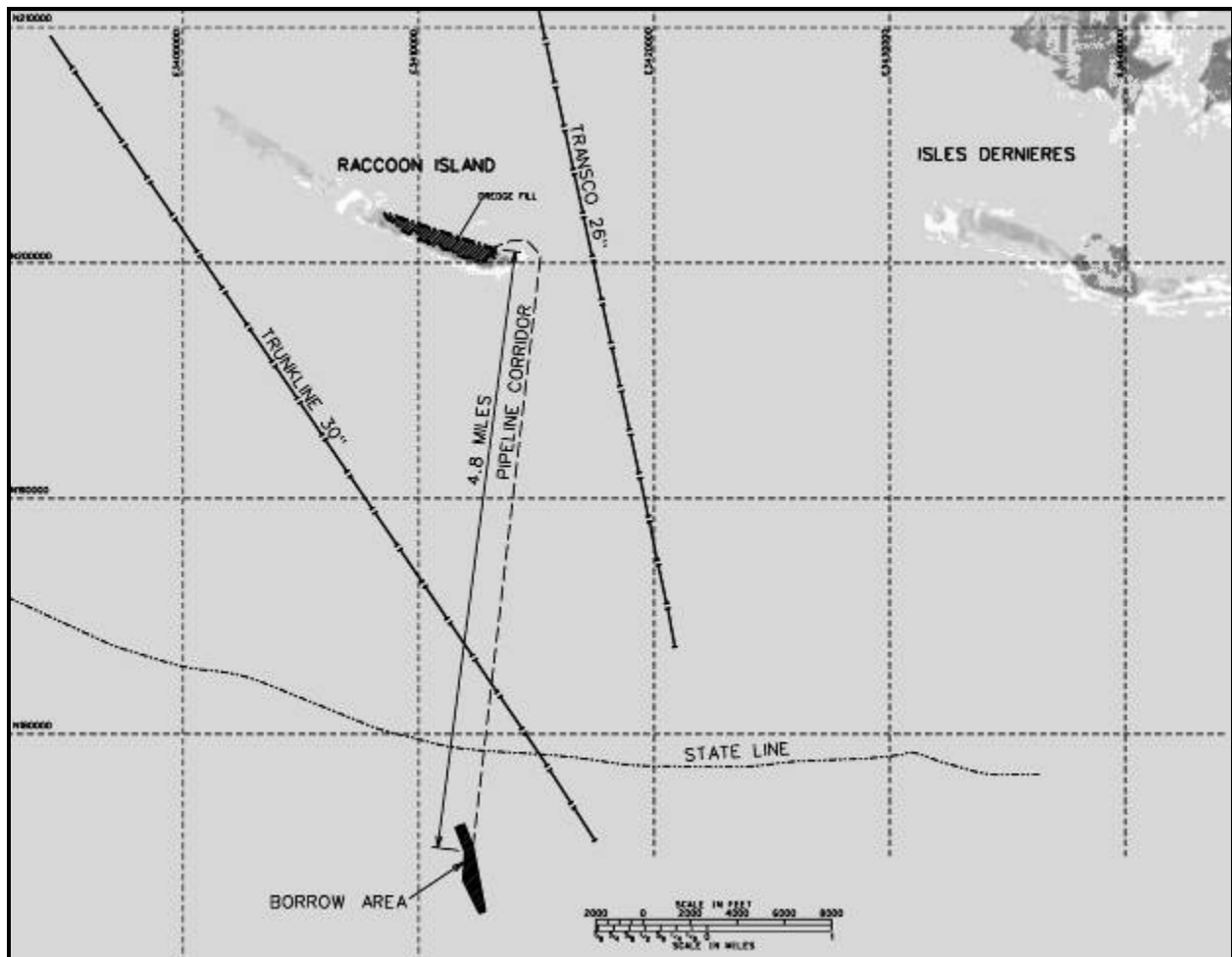
The following mitigation is proposed to reduce or eliminate environmental risks associated with the proposed action. Mitigation in the form of terms and conditions are added to the negotiated agreement and are shall be considered enforceable as part of the agreement. Application of terms and conditions will be individually considered by the Director or Associate Director of the BOEMRE. Minor modifications to the proposed mitigation measures may be made during the noncompetitive negotiated leasing process if comments indicate changes are necessary or if conditions warrant.

### **Environmental Responsibilities and Environmental Compliance**

Prior to any extraction, transportation or placement of OCS sand resources from the Raccoon Island Borrow Area, NRCS will ensure compliance with applicable provisions of the Clean Water Act through coordination and consultation with the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. No material from the Raccoon Island Borrow Area will be extracted, transported, or placed that does not meet applicable Federal requirements.

## Use of Outer Continental Shelf Sediment Resources in the Raccoon Island Shore Protection / Marsh Creation Project (Phase B)

### Environmental Assessment



U.S. Department of the Interior  
Bureau of Ocean Energy Management, Regulation and Enforcement  
Environmental Division

**Use of Outer Continental Shelf Sediment Resources  
in the Raccoon Island Shore Protection / Marsh Creation Project (Phase B)**

**Environmental Assessment**

Prepared by

Bureau of Ocean Energy Management, Regulation and Enforcement  
Environmental Division, Branch of Environmental Assessment

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# 1

## INTRODUCTION

The U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS), under authority of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), and the State of Louisiana, serving as the non-federal sponsor, propose to construct Phase B of the Raccoon Island Shore Protection/Marsh Creation Project (Project) in 2011 following several unanticipated project delays. The Louisiana Department of Wildlife and Fisheries (LDWF) manages Raccoon Island as part of the Terrebonne Barrier Islands Refuge. Raccoon Island is one of the only barrier islands along the Isle Dernieres chain along coastal Louisiana with a fairly extensive wooded habitat still remaining and is an important nesting area for many species including the brown pelican, roseate spoonbill, and other seabirds. The rapidly eroding barrier island also serves as important wintering habitat for the federally-listed piping plover. The creation and protection of marsh and woody habitat is planned to ensure the continued availability of neotropical migratory bird habitat, which is important during spring and fall migrations.

The NRCS's proposed action involves the excavation, transport, and placement of dredged material for the creation of 68 acres of new inter-tidal and supra-tidal habitat on the bayside of the westernmost barrier island of the Isles Dernieres in Terrebonne Parish, Louisiana. More detail about project design elements can be obtained in the relevant environmental documents identified below. The NRCS proposes to dredge material (silty sand) from a borrow area on the Outer Continental Shelf (OCS) approximately 3-5 nautical miles south of Raccoon Island in Ship Shoal Lease Blocks 64 and 71 (Figures 1-3).

Prior to the Macondo Well blowout and spill on April 20, 2010, the Minerals Management Service (MMS) was in the process of finalizing a three-party Memorandum of Agreement (MOA) with the NRCS and the Louisiana Coastal Protection and Restoration Authority (CPRA) to authorize use of an offshore borrow area in Phase B of the Raccoon Island Shore Protection/Marsh Creation Project. The MOA was transmitted for final signature to NRCS in July 2009. NRCS executed the MOA in late July and forwarded it to the State for final signature. The State had not yet executed the MOA at the time of the blowout and spill. The execution of the MOA has been delayed further because of the blowout, spill, and spill operations and possible impacts to the project area. Although the oil spill and spill-response operations have affected the central Gulf of Mexico, including the project area, the NRCS and CPRA requested that the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the MMS, provide final authorization for use of the OCS borrow area. Since the spill occurred in April, a revised MOA has been prepared and circulated that incorporates the relevant mitigation discussed in more detail in this environmental review. There are multiple motivations for pursuing execution of the revised MOA at this time including critical restoration needs, concerns about jeopardizing the continued availability of NRCS funding, impending possibility of future damaging storm events, and stewardship concerns over the OCS borrow area.

On May 20, 2009, the MMS adopted an environmental assessment (EA) (Appendix A) prepared by the NRCS to determine whether the proposed action would have a significant effect on the human environment and whether an environmental impact statement (EIS) should be prepared (NRCS, 2009). The MMS served as a cooperating agency during the preparation of the EA. The



MMS prepared sections of the EA, reviewed the EA, and determined that it adequately addressed the potential impacts of its proposed action and issued a Finding of No Significant Impact (FONSI). The EA supplemented a 2005 Final Project Plan and Environmental Assessment for the Raccoon Island Shoreline Protection/Marsh Creation Project, prepared in support of Phase A of the Project, which involved the construction of segmented breakwaters and associated beach fill along the gulfside of Raccoon Island.

The Council of Environmental Quality (CEQ) regulations give federal agencies broad discretion to “prepare an environmental assessment on any action at any time in order to assist agency planning and decisionmaking” 40 CFR 1501.3(b). In accordance with CEQ regulations (40 CFR §1502.9), this assessment was prepared to examine whether there are any “substantial changes in the proposed action” or “significant new circumstances or information” that either were not fully discussed or did not exist at the time the 2009 EA was issued.

The BOEMRE has reviewed the March 2009 EA to determine whether it should be supplemented to evaluate any significant changes in the proposed action, any new environmental information, and/or revisit the potential significance of resulting impacts to the human environment. This EA evaluates only the topics in the 2009 EA for which new information has become available since the 2009 EA was published and which could be material to the decision-making process. This EA identifies the new information and/or circumstances, assesses its relevance to the effects analyses, and makes a determination of whether or not any new or changed information significantly affects the analyses previously completed, or identifies new or significantly different impacts.

#### Relevant Environmental Documents

- Louisiana Department of Natural Resources. September 2004. Ecological Review: Raccoon Island Shoreline Protection/Marsh Creation, Phase A. CWPPRA Priority Project List 11. State No. TE-48.
- Louisiana Department of Natural Resources. December 2007. Ecological Review: Raccoon Island Shoreline Protection/Marsh Creation, Phase B. CWPPRA Priority Project List 11. State No. TE-48.
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2005. Project Plan and Environmental Assessment – Raccoon Island Shoreline Protection/Marsh Creation Project TE-48 Terrebonne Parish, Louisiana. Final Plan EA for Phase A project.
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2007. Raccoon Island Shoreline Protection and Marsh Creation Project (TE-48) Phase B, 95% Preliminary Design Report. U.S. Department of Agriculture, Natural Resources Conservation Service. Alexandria, LA.

- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2009. Supplemental Environmental Assessment for Raccoon Island Shore Protection/Marsh Creation Project (TE-48) Phase B - Marsh Creation.
- U.S. Department of Agriculture, Natural Resources Conservation Service. March 31, 2009. Finding of No Significant Impact, Raccoon Island Shore Protection/Marsh Creation Project (TE-48) Phase B - Marsh Creation.
- U.S. Department of the Interior, Minerals Management Service. 2004. Environmental Assessment for the Issuance of Non-Competitive Leases for the Use of Outer Continental Shelf Sand Resources from Ship Shoal, Offshore Central Louisiana for Coastal and Barrier Island Nourishment and Hurricane Levee Construction.
- U.S. Department of the Interior, Minerals Management Service. 2004. Ship Shoal Multi-Project Biological Assessment.
- U.S. Department of the Interior, Minerals Management Service. May 20, 2009. Finding of No Significant Impact, Raccoon Island Shore Protection/Marsh Creation Project (TE-48) Phase B - Marsh Creation.

## **2 DESCRIPTION OF THE PROPOSED ACTION**

The NRCS proposes to use up to 750,000 cubic yards of OCS sediment from a borrow area approximately 3-5 nautical miles south of Raccoon Island in Ship Shoal Lease Blocks 64 and 71. The volume has been slightly reduced from 830,000 cubic yards analyzed in the 2009 EA. The purpose and need for the proposed action has not changed (see 2009 EA, p. 4, p. 10). The proposed project area includes shallow open-ocean and sound water, salt marsh, and barrier island habitats. The NRCS proposes to create approximately 54 acres of inter-tidal marsh and 14 acres of supra-tidal area (Figures 1-2). Once constructed, the inter-tidal and supra-tidal areas will be planted with woody and herbaceous plant species to stabilize the dredged material. The BOEMRE's connected action is the issuance of a negotiated agreement to provide for use of OCS sediment. The preferred alternative in Phase B involves dredging *in situ* material and constructing containment dikes on the landward side of the barrier island and placing the dredged material from the OCS into the confined area. The OCS borrow area is a paleo-distributary channel located approximately 3.8 miles south of the island in -22 to -26 ft water depths (Figures 3-4). More detail about the construction technique is provided in the 2009 EA, including a discussion of the preferred use of a cutterhead dredge. The NRCS has since indicated that a cutterhead dredge will be required in the specifications for the project (Broussard, personal communication). A subarea in the borrow area has been identified for preferred use based on the quality of sediment available. The alternatives to the proposed action are the same as those discussed in the 2009 EA. There is one substantive change in the proposed action which involves the potential use of a pipeline and booster pump to convey sediment from the borrow area to the placement site. On September 30, 2010, the NRCS submitted an application to the U.S. Army Corps of Engineers – New Orleans District (Corps) requesting a permit modification to allow for pipeline conveyance in the proposed project. Previously, the proposed action provided for

conveyance by either hopper plant and/or tug and scow barges. The environmental effects related to pipeline conveyance were not analyzed.

The proposed conveyance method may require the use of floating, riser, and submerged pipeline and at least one booster pump in a corridor that stretches from the borrow area on the OCS to the east end of Raccoon Island. A comparatively small segment of the pipeline corridor will occur on the OCS (Figure 1). The exact corridor will be delineated following surveying to identify potential obstacles, hazards, and/or environmental or cultural resources. The NRCS has indicated that the dredge contractor will be required to identify the final corridor in a dredging operations plan, subject to BOEMRE review. The final corridor, also subject to Corps approval, must avoid any resources identified in clearance surveys. The dredging operations plan will include necessary safety measures identified by the Corps, including protocols of notice to boaters and other mariners. In areas less than four feet deep, the contractor will be required to mark the pipeline. The discharge pipe will enter the placement area from the northeast, and at no time, will pipe or other equipment be placed on sensitive areas of Raccoon Island. Marsh buggies, airboats, and other small vessels may be necessary when operating in inter-tidal, backbarrier waters. All access to Raccoon Island must be approved by the Louisiana Department of Wildlife and Fisheries. Because of the anticipated length of pipe required (~ 5 miles), it is anticipated that the dredge contractor will need to use at least one booster pump. Depending on the location of the booster pump, it may be installed on a jack-up barge that could be spudded or anchored, or on an anchored, floating platform. Pipeline will be floated at the location of the booster pump, and riser pipe will connect to the booster pump and/or floating pipeline. All equipment will be mobilized and de-mobilized to the proposed route on barges and placed using either dragline or excavator machines to install and retrieve the pipe. It is possible that longer lengths may be pre-assembled and towed to site in rafts (i.e., a series of pipeline tied together at several locations along their length for long distance transport). The contractor will be required to place and maintain tight joints in the dredge discharge pipeline at all times. Joints will be constructed so as to prevent spillage and leakage. Local anchoring of the pipeline may be necessary to avoid movement of floating and submerged pipeline, especially during storm conditions. There are known oil/gas pipelines in the vicinity of the proposed pipeline corridor, and crossings will occur in state waters (Figure 6). The pipeline will be floated over the oil/gas pipeline (Figure 7) unless other safe alternatives are proposed. Floating flexible pipelines and submerged pipelines will be connected with riser pipelines.

The restoration project area has experienced shoreline erosion, overwash, and conversion of wetlands to open water since the publication of the 2009 EA. Since the configuration of the island is slightly different, the design has been modified to accommodate the new island configuration. However, these changes are the result of natural coastal processes and episodic storm events. The changes are considered minor as similar changes are naturally-occurring and regularly experienced in south Louisiana due to rapidly changing coastal landscapes. The size of the construction footprint is the same and volumetric needs have not increased over what has already been analyzed in the 2009 EA. Final NRCS design drawings are presented in Figures 1-5.

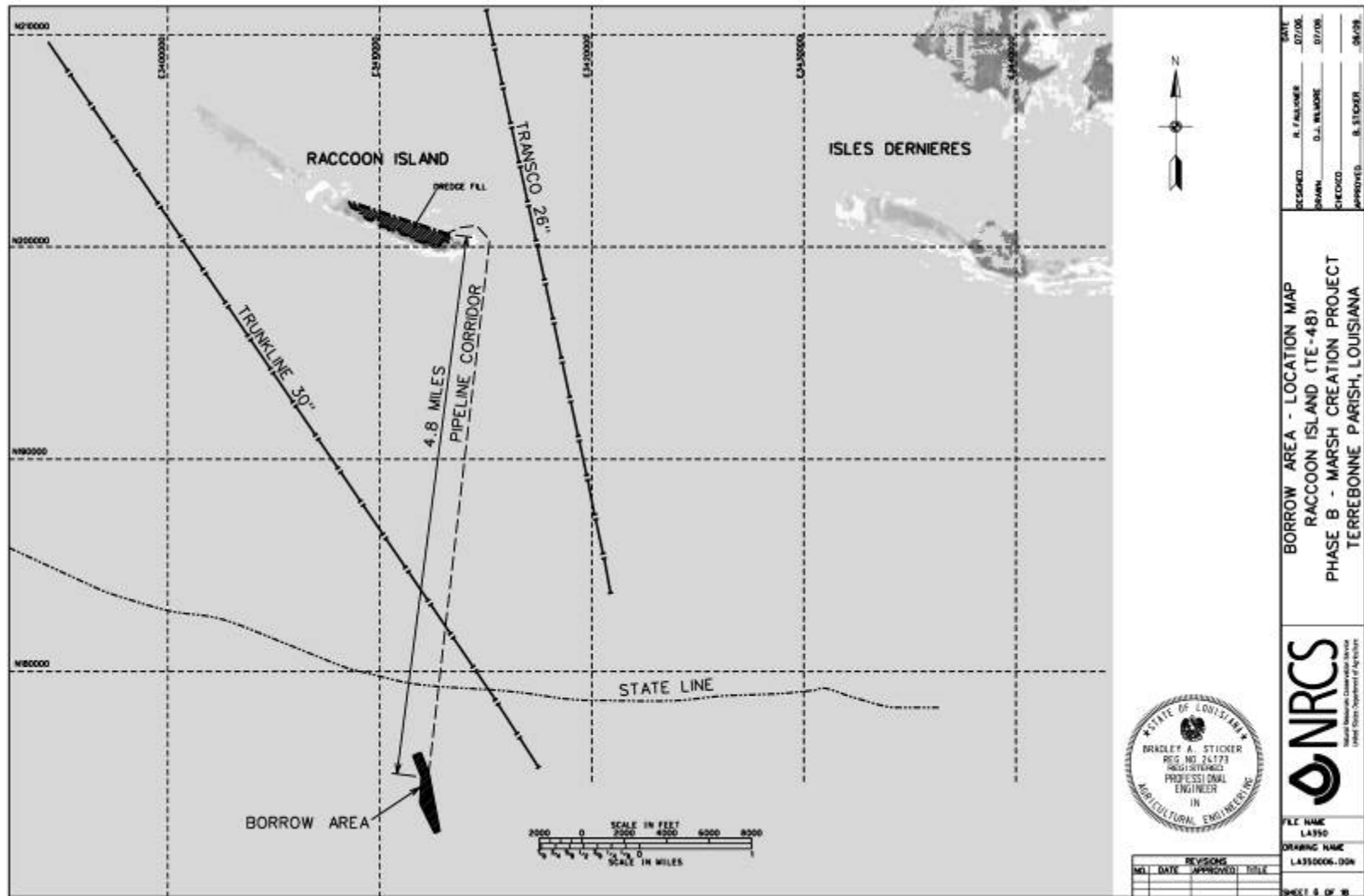


Figure 1: Project area for the Proposed Action. The Trunkline pipeline represents two adjacent 30” gas pipelines.

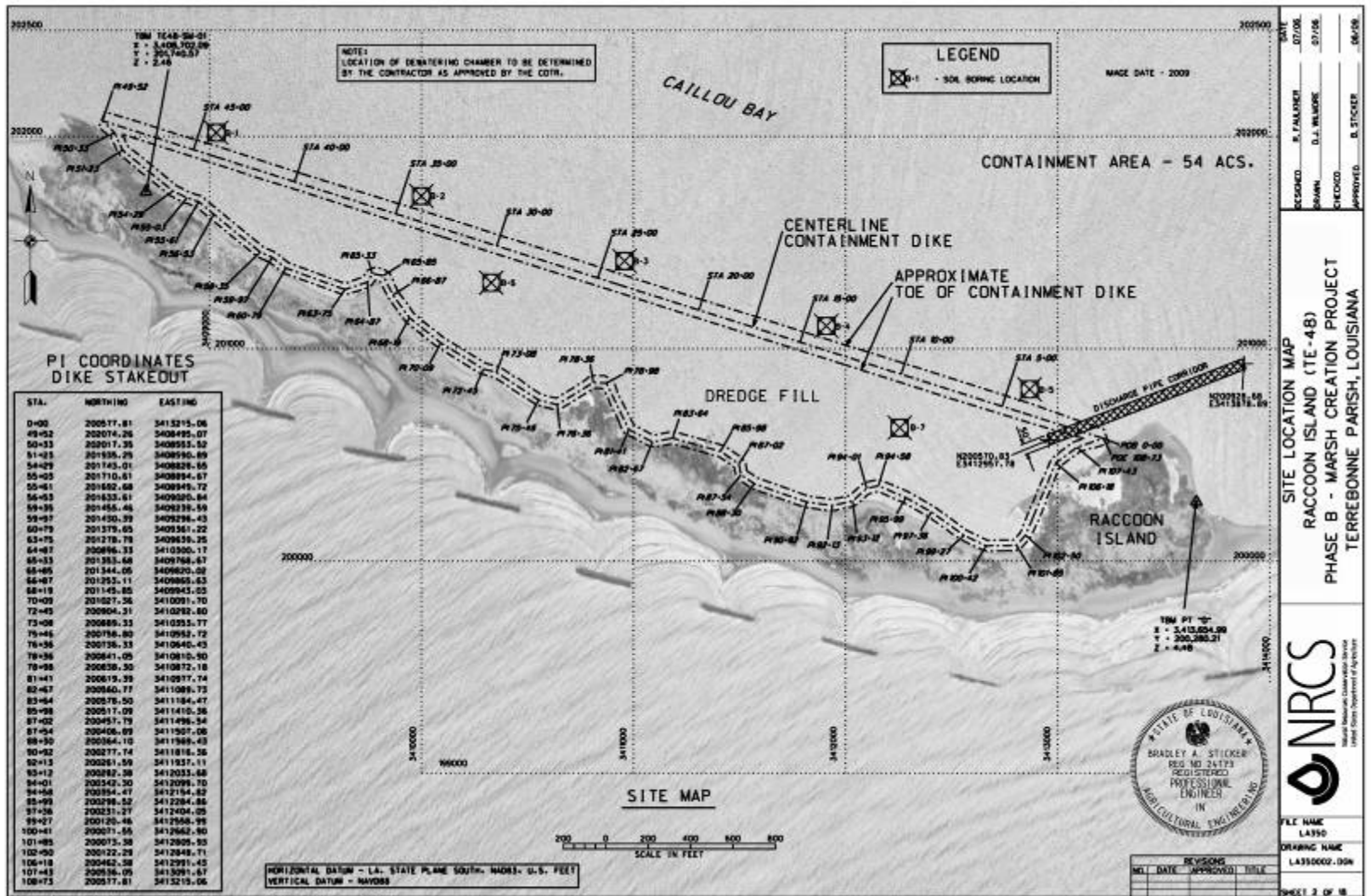


Figure 2: Marsh creation area on Raccoon Island

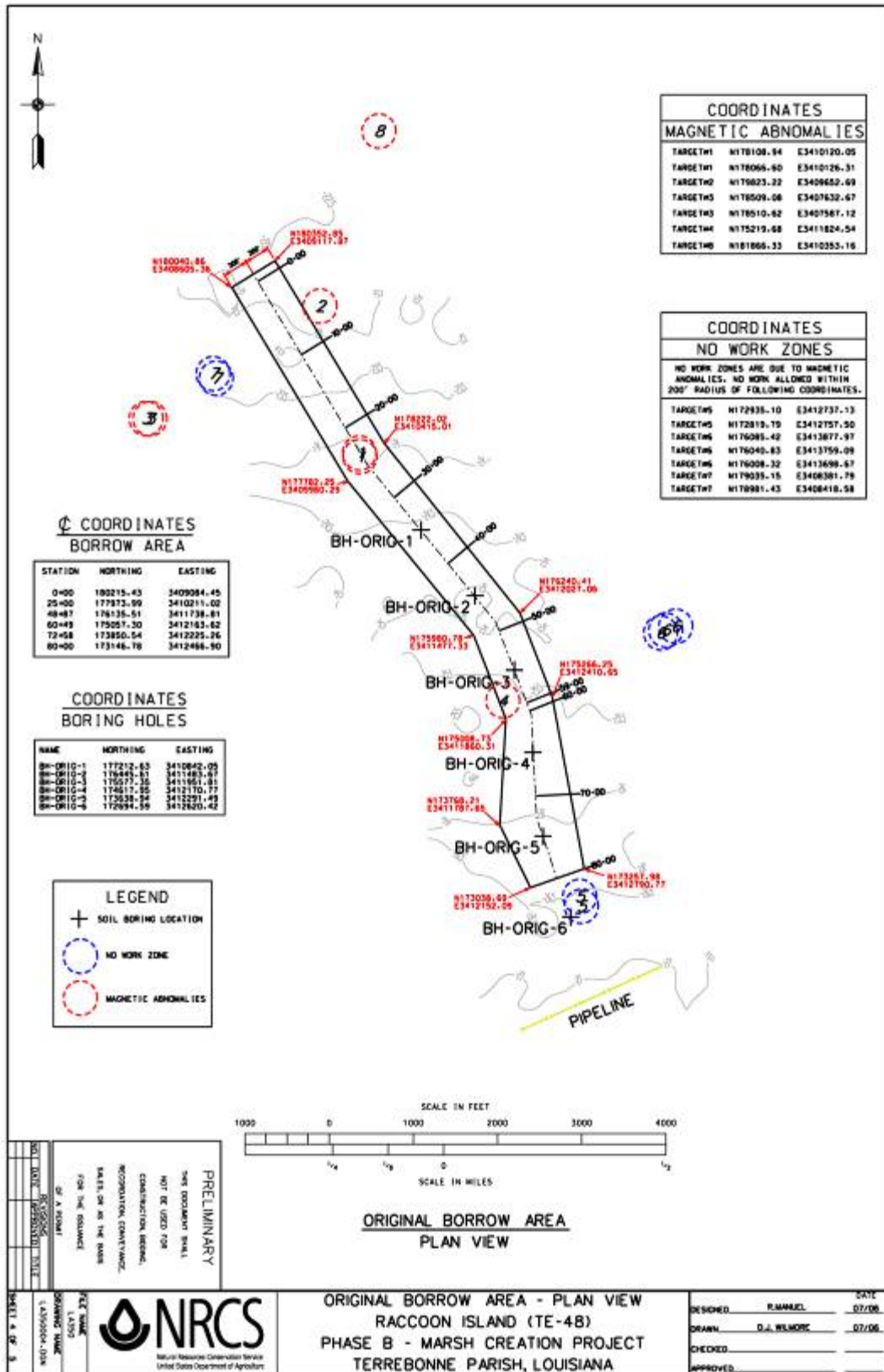


Figure 3: Raccoon Island borrow area

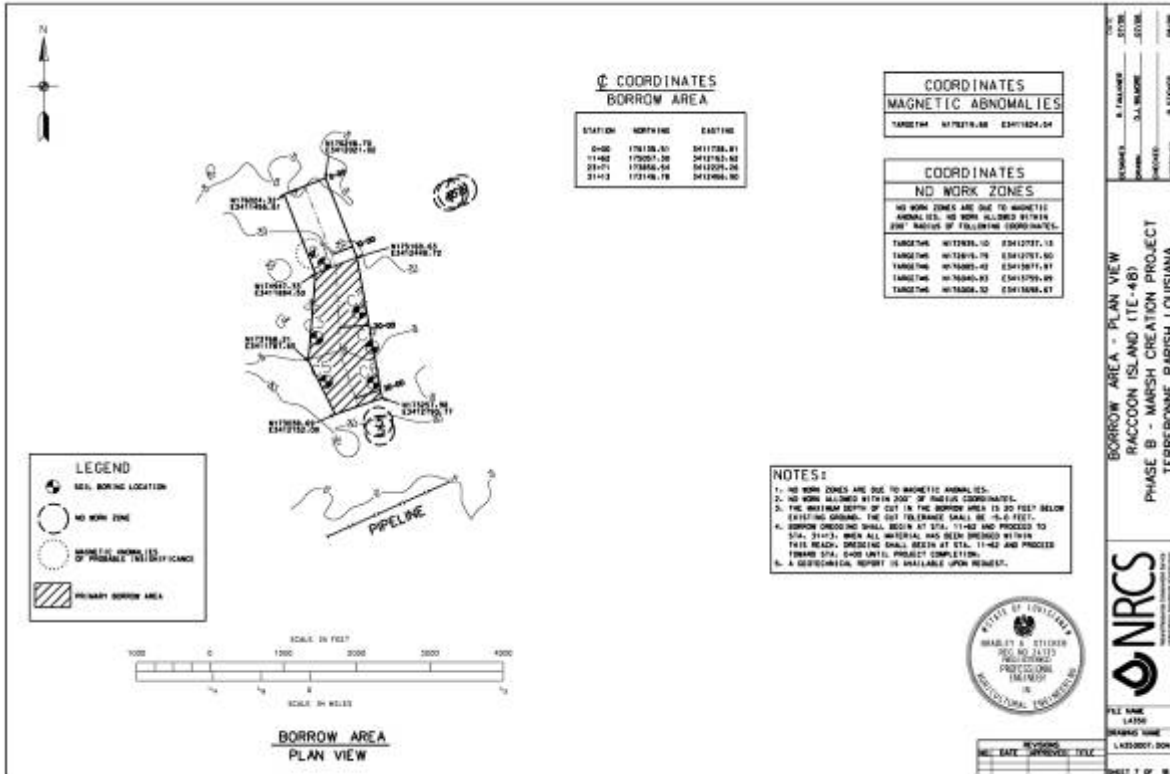


Figure 4: Preferred dredging target in the Raccoon Island borrow area





### 3 MACONDO WELL BLOWOUT, SPILL, AND SPILL RESPONSE OPERATIONS

On April 20, 2010 the Macondo Well blowout occurred in Mississippi Canyon Block 252 approximately 53 miles offshore coastal Louisiana. The ensuing 4.1-4.9 million barrel spill released from the Macondo Well prior to final capping on July 15, 2010 spread over a substantial footprint of the central and eastern Gulf of Mexico. Since April, oil spill response operations in the Gulf of Mexico have included the application of surface and subsea dispersants, containment and sorbent booms, controlled surface burning, vessel skimming, beached oil clean-up, lower marine riser containment and oil collection, natural gas flaring, relief well drilling, and construction of sand berms. The best government estimates suggest that the response efforts successfully recovered about one-third of the spilled oil. Final well kill and cementing operations were completed on September 19, 2010. Final plugging and abandonment occurred on November 8, 2010. Less than 23% of the overall spill volume is still believed to 1) be on or just below the surface in the form of light sheen or tar balls, 2) have washed ashore and been collected from the shore, and 3) be buried in sediments and capable of resurfacing over time (National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 2010; The Federal Interagency Solutions Group, 2010). The remaining oil continues to degrade through natural processes.

Approximately 360 miles of shoreline have been oiled in coastal Louisiana since the blowout occurred. Although Raccoon Island and the proposed borrow area are located more than 150 miles west of the Macondo well, light to moderate oil has been observed on Raccoon Island, north of Raccoon Island in Calliou Bay, and south of the Isles Dernieres in the Gulf of Mexico several times since the spill began. Highly weathered oil has generally been confined to the inter-tidal zone of the barrier beach and limited reaches of inter-tidal and supra-tidal back-barrier marsh. Northeast of the project area, oil sheen with periodic clumps of reddish/orange oil has been observed in Caillou Bay north of Raccoon Island during May, July, and August. Although ephemeral streamers of weathered surface oil were reported south of Raccoon Island, there is a low potential that the sediment in the borrow area will be at levels of concern (<http://www.epa.gov/bpspill/sediment.html>, accessed 11/10/ 2010; Deepwater Horizon Incident Joint Information Center, 2010). The sediments in the proposed borrow area have not been tested for hydrocarbons (Broussard, personal communication).

NOAA Shoreline Cleanup and Assessment Technique (SCAT) reports, Louisiana Department of Wildlife and Fisheries' (LDWF) Oil Sightings Reports, and Terrebonne Parish daily press releases have been compiled and reviewed for reports of oiling or surface oil in the vicinity of Raccoon Island. Raccoon Island was first oiled on May 12-13<sup>th</sup>, 2010. The oiling was very light and limited to a short segment of beach. On June 21, 2010, the NRCS and LDWF e-mailed a joint statement indicating that a reconnaissance survey conducted by LDWF on May 14-16<sup>th</sup>, 2010 documented minimal to no impacts on either the gulf side or bay side of the island as a result of first contact from the oil spill. The LDWF stated that tar balls and emulsified/weathered mousse had only occurred on part of the gulfside of Raccoon Island (Carloss, personal communication). Containment boom was deployed on the gulfside and the bayside of the barrier island beginning in mid May and was later removed after a relatively heavier oiling that occurred later in July.

The July 14, 2010 SCAT report described light to moderate oiling along different parts of the barrier island. An intermittent, thin coat of light oil, mousse and tar balls were documented along central and eastern segments of the sandy beach. Some sandy beach areas along western, washover portion of island were reported as covered (0.1 cm to 1 cm). The heaviest oiling was documented along a limited area of supra-tidal oystergrass along the northwest back-barrier wetland, within the footprint of the proposed action. Oil extended approximately 2 to 5 m inland according to the SCAT report. Observations of highly weathered oil were also made in limited areas along the northeast, drumstick end.

The continued transport, resuspension, dispersion, and beaching of oil depends on the rate of weathering, degree of remobilization, and changing meteorological forcing and surface currents. During summer months, there is a well-documented reversal in the Louisiana Texas coastal current which will tend to transport surface oil east of the delta towards the Florida Panhandle. Otherwise, coastal currents will tend to transport surface oil west towards the Chenier Plain. Coastal currents and oil transport are subject to short-term variability, including the passage of storms that could mobilize weathering oil currently trapped in estuarine areas.

The exact timing of offshore dredging, dike construction, and fill placement is unknown, but is expected to occur in mid to late 2011. The best available information does not provide a complete understanding of the effects of the spilled oil and active response/cleanup activities on resources in the central Gulf of Mexico, as some exposure effects may only be realized over longer time intervals. Changes in the sensitivity of resources (including biological resources whose range may include the project area) may not be fully realized.

The NRCS has requested the execution of the MOA so that NRCS can issue a solicitation to procure a dredging contractor for the project. An optimistic scenario is that several months will pass before the NRCS can award a contract and mobilize the necessary dredging equipment (L. Broussard, personal communication). Any temporarily-increased sensitivity of biological resources and possible, future effects to physical and biological resources from oil contact or spill operations in the vicinity of Raccoon Island could be curtailed or remediated in ensuing months.

#### **4 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND THE ENVIRONMENTAL EFFECTS**

The Affected Environment includes diverse physical (e.g., geological, climatic, water), biological (e.g., vegetative habitats, aquatic resources and habitats, fish and wildlife) and socioeconomic (e.g., cultural, recreational, and infrastructure) resources. The 2009 EA provides a detailed description of the project area and environmental resources. The condition of most environmental resources in the project area remain unchanged from that evaluated in the 2009 EA, with the exception of some habitat and biological resources which may have changed due to naturally occurring processes, and the Macondo spill and ensuing spill response operations.

The 2009 EA analyzed the direct, indirect, and cumulative social, economic, and environmental impacts of the proposed action as understood at that time and concluded that the effects of the

proposed activities would not be significant. Based on the EA, which documented the status of resources and potential effects prior to the oil spill, NRCS and MMS prepared independent FONSI. The analysis did not address the potential for significantly different effects that may occur due to conditions or circumstances caused by the on-going Macondo spill and spill response operations.

This EA evaluates whether changes in the proposed action, new circumstances not previously analyzed, and information not previously available contribute to a determination of significantly different environmental effects (43 CFR 46.120). Since the NRCS has revised the proposed action to include pipeline conveyance of OCS sediment resources from the borrow area, there is the potential for new impacts to occur during placement and retrieval of submerged pipeline, associated anchoring during pipeline placement, use, retrieval, and anchoring/spudding associated with installation and use of in-line booster pumps. There is also concern about the potential for different environmental effects from the proposed activities due to conditions caused by the spill and spill operations (*i.e.*, a changed environmental baseline). There have been adverse impacts to coastal and wetland habitat and biological resources in the vicinity of Raccoon Island, Caillou Bay area, or within/near the proposed TE-48B borrow area as a result of the Macondo incident; in general, these impacts have been localized and relatively minor in context of the size of existing habitat and population levels. The type and nature of impacts related to oil exposure and spill response operations in sensitive coastal habitats in Louisiana are discussed in the *Final Environmental Impact Statement for Gulf of Mexico OCS Oil and Gas Lease Sales: 2007-2012; Western Planning Area Sales 204, 207, 210, 215, and 218; Central Planning Area Sales 205, 206, 208, 213, 216, and 222* (USDOJ MMS, 2007) and *Supplemental Environmental Impact Statement for Proposed Central Planning Area OCS Oil and Gas Lease Sales 208, 213, 216, and 222, and Proposed Western Planning Area OCS Oil and Gas Lease Sales 210, 215, and 218* (USDOJ MMS, 2008). A complete understanding of the long-term condition of environmental resources in the vicinity of Raccoon Island and the offshore borrow area resulting from the oil contact and spill-response operations is not available as effects may materialize over longer periods of time. The purpose of this EA is not to specifically evaluate the harm oil may cause to sensitive habitats or to wildlife through physical contact, ingestion, inhalation, and absorption, but to analyze whether possible exposure increases the sensitivity of environmental resources to impacts previously analyzed or introduces different impacts altogether. Circumstantial changes, new information and potentially different effects are discussed below for the following resources: coastal habitat, open water and benthic habitats, water quality, birds, marine mammals, sea turtles, fish and essential fish habitat, cultural resources, oil and gas infrastructure, and marine navigation.

### *Habitats*

Sections 3.2.1 – 3.2.4 of the 2009 EA describe the diverse habitats in the project area: inter-tidal and supra-tidal beach, open water, benthic (marine, coastal, and estuarine), emergent and submerged aquatic vegetation, marsh, and mangrove. Effects on habitats previously analyzed are described in Section 4.2.2 of the 2009 EA. Pipeline conveyance activities could also disturb benthic habitat because of shallow anchor drag, seafloor disturbance by mechanical equipment during pipeline placement and retrieval, pipeline movement, and direct or indirect modification of sand and muddy bed forms. Localized scour may occur around the pipelines once in place,

resulting in the creation of shallow depressions. No particularly sensitive habitat is known to exist between the borrow area and barrier island, as habitat is comparable to muddy and sandy, shallow innershelf and estuaries of coastal Louisiana. Since the pipeline is expected to be in place for a few months in a physically dominated environment, bottom-disturbing impacts associated with pipeline conveyance are expected to be minor, and seabed conditions are expected to return to a pre-dredging state relatively quickly following construction. Local, benthic communities may experience lethal and sublethal effects resulting from overburden, burial, and or temporary increases in turbidity. Re-colonization is expected to occur relatively rapidly in the affected areas since comparable habitat and benthic species are widely distributed and abundant in the vicinity of the proposed project.

The 2009 EA did not consider any effects related to the presence and persistence of weathered oil in these diverse, ecologically important habitats. In general, the supra-tidal habitats, including dune, mangrove, and high marsh, which are relatively limited on Raccoon Island, have not been affected. Swaths of inter-tidal habitat, including sandy beach and marsh, were oiled. Light oil, mousse, and tar balls were observed on sandy beach environments and worked into the sediment by wave and tidal stirring. Limited segments of the island were groomed following the mid-July oiling by BP response crews. In inter-tidal and supra-tidal back-barrier settings, oil is particularly difficult to clean up and may persist undisturbed for longer periods of time. In turbid open-water settings, such as the borrow area, dispersed and weathered oil may adsorb to sediments and settle to the seafloor. Weathering processes, including microbial consumption, will continue to break down oil (Graham et al., 2010). Remobilization of oil through re-suspension and erosion processes remains a risk, especially in oxygen-poor or oxygen-depleted environments where microbial breakdown may be limited.

The BOEMRE, NRCS, and CPRA have negotiated an additional requirement to prevent the potential use of or burial of contaminated sediment in the project area. Although the U.S. Fish Wildlife Service (FWS) has recommended that the sediment in the proposed borrow area be tested for any traces of oil prior to dredging (Appendix B; see discussion in Birds section), no effort has been made to test the borrow area to date. The Corps is responsible for permitting discharge of dredged material into the retention area on the bayside of Raccoon Island. It is the responsibility of NRCS to coordinate with the Corps and U.S. EPA to ensure sediment quality standards are met for deposited sediment. If NRCS tests the sediment, the protocols established in U.S. Environmental Protection Agency (EPA)/ Corps' Inland Testing Manual and U.S. EPA Region VI Quality Assurance Sampling Plan (May 30, 2010) should be followed to assess chemical contamination and toxicity in sediments as the result of the oil spill and dispersant use.

The NRCS, as an agent for the Louisiana Department of Wildlife and Fisheries, shall ensure continued compliance with applicable provisions of the Clean Water Act (CWA) and Rivers and Harbors Act (RHA) through coordination and consultation with the Corps. The Department of Army (DA) 404 permit (MVN-2008-0143-CQ), issued on June 18, 2008, requires that all proposed work be completed in accordance with approved plans and terms and conditions of the permit. Under the "Reevaluation of Permit Decision" clause, the Corps may also re-evaluate its permit decision at any time circumstances warrant, including if and when new significant information becomes available that was not previously considered. There is also a Special Condition that requires an amendment to the authorization if the proposed project requires any

additional work not expressly permitted or previously evaluated. Notification must be provided to the Corps prior to the commencement of any work.

The intent of additional mitigation is that no material from the borrow area will be extracted, transported, or placed if it does not meet applicable Federal requirements. Because of the ongoing dispersion and breakdown of oil derivatives, concentrated, surface oil is not expected at the time the project goes to construction. Although unlikely, if visual inspections or other observations indicate the presence of oil or oil sheen during operations, the recent scenario-based operational restrictions developed by the Corps for dredging operations will be followed. By avoiding the use of contaminated dredged material or burying oil sediments, no additional, incremental impacts from the proposed action are expected. As part of the Barrier Island Comprehensive Monitoring (BICM) Program, the Office of Coastal Protection and Restoration will monitor the distribution and state of habitat on the island following marsh creation and document any impacts.

### *Water Quality*

Section 3.1.6 of the 2009 EA describes water quality in the project area prior to the oil spill. The potential effects of the proposed action to water quality are discussed in Section 4.1.2. Effects related to pipeline conveyance activities and a changed environmental baseline are considered below. Turbidity generated during pipeline installation and retrieval activities may result in local and temporary deterioration of water quality. Leaky pipelines during actual sediment conveyance may result in local and temporary increases in turbidity. Accidental spills or discharges associated with pump operation are not expected, but the clean-up of such spills must be addressed in a marine pollution control plan. Routine discharges may occur from the operation of support vessels during pipeline-related activities, but any effects from such discharges are minor and were previously discussed in the 2009 EA. The construction operations will be under constant inspection by NRCS personnel or independent inspectors under contract (Broussard, personal communication). The inspections will monitor the discharge pipeline and pipeline corridor for evidence of any spillage or leakage. The contractor will be required to stop pumping if any spillage or leakage is evident and have the pipeline repaired promptly. The impacts associated with pipeline conveyance are expected to be minor.

The oil spill and spill operations have adversely impacted coastal water quality in the Gulf of Mexico. In particular, large volumes of subsea dispersants have been used to disperse oil; however, because of the distance of the project area from the Macondo well, concentrations of the dispersant/dispersed oil droplet clouds are expected to be at near undetectable levels (<http://www.epa.gov/bpspill/water.html>, accessed 11/10/2010). Since the project area is in the zone subject to seasonal hypoxia on the Louisiana-Texas shelf, low dissolved oxygen conditions remain a concern as microbial breakdown of oil may further reduce dissolved oxygen levels (LUMCON, 2010). Project construction in the winter will not coincide with peak seasonal hypoxia; if the project is delayed until the summer, it is likely that low dissolved oxygen conditions attributable to the spill will have normalized. There is a very low potential for concentrated streamers, sheen or tar balls to be present during dredging operations in the future; however, if oil is in the vicinity of the project, there may be a risk for contaminating sediment during dredging operations. According to NRCS and the Louisiana Department of Natural

Resources, dredging guidelines being implemented by the Corps will be followed that have established conditions when dredging and disposal is suitable and when operations must be shut down. Daily visual inspections of the borrow area, dredged material, and placement site for oil contamination will be performed. If re-suspended oil is observed in the borrow area, the NRCS will coordinate with the necessary parties to ensure contaminant testing is performed. By avoiding dredging operations in the presence of oil, no additional incremental effects from the proposed action are expected.

### *Birds*

Sections 3.2.5 and 4.2.2.5 of the 2009 EA address avian resources and potential effects to those resources from the proposed action. Raccoon Island is the largest rookery in Louisiana and host to thousands of migratory birds in the spring and fall. Timing restrictions have already been incorporated into the proposed action to avoid and minimize disturbance to birds during the most sensitive time. Since the pipeline from the offshore borrow area will not cross existing subaerial habitat, no impacts are expected from the proposed pipeline conveyance. No substantive impacts are expected for seabirds diving and foraging in the vicinity of the corridor since the relative footprint is small relative to available habitat.

Avian contact with oil may be lethal and sub-lethal (i.e., weight loss, anemia, and dehydration effects). Since the island was oiled in July, it is important to consider the condition of birds on the barrier island and evaluate any increased sensitivity to incremental effects of the proposed action. In mid-July 2010, a video crew from Cornell University's Lab of Ornithology observed Pelicans, Royal and Sandwich terns, and Black Skimmer chicks splashed or partially coated with oil (Carloss, personal communication). U.S. FWS and LDWF biologists confirmed the presence of several hundred birds with visible oil ranging from light to heavy. Most of the oiled birds were fledgling chicks (Carloss, personal communication). U.S. FWS biologists documented 68 oiled pelicans. LDWF has indicated that they believed that the oiling occurred offshore given the degree of oiling on the birds relative to oil observed on the island (Carloss, personal communication). Of the 68 heavily oiled pelicans observed on July 10, 14, and 15, less than ten have been rescued by LDWF biologists using established bird rescue protocols (all have since been released). According to LDWF, approximately 20,000 nesting pairs of birds were present in late August. Approximately 2,500 pairs are pelicans and the other birds are terns, gulls, and wading birds such as herons and egrets. Another 35,000 adults, immature birds, and chicks are estimated to be present; however, the population is expected to increase during the fall migratory season. In early August, unconfirmed bird mortalities were reported by amateur birders trespassing on the island, although there were no visible signs of oiling. Others have suggested that there was a short-term decline in population, although U.S. FWS and LDWF have disputed these assertions (Carloss, personal communication).

Although a few visibly oiled birds have been transported for cleaning, observation, and release, no systematic intervention has been conducted since the initial intervention in mid July. U.S. FWS and LDWF biologists have been monitoring oiled birds following carefully crafted protocols that consider the overall health and safety of the bird colony when considering when and how to intervene and recover oiled birds. The protocols require that bird colonies are not disturbed to capture birds unless a large percentage of the birds are oiled or heavily oiled

individuals may be accessible without causing increased colony stress or oiling. According to Federal and state officials, the number and extent of oiled birds observed on Raccoon Island did not meet the requirements of the protocols to risk capturing many of the oiled birds and disturbing the adults and chicks not currently impacted by oil.

Although a remote possibility, oiled species may be present on Raccoon Island or in adjacent coastal waters in the future. The U.S. FWS is currently engaged in monitoring efforts to track and evaluate longer-term impacts to birds at the individual and community level (DOI U.S. FWS, 2010). The NRCS and BOEMRE requested specific guidance from the U.S. FWS and LDWF concerning the project. Both entities support moving forward with the proposed action provided no contaminated sediment is used in the restoration area. The U.S. FWS has reviewed the project in accordance with the provisions of the Endangered Species Act and the Migratory Bird Treaty Act and maintains that no additional incremental effects are expected since project features will not be constructed on the existing island; sand placement will occur only in open water habitat along the northern side of the island (Appendix B). The U.S. FWS recommended that the sediment in the proposed borrow area be tested for any traces of oil prior to dredging. Likewise, U.S. FWS requested that NRCS coordinate with the U.S. FWS's Natural Resource Damage Assessment and Restoration (NRDAR) team to notify them that the project would be constructed in an area affected by the oil spill to ensure that it would not conflict with or preclude any NRDAR recommendations. Adverse impacts are expected to be negligible to minor since any impacts will be localized and short-term, restricted to behavior modifications and temporary displacements from preferred nesting, roosting, or feeding areas caused by the temporary disturbances of dredging and placement of fill materials. The project is scheduled to take place during the non-nesting period to further minimize these effects to the degree possible. Since construction activities are confined to the eastern portion of the island, nearby, habitat on the gulfside and western sand spit will not be disturbed and will be available for use. Over the long-term, the new habitat created by the proposed project will be available for potential nesting and foraging by diverse bird groups and individuals.

### *Marine Mammals*

Sections 3.2.5, 3.3.1, 4.2.2.5, and 4.3.2 of the 2009 EA describe marine mammals likely to be present in the project area and the potential effects to those species from the proposed action. Due to the extreme shallow waters (<30 ft) within the project area, no whales species are likely to be present in the project area. The West Indian manatee is the only listed marine mammal that may be present in the project area. Manatees and unlisted dolphin species, such as bottlenose and Atlantic spotted dolphins, may occur in and around the shallow waters in the vicinity of the borrow area, or in the region between the borrow area and placement site to be transited by vessels. Their presence is transient, as manatees and dolphins generally are highly mobile and are known to range over broad areas of the gulf. The actual occurrence of a species in the area depends on the availability of suitable habitat, season of the year relative to species' temperature tolerance, migratory habitats, food availability, and other environmental factors. A suite of mitigation concerning vessel activities is currently required to minimize the risk of collisions (NRCS, 2009). The use of a cutterhead dredge and submerged pipeline to convey dredged material should reduce the project's overall risk for collisions with marine mammals since fewer trips by larger hopper vessels and/or tugs and scow barges will occur. There is some collision

risk associated with the transport, placement, maintenance, and retrieval of pipeline, but it is relatively small since vessels will be slow moving and lengths of pipeline during placement are floated. Similarly, the use of pumps and pipeline may introduce different levels and frequencies of sound into the marine environment (Clarke et al., 2002). The source levels are not expected to exceed threshold levels (Thomsen et al., 2009), and marine mammals that venture into the project area are expected to show avoidance behavior.

The oil spill and related activities have impacted marine mammals that have come into contact with oil, dispersant, and clean-up activities. There has been one documented stranding and mortality of a bottlenose dolphin on Raccoon Island following the oil spill (<http://www.nmfs.noaa.gov/pr/pdfs/oilspill/marinemammals.pdf>, accessed 11/10/2010). The mortality has not been attributed to the oil spill. Exposure to hydrocarbons persisting in the sea may result in various sub-lethal impacts (e.g., decreased health, reproductive fitness, and longevity; and increased vulnerability to disease), soft tissue irritation, respiratory stress from inhalation of toxic fumes, food reduction or contamination, direct ingestion of oil and/or tar, and temporary displacement from preferred habitats or migration routes (NOAA NMFS, 2010). The best available information does not provide a complete understanding of the effects of the spilled oil and spill-response operations on marine mammals and the future status of marine mammals. The increased human presence (e.g., vessels) may contribute to changes in behavior and/or distribution, thereby potentially stressing animals further and perhaps making them more vulnerable to various physiologic and toxic effects. There are assessment efforts underway to document the range of actual effects to marine mammals in the Gulf of Mexico from the Macondo well blowout and spill (<http://www.gulfspillrestoration.noaa.gov/oil-spill/case-documents/>, accessed 11/10/2010). For marine mammals that may be experiencing additional stress impacts from the spill and spill-response operations, no additional incremental impacts from the proposed action are expected for the following reasons: limited numbers of marine mammals are expected in the project area; limited vessel-borne operations in the project area; oil remnants are expected to be highly degraded at the time of construction; and spill-response operations will be largely discontinued at the time of construction. The proposed action is not expected to exacerbate any chronic physiological or toxic effects that marine mammals may be experiencing through consumption of contaminated prey and/or residual exposure of oil. A suite of specific measures are required to further reduce potential for vessel harassments or collisions, including avoidance buffers and speed restrictions.



## *Sea Turtles*

Sections 3.3.1 and 4.3.2. of the 2009 EA describe sea turtles present in the project area and potential effects to those species from the proposed action. The endangered Kemp's ridley, hawksbill and leatherback sea turtles, as well as the threatened loggerhead and green sea turtles, occur in the Gulf of Mexico. Of these five sea turtle species, the loggerhead and ridley sea turtles are relatively common in the nearshore waters of the Gulf of Mexico where they forage, and may occur within the project area. Sea turtles generally do not nest on Raccoon Island, although they may forage in and transit through the project area. Juvenile and sub-adult Kemp's ridley sea turtles occupy shallow coastal waters, where substrates are sand or mud and crabs are abundant. Small turtles are generally found nearshore from May through October. Adults and juveniles move offshore to deeper, warmer water during the winter. The proposed action is expected to be take place during this time, although it may be delayed until early summer. Minor impacts may be associated with pipeline conveyance activities if pipeline tending and associated noise, including pump operation, disrupts foraging or other behavior in the vicinity of the corridor. There is a small collision risk associated with vessel traffic and pipeline transport and placement activities. Avoidance by swimming or bottom-resting sea turtles is expected since vessel speeds will be slow and pipeline lengths are relatively short and pipelines are set slowly into place by flooding. Mortality and/or sublethal injury are not expected.

Sea turtles have been impacted by the oil spill and related spill-response operations including the application of dispersant, construction of a sand berm along coastal Louisiana, beach clean-up and grading operations, and a systematic nest relocation and hatchling release program led by the U.S. FWS across the eastern Gulf (<http://www.nmfs.noaa.gov/pr/pdfs/oilspill/turtles.pdf>, accessed 11/10/2010). The sea turtle nest translocation program was discontinued on August 19, 2010. The hatchlings resulting from those translocations were all released as of September 9, 2010. Relocation trawling and hopper dredging for berm construction offshore the Chandeleur Islands led to unprecedented sublethal (191 sea turtles) and lethal (6 to 9 sea turtles) take in late July and August (<http://el.ercd.usace.army.mil/seaturtles/project.cfm?Id=654&Code=Project>, accessed 8/30/2010). NMFS recommended a temporary ban on hopper dredging in the Gulf of Mexico because of the rare abundance of sea turtles and unusual number of drownings during trawling. Although the temporary ban expired on October 1, 2010, these summer occurrences suggest a potentially weakened state or increased sensitivity of sea turtles. It is expected that sea turtles may continue to be suffer detrimental effects of the oil spill via the waters that they drink and swim in, as well as via the prey they consume. Contact with petroleum and consumption of oil and oil-contaminated prey has the potential to cause chronic (longer-term lethal or sub-lethal oil-related injuries) and acute (spill-related deaths occurring during a spill) effects on turtles (NOAA NMFS, 2010)). As a result, sea turtles in the area of the proposed action may be under higher levels of stress than normal and exhibit changes in normal behavior (e.g., frequent surfacing) that may put them at higher risk to vessel strike (Lutcavage et al., 1995; Shigenaka et al., 2003). The use of cutterhead dredges in the Gulf has been previously thought to present a discountable risk of sea turtle interactions. The presence of attending vessels in the pipeline corridor as compared to more frequent trips of hopper plants or tugs and scow barges lowers the risk for collisions.

The best available information does not provide a complete understanding of the effects of the

spilled oil and spill response operations on sea turtles; however, there are assessments underway to document the range of actual effects to sea turtles in the Gulf of Mexico from the Macondo well blowout/spill (<http://www.gulfspillrestoration.noaa.gov/oil-spill/case-documents/>, accessed 11/10/2010). The magnitude and longevity of effects, which in part depend on life stage of the species, is unknown, but the status of marine and coastal habitat appears to be improving given the recent decrease in the number of documented strandings ([http://www.noaa.gov/features/04\\_resources/seaturtles2.html](http://www.noaa.gov/features/04_resources/seaturtles2.html), accessed 11/10/2010). The BOEMRE has coordinated with NMFS Protected Resources Division (PRD) to ensure that the proposed activity did not present any increased risk to sea turtles in light of potential increased sensitivity. NMFS PRD concurred that it is unlikely that cutterhead dredging operations will have any adverse impacts on sea turtles or other listed species that may be present at the time in the project area (Hawk, personal communication). No observer requirements on the plant or discharge pipeline are necessary at this time; however, if hopper dredging is pursued, BOEMRE and NRCS may need to re-initiate consultation with NMFS PRD. For sea turtles that may be experiencing additional stress/sublethal impacts from the ongoing Macondo blowout, spill, and spill-response operations, no additional incremental impacts from the proposed action are expected due to its distance from the spill location and relative timing.

### *Fish and Essential Fish Habitat*

Sections 3.2.6, 3.3.2, 4.2.2.5, and 4.3.2 of the 2009 EA describe fish and essential fish habitat present in the project area and potential effects to those resources from the proposed action. Minor impacts to fish and fish habitat are expected from proposed pipeline conveyance activities, and any impacts, such as local and temporary interruption of foraging, will be related to localized and temporary impacts to benthic habitat and benthic community impacts previously discussed (Williams, personal communication). Since equivalent habitat is abundant in the immediate vicinity of the proposed corridor, it is expected that fish will avoid any activities that may locally and temporarily increase turbidity and/or noise in the marine environment.

Fish may also exhibit increased sensitivity to project-related impacts because of the recent oil spill. Although recreational and commercial fishing were greatly curtailed in the Gulf of Mexico during the spill, fish and essential fish habitat may have been and continue to be adversely affected by ongoing exposure to or contact with oil and dispersant (Benfield and Shaw, 2005). Specific effects of oil on organisms can include direct lethal toxicity, sublethal disruption of physiological processes, effects of direct coating by oil, incorporations of hydrocarbons in organisms causing tainting or accumulation in the food chain and changes in biological habitat (Graham et al., 2010). At a symposium on gulf-wide oil spill effects, researchers warned about the potential for trophic cascading effects related to the oil spill if a single key species or multiple species in the gulf ecosystem is subject to dramatic stress or decline in population size (<http://www.mote.org/index.php?src=news&submenu=NEWS&srctype=detail&category=Newsroom&refno=429>, accessed 11/10/2010). In general, adult fish tend to avoid contact with oil in the water column. The fisheries resources most at risk are juvenile fish, species whose eggs and larvae float near the water surface, and species whose reproduction cycles were timed when oil was most concentrated at the water's surface. A species whose reproduction has a narrow temporal peak that coincides with severe oil concentrations may sustain enough losses to have measurable effects on the affected area's year class. Fish in early developmental stages are

generally more susceptible to sub-lethal toxic effects, which may lead to abnormal development. The effects of dispersant application and the dispersant mixed with oil is relatively unknown for individual fish species. However, dispersant levels are expected to be undetectable at the project area at the time of construction given the relative distance from the Macondo well and time elapsed since last application.

Fishing closures in the Gulf of Mexico peaked at 88,522 square miles in early June 2. The LDWF lifted the state water closure in the project area in mid-August. NMFS re-opened the recreational and commercial fishery in federal waters in the project area in early October. Sensory analyses of finfish and shrimp showed no detectable oil or dispersant odors or flavors in samples, and results of chemical analysis for oil were well below levels of concern ([http://sero.nmfs.noaa.gov/sf/deepwater\\_horizon/FB10-085\\_Reopening\\_west\\_delta\\_100110.pdf](http://sero.nmfs.noaa.gov/sf/deepwater_horizon/FB10-085_Reopening_west_delta_100110.pdf), accessed 11/10/2010). The unprecedented scale and length of the fishing closure may contribute to increased abundances in the project area and overprint any adverse effects related to the oil spill. NRDA assessments will be critically important in the evaluation of long-term effects to fish and essential fish habitat. British Petroleum (BP) will fund a robust monitoring program of inshore, nearshore and offshore fish and fish habitat over the next three years ([http://www.piersystem.com/external/content/document/2911/905579/1/NR\\_FISH\\_Louisiana\\_Fisheries\\_Monitoring.pdf](http://www.piersystem.com/external/content/document/2911/905579/1/NR_FISH_Louisiana_Fisheries_Monitoring.pdf), accessed 11/10/2010). Oil which has collected and persists in the back barrier marsh and inter-tidal habitat along Raccoon Island could locally degrade spawning and foraging habitat for select species; however, comparable habitat unaffected by oil should be available in and adjacent to the immediate project area. Because of the distance from the spill location and relative timing of construction, no incremental impacts from the proposed action are expected. Provided the mitigation intended to prevent the burial or use of contaminated sediment in dike creation and marsh fill is implemented, the proposed action will provide additional foraging habitat and help ameliorate conditions which may cause stress to vulnerable fish species.

### *Cultural Resources*

Sections 3.4.1, 3.4.2, and 4.4.2 of the 2009 EA address the potential for cultural resources in the project area and any effects related to the proposed action. Bottom-disturbing activities associated with pipeline conveyance of dredged material may result in additional impacts not previously considered. The placement and retrieval of submerged pipeline, anchoring during pipeline placement, use, maintenance and retrieval, anchoring/spudding associated with installation and use of in-line booster pumps, and indirect effects related to scour around submerged pipelines could disturb cultural resources if present in the pipeline corridor.

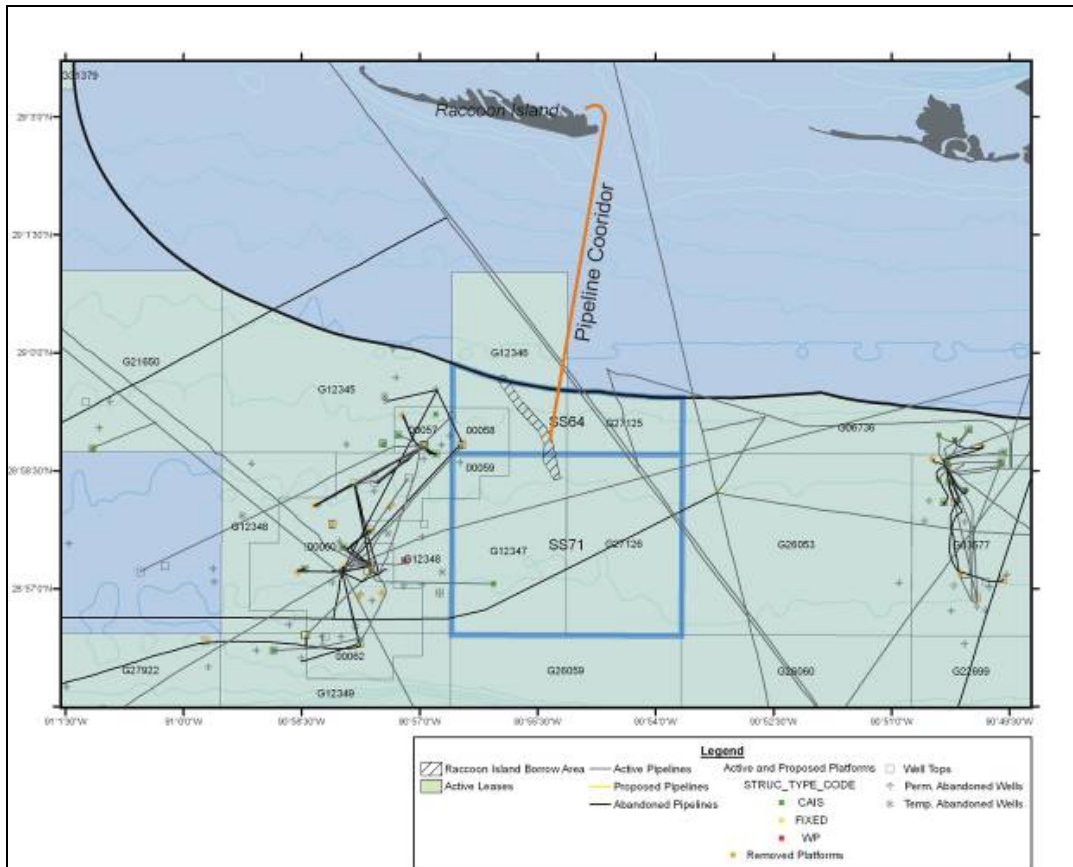
As the designated lead for National Historic Preservation Act (NHPA) Section 106 compliance, the NRCS has re-initiated the Section 106 consultation with the Louisiana State Historic Preservation Officer (SHPO) to identify the potential for and possible effects to cultural resources present in the pipeline corridor. The NRCS has reviewed the cultural resource database, survey maps, and associated files housed at the Division of Archaeology in the Louisiana Department of Culture, Recreation & Tourism, Office of Cultural Development (Steyer, personal communication). No documented cultural resource sites or shipwrecks were identified in the immediate vicinity of the pipeline corridor. The nearest four listed sites were

located several miles away from the currently proposed corridor. There is still a potential to encounter and/or cause adverse impacts to unidentified submerged cultural resources when the seafloor is disturbed. To better assess site conditions, the NRCS is reviewing multibeam and side scan sonar survey data (available from the National Ocean Service (NOS) Office of Coast Surveys) that provides coverage over the area of potential effect. In addition, the NRCS will require the dredge contractor perform a magnetometer survey of the pipeline corridor, as part of a hazards assessment, prior to any construction activities. Any identified resources will be avoided or the pipeline will be re-routed. If the available geophysical data cannot be used for the purpose of assessment, the NRCS will ensure a professional marine archaeologist performs the necessary archaeological/cultural resources survey and assessment encompassing an Area of Potential Effect (APE) that includes the full-range of bottom-disturbing activities (Broussard, personal communication). This approach has been endorsed by the SHPO (Rachel Watson, email communication to C. Steyer, 11/1/2010). The assessment with findings and recommendations will be submitted for review and concurrence by the SHPO. The report will also be submitted to the Chitimacha and the Gena Band of Choctaw Indian tribes and BOEMRE for comment. If potential cultural resources are discovered within the APE, mitigation measures in the form of exclusion/buffer zone areas will be developed similar to those described in the 2009 EA. The existing chance finds clause described in the 2009 EA will apply to this aspect of the project; therefore, if cultural resources are discovered during any phase of the construction activities, the dredge contractor must immediately cease activities that have resulted in or may result in the destruction or damage of cultural resources. Reporting shall occur immediately to the NRCS so that the appropriate authorities, including BOEMRE and Corps, can be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Additional mitigation measures may be developed to ensure that further damage to the resource is avoided.

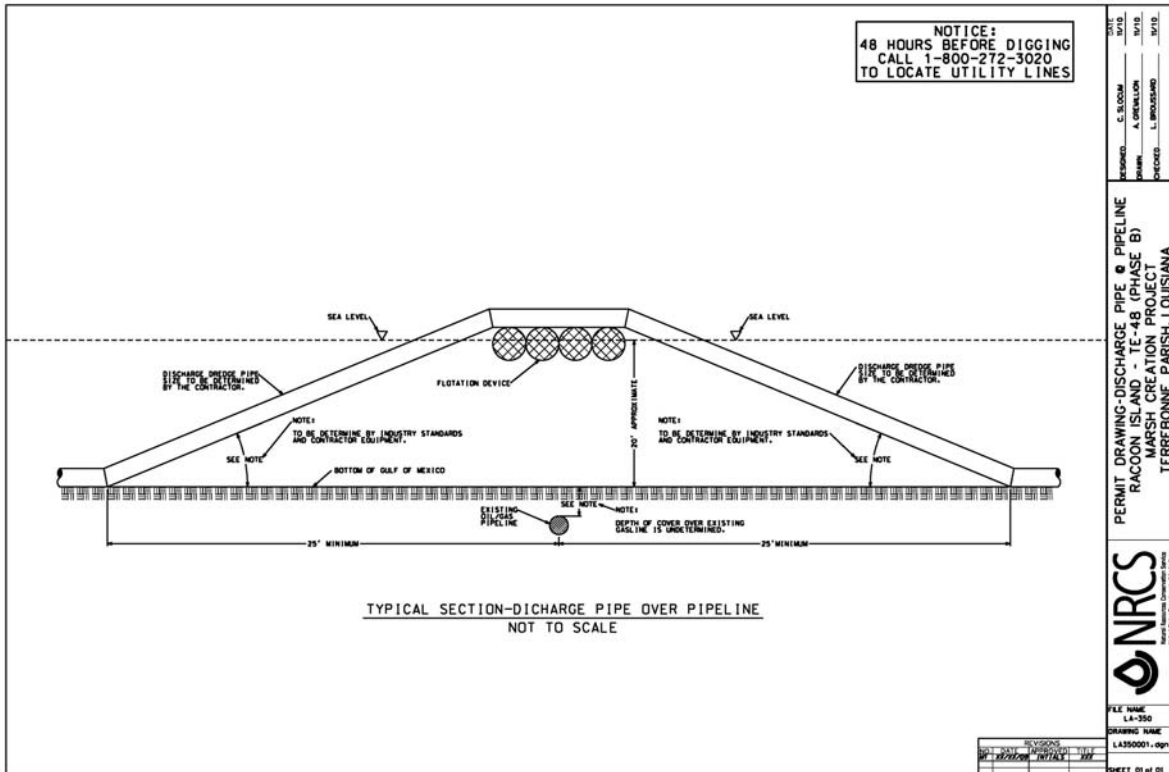
#### *Oil and Gas Infrastructure and Marine Navigation*

Sections 3.5 and 4.5.2.3 of the 2009 EA identify oil and gas infrastructure present in the project area and describe potential effects to infrastructure from the proposed action. The potential for direct impacts related to bottom-disturbing activities required for pipeline conveyance has not been previously evaluated. Potential impacts can be avoided or minimized by establishing and enforcing activity exclusion zones. Table 5 of the 2009 EA (p. 40) identifies the host of pipelines present in the vicinity of the borrow area. Two 30-inch natural gas pipelines operated by Trunkline Gas Company LLC and regulated by the Department of Transportation will be crossed by the conveyance pipeline in state waters (Figure 6). No other pipelines are documented in the pipeline corridor. The NRCS will require the dredge contractor to perform a magnetometer survey of the pipeline corridor to identify the exact location of all oil and gas infrastructure. The exact pipeline corridor and pipeline crossing locations will be identified by the dredge contractor, per NRCS contract requirement, in a dredging operations plan. The NRCS will require that the dredging contractor float the pipeline over any oil/gas infrastructure unless another safe alternative is employed (Figure 7). The contractor will not be permitted to operate any equipment or lay any pipe closer than 25 feet on either side of the oil/gas infrastructure. This buffer will only be necessary in state waters in the vicinity of where the pipeline crossing occurs.

The contractor will be required to coordinate with the NRCS, Corps, BOEMRE, and Trunkline prior to and during the construction window. The NRCS will specifically request that Trunkline be present when the conveyance pipeline is placed in the vicinity of their gas pipeline. Mobilization and/or movement of pipelines may need to be monitored by NRCS or the dredge contractor if submerged pipeline remains in place during severe storm conditions, or needs to be anchored or weighted in order to avoid excessive movement. Surface pipeline, riser pipeline, and booster pump equipment and submerged pipeline may need to be demobilized prior to storm events to avoid any damage to adjacent infrastructure. These various aspects of the dredging operation and coordination will be under monitored and inspected by NRCS personnel or its representatives (Broussard, personal communication).



**Figure 6: Oil and gas infrastructure in the vicinity of the proposed pipeline corridor. The proposed pipeline will be floated over the Trunkline Gas Company pipelines; the crossing will likely occur in state waters.**



**Figure 7: Section of proposed pipeline crossings**

All pipeline conveyance operations will be conducted in a manner to minimize any obstruction to navigation. The Corps, in consultation with the U.S. Coast Guard, may impose additional conditions to ensure navigational safety and minimize risk to existing oil and gas pipeline infrastructure (Blanke, personal communication). The NRCS will ensure that all equipment is disassembled and removed from the pipeline corridor upon completion of the work so that there are no remaining obstructions to navigation.

Effects Conclusion

Per the best available information, there have been no changes to date in the project area or proposed action that would lead to a conclusion of significant effects. Potential impacts, including those associated with pipeline conveyance of dredged material, are still generally considered reversible because they will be minor to moderate, localized, and short-lived. As discussed in the 2009 EA, the natural resource benefits anticipated from implementing this project would enhance and sustain dune, swale, and inter-tidal habitat within the project area. The proposed action would increase critical avian habitat and both quality and acreage of back-barrier fisheries habitat. In addition, the preferred project would result in increased storm surge and wave protection for natural environments and infrastructure on and behind the barrier islands to be restored. The mitigations specified in the 2009 EA will be necessary to ensure environmental protection, consistent environmental policy, and safety as required by NEPA. The BOEMRE, in coordination with the NRCS and the Louisiana CPRA have devised new requirements to avoid any potential for unanticipated impacts due to conditions created by the Macondo spill and spill-response operations. Additional mitigation measures may be developed

by the NRCS and Corps to minimize or avoid impacts to cultural resources, oil and gas infrastructure, and/or navigation because of pipeline conveyance operations.

Per the MOA, “no activity or operation authorized by the BOEMRE at the designated offshore borrow area shall be carried out until the BOEMRE has determined that each such activity or operation described in the ‘Construction Solicitation and Specifications Plan’ (Plan) will be conducted in a manner that is in compliance with the provisions and requirements of the negotiated agreement. Any modifications to the Plan that affect the designated offshore borrow areas must be approved by the BOEMRE prior to implementation of the modification.” If the submitted plan is revised and/or deviates significantly from the proposed project plan, the BOEMRE will evaluate, prior to construction, the potential effects of any substantial change to the scope of the proposed action.

## 5 MITIGATION MEASURES

All mitigation measures originally proposed in the 2009 EA remain relevant to the proposed action. The BOEMRE, coordinating with the NRCS and CPRA, negotiated an additional requirement to prevent the potential use of or burial of contaminated sediment:

Prior to any extraction, transportation or placement of OCS sand resources from the Raccoon Island Borrow Area, NRCS will ensure compliance with applicable provisions of the Clean Water Act through coordination and consultation with the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. No material from the Raccoon Island Borrow Area will be extracted, transported, or placed that does not meet applicable Federal requirements.

The new term is included to avoid to the maximum extent practicably the potential for the burial of *in situ* contaminated material, placing sand material dredged from those offshore borrow areas that may be contaminated, and/or placing sediment contaminated during dredging operations. Without the necessary approvals in place, no material from the borrow area will be extracted, transported or placed that does not meet applicable Federal requirements.

Other design measures proposed by the NRCS and incorporated into the proposed action and other mitigation and monitoring specifically identified or referenced in this EA under other Federal or State authorities are required to avoid or minimize adverse environmental effects. Mitigation concerning impacts to birds, cultural resources, oil and gas infrastructure, and navigation resources from pipeline conveyance are identified in this EA for completeness. The BOEMRE is not responsible for the enforcement of mitigation or monitoring requirements that are required under other Federal or State authorities.



## **6 COORDINATION AND CONSULTATION**

Individuals contacted or consulted:

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Ron Boustanny, U.S.D.A. Natural Resources Conservation Service  
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Michael Carloss, Louisiana Department of Fish and Wildlife  
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**8 APPENDICES**

**U.S. Department of Agriculture Natural Resource Conservation Service.  
Supplemental Environmental Assessment for the Raccoon Island Shore Protection /  
Marsh Creation Project (March 2009)**

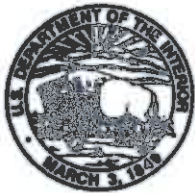
**U.S. Fish and Wildlife Service Section 7 Concurrence (August 24, 2010)**

**U.S. Department of Agriculture Natural Resource Conservation Service.  
Supplemental Environmental Assessment for the Raccoon Island Shore Protection /  
Marsh Creation Project (March 2009)**

Available for download at:

<http://www.boemre.gov/sandandgravel/PDF/RaccoonIslandPhaseB2009.pdf>

**U.S. Fish and Wildlife Service Section 7 Concurrence (August 24, 2010)**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.

Suite 400

Lafayette, Louisiana 70506

August 24, 2010

Mr. Ron Boustany  
Natural Resources Specialist  
Natural Resources Conservation Service  
646 Cajundome Boulevard, Suite 180  
Lafayette, Louisiana 70506

Dear Mr. Boustany:

Please reference your July 28, 2010, electronic mail requesting our updated review of and concurrence with the Natural Resources Conservation Service's (NRCS) determination that Phase B of the proposed Raccoon Island Shore Protection/Marsh Creation Project is not likely to adversely affect the threatened piping plover (*Charadrius melodus*), or its designated critical habitat. Authorized by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), Phase B of the proposed project would involve creating approximately 68 acres of barrier island habitat by installing a retention dike and depositing dredged material on the bayside of the island, in Terrebonne Parish, Louisiana. A secondary project objective is to provide additional avian habitat by planting woody and herbaceous species on any supratidal areas that are created. The U.S. Fish and Wildlife Service (Service) has reviewed the information you provided, and offers the following comments in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), and the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.).

The piping plover, as well as its designated critical habitat, occur on Raccoon Island. Piping plovers winter in Louisiana, and may be present for 8 to 10 months annually. They arrive from the breeding grounds as early as late July and remain until late March or April. Piping plovers feed extensively on intertidal beaches, mud flats, sand flats, algal flats, and wash-over passes with no or very sparse emergent vegetation; they also require unvegetated or sparsely vegetated areas for roosting. Roosting areas may have debris, detritus, or micro-topographic relief offering refuge to plovers from high winds and cold weather. Because the suitability of a particular site for foraging or roosting is dependent on local weather and tidal conditions, plovers may move among sites as environmental conditions change. Piping plover critical habitat identifies specific areas that are essential to the conservation of the species. The primary constituent elements for piping plover wintering habitat are those habitat components that support foraging, roosting, and sheltering and the physical features necessary for maintaining the natural processes that support those habitat components. Constituent elements are found in geologically dynamic coastal areas that contain intertidal beaches and flats (between annual low tide and annual high tide), and associated dune systems and flats above annual high tide with no or very sparse emergent vegetation. On Raccoon Island, designated critical habitat “. . . includes the entire island where primary constituent elements occur to the MLLW [mean low low water]” (66 Federal Register, No. 132, Page 36127).





Phase A (i.e., construction of eight rock breakwaters on the Gulf side of the island) of the subject CWPPRA project was completed in 2006, while Phase B received approval from the CWPPRA Task Force for construction funding in 2008. Phase B would involve creating approximately 68 acres of barrier island habitat on the bayside as a northward extension of the existing island. Proposed structural features include constructing a retention dike between two peninsulas to enclose a large open water area, then backfilling that area with hydraulically dredged material. Non-structural features would involve planting any newly created supratidal areas with woody and herbaceous plant species to complement the existing island habitat. Protection and creation of woody habitat would ensure the availability of neotropical migratory bird habitat, which is important during both the spring and fall migrations, and colonial waterbird nesting habitat.

According to the project design, no work or project features would be constructed on the existing island but would be created in open water along the northern shoreline of the island. The short-term effects of Phase B of the subject CWPPRA project may include a temporary localized increase in turbidity and suspended solids within the project area, and periodic noise disturbance to any birds loafing or roosting on the island and/or foraging within the project area. Access to aquatic prey organisms may also be temporarily limited by certain structural measures in the immediate project area on the north side of the island; however, birds should not be significantly affected due to the abundance of nearby suitable habitat located on the Gulf side of the island and on the large sand spit at the western end of the island.

Based on your letter, short-term effects during construction of Phase B may temporarily disturb existing piping plover critical habitat by increasing turbidity and suspended solids within the project area; however, no use of heavy machinery would be necessary on the existing island. All work (e.g., construction of retention dikes and deposition of fill material) and access to the project area would occur in open water on the bayside of the island. In the long-term, NRCS anticipates that construction of the terminal groin and additional breakwaters (Phase A) would offset the high rate of shoreline retreat and land loss on the Gulf-side of Raccoon Island, while the creation of additional barrier island habitat on the bayside of the island (Phase B) would help to further stabilize the existing habitat and any new habitat created (sand/land accretion) by the additional breakwaters. Overall, the NRCS believes that the entire project as proposed would protect and increase existing foraging and roosting habitat for the piping plover. Based on that information, the Service concurs with the NRCS' determination that Phase B of the proposed action is not likely to adversely affect the piping plover or its designated critical habitat.

West Indian manatees occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams in Louisiana during the summer months (i.e., June through September). Manatee occurrences appear to be increasing in Louisiana, and they have been regularly reported in the Amite, Blind, Tchefuncte, and Tickfaw Rivers, and in canals within the adjacent coastal marshes of Louisiana. They have also been occasionally observed elsewhere along the Louisiana Gulf coast. The manatee has declined in numbers due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution. Cold weather and outbreaks of red tide may also adversely affect these animals.

Although manatees may occasionally occur along coastal Louisiana during the summer months, they are rarely observed foraging or loafing in offshore waters in Louisiana due to lack of suitable foraging areas and sources of freshwater in that environment. Because the proposed project would

be constructed during cooler months (to avoid disturbance of colonial nesting water birds) there is little likelihood of manatees occurring within the proposed project area during construction activities. Accordingly, the Service has determined that the proposed project is not likely to adversely affect the West Indian manatee.

Endangered and threatened sea turtles forage in the nearshore waters, bays and sounds of Louisiana. When sea turtles leave the aquatic environment and come onshore to nest, the Service is responsible for consultation. Because sea turtles have rarely been known to nest in Louisiana and the proposed action would not occur on beach areas during the sea turtle nesting season, the Service has determined that the proposed project is not likely to adversely affect nesting sea turtles. Please note, however, that the National Marine Fisheries Service (NMFS) is responsible for aquatic marine threatened or endangered species. Please contact Eric Hawk (727/824-5312) at the NMFS Regional Office in St. Petersburg, Florida, for information concerning those species in the aquatic environment, especially regarding dredging at the borrow site.

No further ESA consultation with the Service will be necessary for the proposed action unless there are changes in the scope or location of the project elements, or the project has not been initiated within one year. If the proposed action has not been initiated within one year, follow-up consultation should be accomplished with the Service prior to making expenditures to ensure that the threatened and endangered species information is up-to-date. If the scope or location of the proposed action is changed, consultation should occur as soon as such changes are made.

The proposed project may also temporarily affect nesting habitat for the brown pelican (*Pelecanus occidentalis*), which was officially removed from the Federal List of Endangered and Threatened Species on December 17, 2009. Brown pelicans are currently known to nest on Raccoon Island. In spring and summer, nests are built in mangrove trees or other shrubby vegetation, although occasional ground nesting may occur. Brown pelicans feed along the Louisiana coast in shallow estuarine waters, using sand spits and offshore sand bars as rest and roost areas. Major threats to this species include chemical pollutants, colony site erosion, disease, and human disturbance. Although the brown pelican has been removed from the List of Endangered and Threatened Species, brown pelicans and their nests continue to be protected under the MBTA. To minimize disturbance to nesting colonies of brown pelicans, all activity occurring within 2,000 feet of a rookery should be restricted to the non-nesting period (i.e., September 15 through March 31).

Your electronic mail also requests specific guidance regarding any recommendations we may have regarding potential effects to the project as a result of the recent Deepwater Horizon Mississippi Canyon Well #252 oil spill. Based on the project information provided, the NRCS would utilize borrow material dredged from Ship Shoal on the Outer Continental Shelf to construct the marsh creation area as soon as their proposal is approved by the Bureau of Ocean Energy Management, Regulation, and Enforcement (formerly the Minerals Management Service). The Service recommends that any borrow sediments to be used for the subject CWPPRA project be adequately tested for any traces of oil related to the Deepwater Horizon incident prior to being deposited in the marsh creation area of Raccoon Island to ensure that contaminated sediments are not being utilized for the restoration project. We also recommend that NRCS contact the Service's appropriate Natural Resource Damage Assessment and Restoration (NRDAR) team to notify them that this project would be constructed in an area that has been affected by the Deepwater Horizon oil spill

and to ensure that the subject project would not conflict with or preclude any NRDAR recommendations.

We appreciate the NRCS' continued cooperation in the conservation of threatened and endangered species and their critical habitats, migratory birds, and colonial nesting waterbirds. If you have any questions or require additional information, please contact Ms. Brigitte Firmin (337/291-3108) of this office.

Sincerely,



James F. Boggs  
Supervisor  
Louisiana Field Office

cc: FWS, Panama City, FL (Attn: Patty Kelly)  
Corps of Engineers, New Orleans, LA  
NMFS, Baton Rouge, LA  
LDNR, CMD, Baton Rouge, LA  
OCPR, Baton Rouge, LA  
LDWF, Office of Wildlife, Baton Rouge, LA (Attn: Mike Carloss)  
LDWF, Natural Heritage Program, Baton Rouge, LA



## **The Department of the Interior Mission**

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

## **The Bureau of Ocean Energy Management, Regulation and Enforcement Mission**

As a bureau of the Department of the Interior, the Bureau of Ocean Energy Management, Regulation and Enforcement's (BOEMRE's) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

The BOEMRE strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending BOEMRE's assistance and expertise to economic development and environmental protection.