

APPENDIX G-2:

FINDING OF NO SIGNIFICANT IMPACT

For the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project

Overview and Background

The Department of the Interior (DOI), National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA), and United States Department of Agriculture (USDA), (collectively “Federal Trustees”) have conducted an environmental assessment (EA) for the construction of over four miles of breakwaters, five acres of intertidal reef habitat and 267 acres of subtidal reef habitat at four locations across the Mississippi Gulf Coast. The Restoring Living Shorelines and Reefs in Mississippi Estuaries Project will be implemented by the Mississippi Department of Environmental Quality. The project is an early restoration project to be funded as part of the *Deepwater Horizon* Natural Resource Damage Assessment and Restoration process in accordance with the “Framework for Early Restoration Addressing Injuries Resulting from the *Deepwater Horizon* Oil Spill.” This project is one of several projects to be implemented by the Trustees as identified in the Final Phase IV Early Restoration Plan and Environmental Assessments (Final Phase IV ERP/EA) to accelerate restoration, and represents an initial step toward the restoration of natural resources injured by the *Deepwater Horizon* oil spill.

Under the Oil Pollution Act of 1990, damages recovered from parties responsible for natural resource injuries are used to restore, replace, rehabilitate and/or acquire the equivalent of the injured natural resources and services they provide (33 U.S.C. § 2706). When Federal Trustees are involved, these restoration activities are subject to the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq. Therefore, the Federal Trustees prepared this EA to evaluate the potential environmental impacts associated with the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project. This EA tiers from the Final Phase III Early Restoration Plan and Programmatic Environmental Impact Statement (Final Phase III ERP/PEIS) prepared by the Trustees in 2014 and is prepared in accordance with NEPA, Council on Environmental Quality (CEQ) NEPA regulations, and all applicable agency NEPA regulations and guidance.

Summary of Proposed Action and Alternatives

The CEQ NEPA regulations require the decision maker to consider the environmental effects of the proposed action and a reasonable range of alternatives, including the No Action Alternative, (40 CFR § 1502.14). The EA addresses the Proposed Action and a No Action alternative. The purpose of the proposed action is to restore secondary productivity through the placement of intertidal and subtidal reefs and the use of living shoreline techniques including breakwaters. Over time, the breakwaters, intertidal and subtidal restoration areas would develop into living reefs that support benthic secondary

productivity including but not limited to oysters/bivalves mollusks, annelid worms, shrimp, and crabs. Breakwaters would reduce shoreline erosion as well as marsh loss.

Under the proposed action, the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project would be implemented at selected locations in Grand Bay, Graveline Bay, Back Bay of Biloxi and vicinity, and St. Louis Bay in Jackson, Harrison, and Hancock Counties, Mississippi and would consist of the overall construction of over four miles of breakwaters, five acres of intertidal reef habitat and 267 acres of subtidal reef habitat. The Proposed Action is being selected because it will result in more efficient recovery of injured salt marsh and lost benthic secondary productivity compared to the No Action Alternative. Under the No Action Alternative, the Trustees would not receive funding to restore secondary productivity through the placement of intertidal and subtidal reefs and the use of living shoreline techniques and the Trustees would not pursue Restoring Living Shorelines and Reefs in Mississippi Estuaries as part of Phase IV Early Restoration. The Federal Trustees prepared the Final EA and this Finding of No Significant Impact after considering input from the public during the public comment period for the Draft Phase IV ERP/ EA.

Analysis Summary

The Federal Trustees evaluated potential environmental effects of the proposed action and analyzed the significance of this action based on NEPA, CEQ NEPA regulations, and all applicable agency NEPA regulations and guidance. CEQ regulations (40 CFR §1508.27) state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Analysis discussed and summarized below is relevant to making a finding of no significant impact. See Phase IV ERP/EA Chapter 6, sections 6.2.5, 6.2.7, 6.2.8, and 6.2.9 (overall summary). When environmental consequences were reviewed across the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project, the analysis suggests that there will be long-term minor to moderate adverse impacts to geology and substrates, and there will be minor short-term adverse impacts to other project specific resource categories. The project will provide long-term benefits by creating approximately 267 acres subtidal reef habitat, five acres of intertidal reef habitat, and approximately four miles (17.9 acres) of reef, as discussed below and in the Phase IV ERP/EA Chapter 6:

- Impacts to the physical environment (geology and substrates, hydrology and water quality) were assessed in Phase IV ERP/EA Chapter 6, sections 6.2.7.1.1 and 6.2.7.1.2.
 - Geology and substrates: Placement of structures such as breakwaters, intertidal and subtidal reefs will permanently cover existing geology and substrates. The adverse effects will be minor to moderate and long-term, because they will affect substrate/geologic characteristics of the project footprint, and could extend beyond the construction period. There will be long term, minor to moderate impacts to 289.9 acres of soft bottom and hard bottom habitat due to the construction of breakwaters (17.9 acres), subtidal reefs (267 acres) and intertidal reefs (5 acres). There will be short term, minor impacts to 85.4 acres of soft bottom habitat for the construction of temporary flotation channels (if needed for construction of breakwaters) and subtidal and intertidal reef habitat. The impacts resulting from the temporary flotation channels will

be short-term because the channels will be backfilled as part of the construction process. The project will result in long-term benefit resulting from the development of 289.9 acres of substrate (breakwater materials and cultch) into living reefs that support benthic secondary productivity. There will be long-term benefits to shorelines and marsh resulting from the placement of 21,912 linear feet of breakwater along eroding shorelines. Breakwaters will reduce the wave energy, thereby slowing shoreline and marsh erosion and resulting in the long-term protection of the shoreline. Therefore, the project will have a long-term beneficial impact on geology and substrate.

- Hydrology, tides and currents
 - Breakwater construction: Shoreline protection and erosion reduction could generally help reduce storm surges on shorelines and marshes. Breakwater construction could reduce the loss of the wetlands and channel networks particularly in St. Louis Bay. Gaps will be present between breakwater segments that will allow tidal exchange flows and waterway access. Breakwaters will change natural current patterns, sediment accretion and erosion rates. Wave energy and resulting erosion will be reduced. This could be a long-term beneficial effect to shorelines that will extend beyond the construction period.
 - Intertidal and subtidal reef habitat: Creating intertidal and subtidal reef habitat could help protect eroding wetlands and shallow water areas. Placement of cultch and other materials to establish living reefs adjacent to shorelines and breakwaters will reduce wave energy reaching shorelines. This will provide long-term beneficial effects by reducing wave energy of storm surges as well.
- Water quality: Placement of the breakwaters, subtidal and intertidal reef will result in short-term, minor adverse impacts to water quality as a result of resuspension of sediment by vessels (barges, tugs, skiffs, etc.) moving in and out of the project area, excavation of the temporary flotation channels, placement of breakwaters and deployment of intertidal and subtidal reefs. The suspended sediment may be transported into surrounding wetlands and waterways. However, the area is currently exposed to elevated turbidity levels as a result of resuspension of sediment from river transport and during frequent storms, tides, and other typical weather events. Impacts from turbidity will be minor, short-term and limited in spatial extent.
 - In addition to turbidity, the water quality could be adversely impacted by leaks or spills of fuel and lubricants used by vessels and other equipment during the construction of the temporary flotation channels, breakwater, and reefs. Impacts, if any, will be short-term, localized and minor.
 - Breakwaters, once established as living reefs, could benefit local water clarity because bi-valves such as oysters and mussels feed by filtering the water column. The reef could also reduce wave energy reaching the shoreline, minimizing erosion, and decreasing sediment suspended in the water column

from erosion. Long-term this method could result in minor improvements to water quality. The benefits will be long-term because they will extend beyond the construction period.

- Floodplains: The majority of the project is located below the mean high water level and will not impact the floodplain in the project area. Shoreline protection and erosion reduction could generally help reduce storm surges on coastal wetlands, and limit the shoreward extent of saltwater flow.
- Wetlands: There will be short-term, minor, and localized indirect adverse impacts from sediment movement that could temporarily impact the shoreline edge near the project components. The project will result in long-term beneficial impacts to salt marsh by reducing shoreline erosion and resulting marsh degradation. These actions could reduce the pace and extent of future saltwater intrusion to freshwater and brackish systems and reduce erosion and loss of the wetlands and channel networks.
- Impacts to the biological environment were assessed in Phase IV ERP/EA Chapter 6, sections 6.2.7.2.1:
 - Submerged aquatic vegetation (SAV): No long-term adverse effects to SAVs are expected. Short-term, minor, adverse impacts to SAVs could occur in the vicinity of the project resulting from temporary sedimentation in beds. Any disturbance will be temporary in nature; it is anticipated that SAV beds will recover naturally. Construction of the breakwaters in St. Louis Bay and Back Bay could provide or protect areas conducive to SAV growth which could provide long term benefits as established or ephemeral SAV beds in these water bodies.
 - Invasive species: No long-term adverse effects from invasive species are expected. Any adverse impacts from invasive species are expected to be short-term and minor. Mitigation measures and best management practices (BMPs) will reduce the likelihood of impacts from invasive species.
 - Benthic infauna and epifauna: Potential short-term minor impacts to benthic organisms may occur from increased turbidity, substrate disturbance, or siltation during construction. Following construction, there is expected to be increased habitat utilization of the zone between the breakwater and the existing eroded shoreline, and long-term benefit due to the placement of hardened structure. This represents a long-term benefit for these organisms.
 - Protected species: The Trustees are coordinating with the U.S. Fish and Wildlife Service (USFWS) and NOAA National Marine Fisheries Service (NMFS) to determine effects to protected species. A summary of impacts to protected species and critical habitats is provided below:

- Marine mammals: Short-term minor adverse effects due to noise and turbidity associated with placement of structures could temporarily disturb marine mammal species if they are in the vicinity of the project area. Based on the mobility of these species, the short duration of construction activities, the selected construction methodology, and implementation of BMPs, effects on marine mammals are not anticipated.
- Sea turtles: Loggerhead (threatened), Green (threatened), Kemp's ridley (endangered), Leatherback (endangered), Hawksbill (endangered): Applicable to all project components. While not likely to be impacted, sea turtles are a mobile marine species and project activities will not impede transit routes. There is no nesting habitat in the project area. There is no designated or proposed critical habitat for sea turtles within the action area. If individuals enter construction areas, construction will be halted. Accordingly, the Trustees have made a "Not Likely to Adversely Affect" determination under the ESA for the five species of sea turtles, and coordination with NOAA Nation Marine Fisheries Service is ongoing.
- Piping plover and red knot (both threatened) and piping plover Critical Habitat: Applicable to all project components. Piping plover Critical habitat applicable to Grand Bay Intertidal and Subtidal Reefs. Piping plover could be present between August and May. The red knot could be present from March to April and September to October. If individuals of either species are within 150 feet of the construction area, work will stop until the individual(s) leave of their own volition. The project will be implemented so as to ensure no effects to the PCEs of nearby piping plover critical habitat in the Grand Bay area are impacted. Accordingly, the Trustees have made a "Not Likely to Adversely Affect" determination under the ESA for piping plover and red knot, and a "No destruction or adverse modification" determination for piping plover designated critical habitat, occurring near Grand Bay Intertidal and Subtidal Reefs. In August 2015, the Trustees requested concurrence from the U.S. Fish and Wildlife Service (USFWS) regarding these determinations (DOI 2015). The USFWS provided concurrence with this determination on August 24, 2015 (USFWS 2015).
- West Indian manatee (endangered): Applicable to all project components. West Indian manatees are not likely to occur in the project area. Short-term minor impacts could occur if manatees come into contact with construction activities. Manatees are a mobile marine species and project activities will not impede transitory routes. If individuals are within 50 feet of construction areas, construction will be halted until the individual leaves the area of its own volition. Standard Manatee Conditions for In-Water Work (USFWS 2011) will be followed. Accordingly, the Trustees have made a "Not Likely to Adversely Affect" determination under the ESA for the West Indian manatee. In August

2015, the Trustees requested concurrence from the USFWS regarding this determination (DOI 2015). The USFWS provided concurrence with this determination on August 24, 2015 (USFWS 2015).

- Gulf sturgeon (threatened) and Critical Habitat: Applicable to Grand Bay Intertidal and Subtidal Reefs; and Deer Island Subtidal Reef. The project is in designated critical habitat. The Trustees have made a “Not Likely to Adversely Affect” determination under the ESA for Gulf sturgeon, and a “No destruction or adverse modification” determination for Gulf sturgeon designated critical habitat. Coordination with NOAA Nation Marine Fisheries Service is ongoing. To the extent practicable, project construction at the Deer Island Subtidal Reef and the Grand Bay Intertidal and Subtidal Reef project components will be limited to the window between May and October, after sturgeon have migrated to their riverine habitat. No project components are located within riverine ecosystems. If work continues beyond the May to October window, continued adherence to the Sea turtle and Smalltooth Sawfish Construction Conditions (NMFS 2006) will minimize the potential for impacting Gulf Sturgeon. If individuals enter construction areas, short-term, minor impacts could be the result.
- Migratory Birds/Bald and Golden Eagles (protected under MBTA and BGEPA): Golden eagles are not present in the area. Potential adverse effects to migratory birds include elevated noise levels due to the presence of construction equipment. These species are mobile and will likely exit the area during construction. Due to the implementation of best management practices no “take” is anticipated for bald eagles and migratory birds. Coordination under the MBTA and BGEPA has been completed (DOI 2015).
- Alabama red-belly turtle (endangered): Applicable to all projects in Back Bay and vicinity. Due to the lack of SAVs for foraging at the project site it is unlikely that the species will be present in the project area, therefore no impacts are expected to occur to the Alabama red-belly turtle. Accordingly, the Trustees have made a “No Effect” determination under the ESA and in August 2015, requested concurrence from the USFWS regarding this determination (DOI 2015). The USFWS provided concurrence with this determination on August 24, 2015 (USFWS 2015).
- Mississippi diamondback terrapin: This is a state listed species, ranked by the Mississippi Department of Wildlife Fisheries and Parks as S2: Imperiled in Mississippi. Applicable to all project components, which could contain nesting habitat. In order to avoid impacting the diamondback terrapin and habitat, the Trustee will identify and also avoid pocket beaches to the maximum extent practicable in the design of the project. Since work will be conducted in the shallow water marine environment, impacts to diamondback terrapin and habitat are not anticipated.

- Essential Fish Habitat (EFH):
 - It is anticipated that finfish will move away to other readily available aquatic habitats during the construction period. Fish present in the area of the project component could be subject to a temporary increase in sound pressure levels, a temporary decrease in water quality, entrainment in dredge sediments, and removal of benthos from areas. Sound pressure level increases or entrainment could result in mortality of individual finfish. Overall, this will be a minor short-term adverse effect that will not be expected to reduce local fish populations or designated EFH.
 - There will be minor, long-term, adverse impacts to EFH for species that rely on soft bottom habitat as a result of the project.
 - There will be short term, minor, impacts to EFH for species that utilize both soft and hard bottom habitat.
 - There will be a long term benefit to EFH by creation of reef habitat.
- Impacts to human uses and socioeconomics were analyzed in Phase IV ERP/EA Chapter 6 sections 6.2.7.3.1; 6.2.7.3.2; 6.2.7.3.3, and 6.2.7.3.4:
 - Land and Marine Management: Implementation of the project will be consistent with planned land and marine management and will not disrupt existing or planned land uses. There could be short-term minor adverse impacts due to deployment of subtidal and intertidal reefs. There will be long term ecological benefits that will be consistent with planned land and marine management.
 - Aesthetics and Visual Resources: During construction, there will be short-term, minor adverse aesthetic and visual impacts for recreational boaters and fishermen due to construction equipment in and around the project area. Residents, people who use the bays and estuaries for recreation, and businesses along the shoreline may experience minor adverse aesthetic and visual impacts during construction. The deployed materials will not adversely affect aesthetic and visual resources.
 - Public Health and Safety and Shoreline Protection: There could be minor short-term adverse impacts resulting from the operation of heavy equipment or from the incidental releases of surface water contaminants from barge and boats. The selected breakwater structures will have long-term benefits by helping to protect the shoreline from wave erosion.
- Because the proposed project has reasonably foreseeable effects on coastal uses or resources that are the subject of federally approved Coastal Zone Management Plans in Mississippi, the Federal Trustees submitted a consistency determination for the project to the Mississippi

Department of Marine Resources (MDMR). MDMR concurred with that determination on behalf of its state. As noted in that response, additional consistency review may be required pursuant to federal regulations (see 15 C.F.R. Part 930) prior to project implementation.

- No significant adverse cumulative effects are anticipated from implementation of this project. The Restoring Living Shorelines and Reefs in Mississippi Estuaries Project will occur across the Mississippi Gulf Coast, at eight sites in four bays, and construction is likely to occur at different times. This project will not contribute adverse cumulative impacts when added to past, present or reasonably foreseeable future actions.
- The proposed action is not expected to result in the introduction or spread of any invasive species.

Copies of the draft EA for this project were available to the public as provided in a Federal Register notice published on May 20, 2015. See *Deepwater Horizon* Oil Spill, Draft Phase IV Early Restoration Plan and Environmental Assessments; 80 FR 29019-29021 (May 20, 2015). Public comments on the Draft Phase IV ERP/EA were taken during a 47-day public comment period extending from May 20, 2015 to July 6, 2015 (80 FR 35393, June 19, 2015). Public comments received during this period have been considered and addressed by the Trustees in the Final Phase IV ERP/EA (Chapter 15, Response to Public Comments). The Final Phase IV ERP/EA is hereby incorporated by reference.

Agency Coordination and Consultation Summary

A summary of the results from each coordination and consultation process is provided below:

- Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA): NOAA reviewed the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project for compliance with the MSFCMA. It was determined that some activities have the potential for short and long-term minor site-specific adverse impacts to water bottom and water column characterized as EFH, however, NMFS concurred that the BMPs proposed for implementation would be sufficient to avoid, minimize or offset impacts and no additional conservation recommendations were required.
- Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (GEPA), and Marine Mammal Protection Act (MMPA): To fulfill requirements and obligations under ESA and MMPA, NOAA is reviewing and DOI completed a review of the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project for compliance with Section 7 of the ESA of 1973, as amended (16 U.S.C. 1531 et seq.) and Section 101 of the MMPA of 1972, as amended (16 U.S.C. 1371(a)(5) et seq.). Biological Evaluation forms were submitted to the USFWS for consultation and coordination on the ESA, MBTA, and GEPA (DOI 2015) and to NMFS for ESA (NOAA 2015). The USFWS local field office concurred by letter dated August 24, 2015. See Phase IV ERP/EA Chapter 6, sections 6.2.7.2.1. The Trustees are awaiting NMFS SERO's response on ESA. The Trustees coordinated with NMFS SERO's Protected Resources Division to determine that this project does not require authorization under the MMPA.

Impacts to cultural and historical resources protected under Section 106 of the National Historic Preservation Act (NHPA) were evaluated in the Final Phase IV ERP/EA Chapter 6. The formal compliance review for this project including NHPA section 106 and Tribal consultations has been initiated and will be completed prior to project implementation.

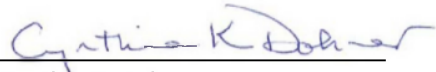
If any further need arises to coordinate and consult with other regulatory authorities, including for example Clean Water Act Section 404 or the Rivers and Harbors Act, the additional coordination or consultation requirements will be addressed prior to project implementation. The status of Federal regulatory permits/approvals will be maintained online (<http://www.gulfspillrestoration.noaa.gov/environmental-compliance/>) and updated as regulatory compliance information changes. The Federal Trustees' Finding of No Significant Impact for this project is issued subject to the completion of all outstanding compliance reviews under other Federal laws. If the proposed action changes or information is brought to light as a result of completing such reviews that is potentially relevant to the environmental evaluation supporting this finding of no significant impact, that evaluation will be updated or supplemented as required by NEPA and a new determination made by the Federal Trustees under NEPA as to whether the proposed action is likely to significantly affect the quality of the human environment.

Determination

In view of the information presented in this document and the environmental analysis contained in the supporting Phase IV ERP/EA for the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project, the Federal Trustees have determined that project will not significantly impact the quality of the human environment. Accordingly, preparation of an environmental impact statement for this action is not necessary.

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For the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project

Date: 9/10/15

Signature: 
Cynthia K. Dohner
Authorized Official, U.S. Department of the Interior


FINDING OF NO SIGNIFICANT IMPACT
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Date: 9/8/2015

Signature: 

David Westerholm
Director, Office of Response and Restoration
National Ocean Service, NOAA

Date: 9/4/2015

Signature: 

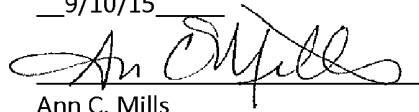
Frederick C. Sutter III
Director, Office of Habitat Conservation
National Marine Fisheries Service, NOAA

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For the Restoring Living Shorelines and Reefs in Mississippi Estuaries Project

Date:

9/10/15

Signature:



Ann C. Mills

Deputy Under Secretary, USDA

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Date: 9/10/15

Signature: *Kenneth J. Kopocis*
Kenneth J. Kopocis
Principal Representative, EPA