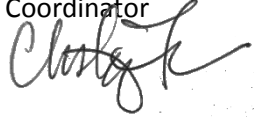




UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MEMORANDUM FOR: FILE

FROM: Christy Fellas, DWH Environmental Compliance Coordinator
NOAA Restoration Center, Southeast Region 

DATE: September 14, 2018

SUBJECT: No Additional ESA or EFH Consultation Needed for Design Refinements
to the Wolf River Living Shoreline and Subtidal Reef Component, Phase
IV Early Restoration, Mississippi

Based on my review of project materials including design updates (see attached) and in coordination with representatives from NOAA's Protected Resource Division and Habitat Conservation Division in the South East Regional Office, the NOAA Restoration Center determined that design updates do not require re-initiation of consultation with NOAA.

Project elements have been refined within the previously considered action area and will not result in any discernible changes to the effects of the project to designated Essential Fish Habitat or species protected under the Endangered Species Act. The EFH consultation was concluded on June 2, 2015 and the ESA consultation was concluded on August 22, 2016; all BMPs and minimization measures in these consultations remain in effect for construction.

Restoring Living Shorelines and Reefs in Mississippi Estuaries: Wolf River Living Shoreline and Subtidal Reef Component

Memo to: Christy Fellas, NOAA Restoration Center, Deepwater Horizon NRDA Program
Erin Chandler, Environmental Compliance Coordinator, Deepwater Horizon Gulf Restoration Office, USFWS
David Felder, Mississippi Field Office, USFWS

The Restoring Living Shorelines and Reefs in Mississippi Estuaries project includes the restoration of secondary productivity through the placement of intertidal and subtidal reefs and the use of living shoreline techniques to reduce shoreline erosion. The project was proposed, evaluated and selected in the *Deepwater Horizon Oil Spill: Final Phase IV Early Restoration Plan and Environmental Assessments* (DOI 2015) referred to hereafter as the Phase IV RP/EA. As the designated Mississippi State Trustee under the Oil Pollution Act, the Mississippi Department of Environmental Quality (MDEQ) is responsible for implementing this project. Eight components were originally identified in the RP/EA as part of the project.

The Wolf River Living Shoreline and Subtidal Reef Component includes construction of approximately 1,600 linear feet of breakwater south of the mouth of the Wolf River in St. Louis Bay to reduce shoreline erosion and marsh loss and to restore secondary productivity. Approximately 30 acres of subtidal reef habitat would also be created in St. Louis Bay, near existing reef projects at the mouth of the Wolf River, to restore secondary productivity.

ESA and EFH consultations for the Wolf River Living Shoreline and Subtidal Reef were previously coordinated with NOAA NMFS and USFWS in 2015 and 2016. Since that time, geotechnical and bathymetric studies, hydrodynamic modeling, and subsequent engineering design has been conducted for the project. The design engineer has completed the Final Basin of Design Report. The project is moving into the permitting phase, and a pre-application meeting will be scheduled with the USACE, MDMR and your agency representatives. The following is provided as a brief summary of the relevant refinements to the project design since your agency's review.

For the purposes of your review, Table 1 summarized the engineering design and compares the current design to the Conceptual Design in the Phase IV EA. The Conceptual Project Design that was analyzed in the Phase IV RP/EA is shown in Figure 1. Design Refinements as of 2016 are depicted in Figure 2. The current engineering design is depicted in Figures 3-7.

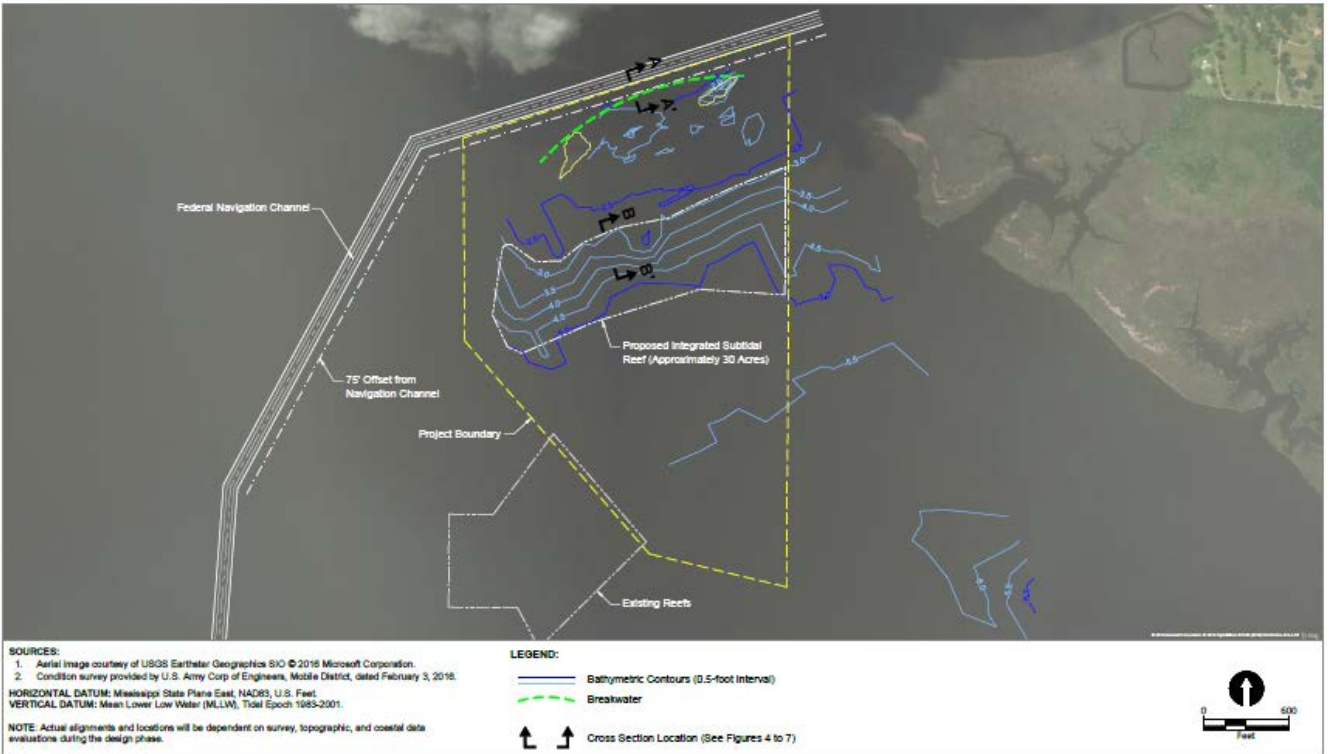
Table 1. Wolf River Living Shoreline and Subtidal Reefs in Mississippi Estuaries-Design Refinements post ESA and EFH consultation			
Project Element	Parameters	Conceptual Design	Current Design
Breakwater Structure	Length	1,388 feet	1,600 feet
	Construction materials	Approved manufactured and/or natural materials	OysterBreaks; Wave Attenuation Devices; Riprap
	Volume of materials	3,123 cubic yards	1,800 to 2,500 cubic yards
	Location	South of the two marsh islands	North of the two marsh islands
	Width of gaps	3 – 25 feet	5 to 15 feet (if selected)
	Footprint	1.3 acres	0.75 acres
	Substrate	Soft bottom sand and mud	Sand over a medium to stiff clay
	Water depth	< 6.0 feet MLLW (6.6 feet NAVD88)	-3.5 to -2.0 feet MLLW (-3.8 to -2.3 ft NAVD 88)
Subtidal Reef	Acreage	30 acres	30 acres
	Construction materials	Limestone, crushed concrete, oyster shells or a combination thereof	Crushed or processed stone
	Thickness	0.08 foot to 1.0 foot	0.2 foot to 3.0 feet in undulating ridges
	Volume of materials	24,210 cubic yards	16,200 cubic yards
	Substrate	Soft bottom sand and mud	Sand or firm clays, with select areas having approximately 1 to 2 feet of soft sediment, underlain by a marine clay bearing layer
	Water depth	< 6.0 feet MLLW (6.6 feet NAVD88)	-2.5 to -6.0 feet MLLW (-2.8 to -6.3 feet NAVD 88)
Flotation channels	Temporary impacts	5.4 acres	0 acres



Figure 1: 2015 conceptual project design proposed in Phase IV Early Restoration FERPs/EAs



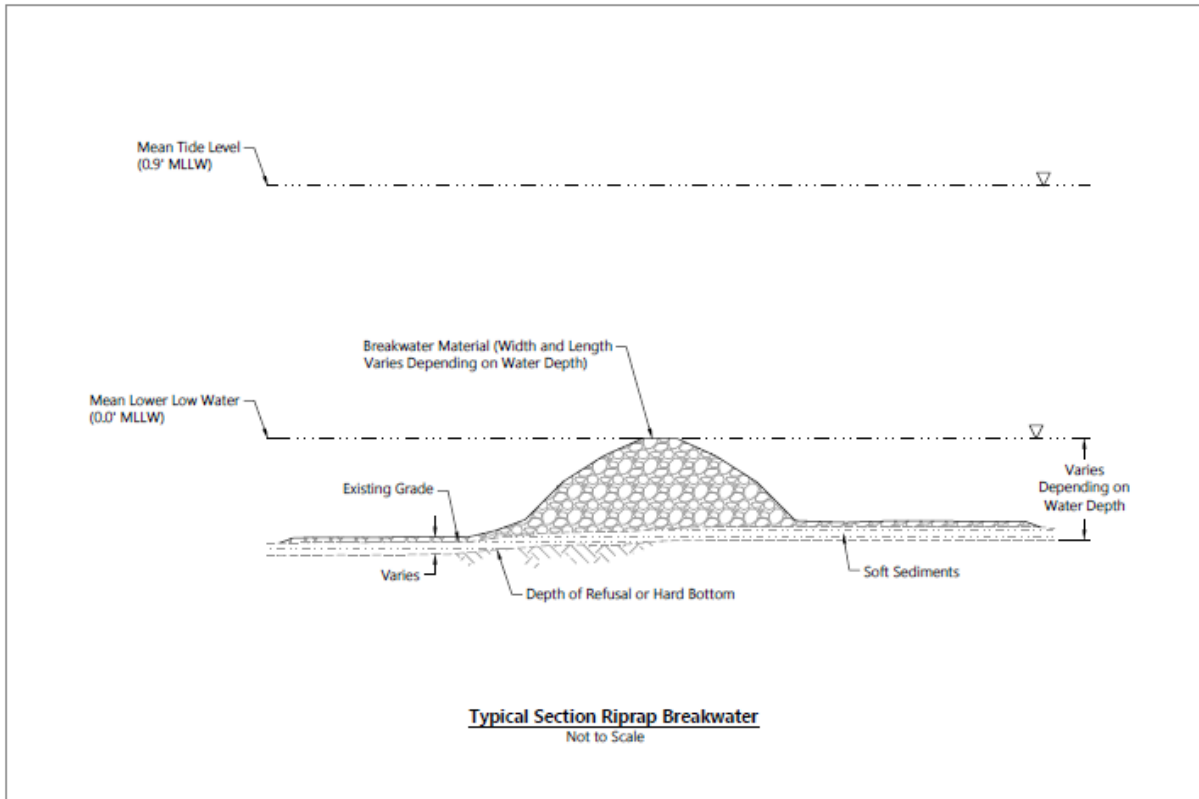
Figure 2: 2016 Refined Conceptual Design



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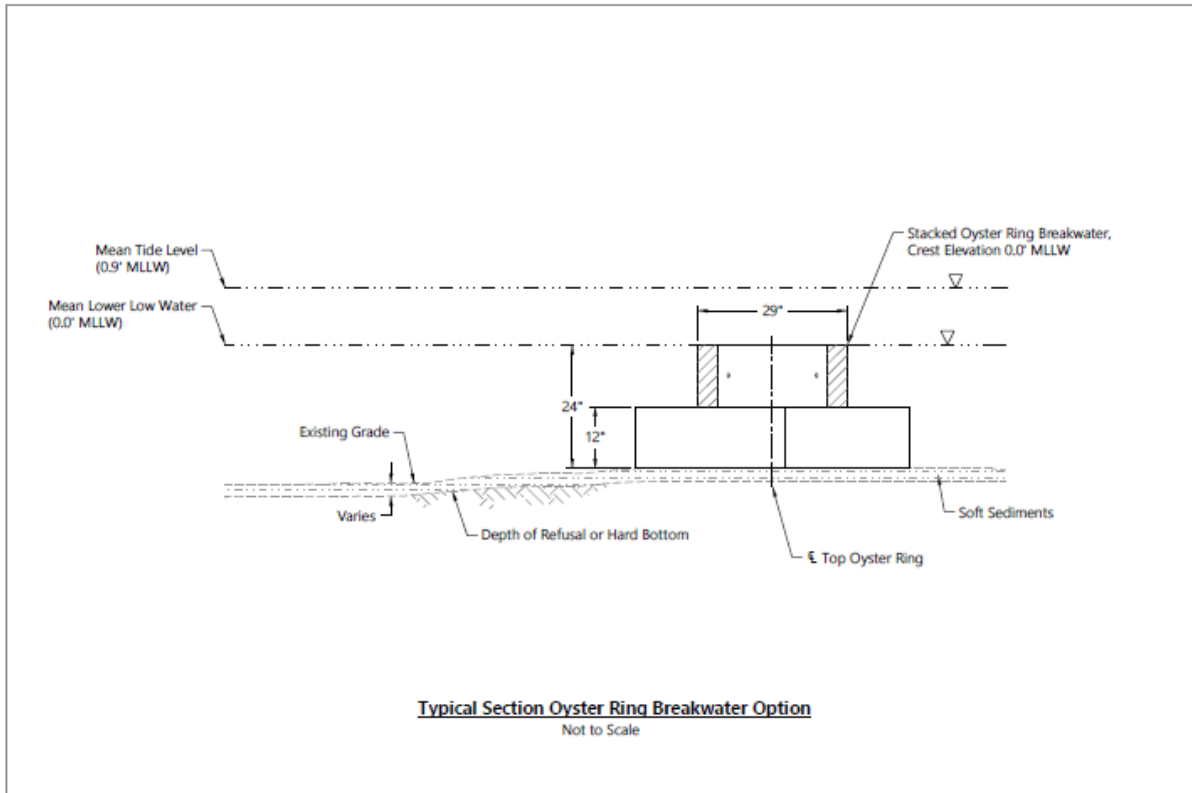
Figure 3
Design Concepts - Wolf River
 Preliminary Basis of Design Report - Wolf River Living Shoreline and Subtidal Reef
 Restoring Living Shorelines and Reefs in Mississippi Squares
 Mississippi Department of Environmental Quality



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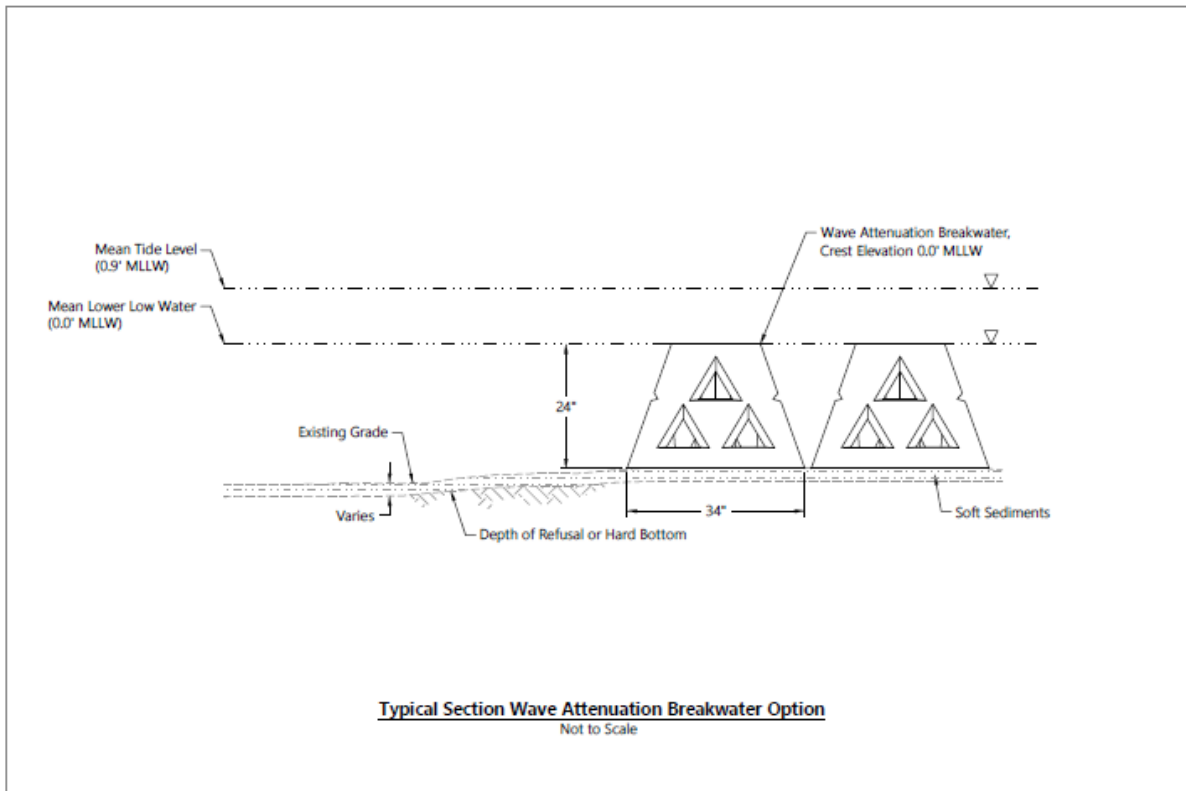
Figure 4
Section A-A' Riprap Breakwater Option
 Preliminary Basis of Design Report - Wolf River Living Shoreline and Subtidal Reef
 Restoring Living Shorelines and Reefs in Mississippi Estuaries
 Mississippi Department of Environmental Quality



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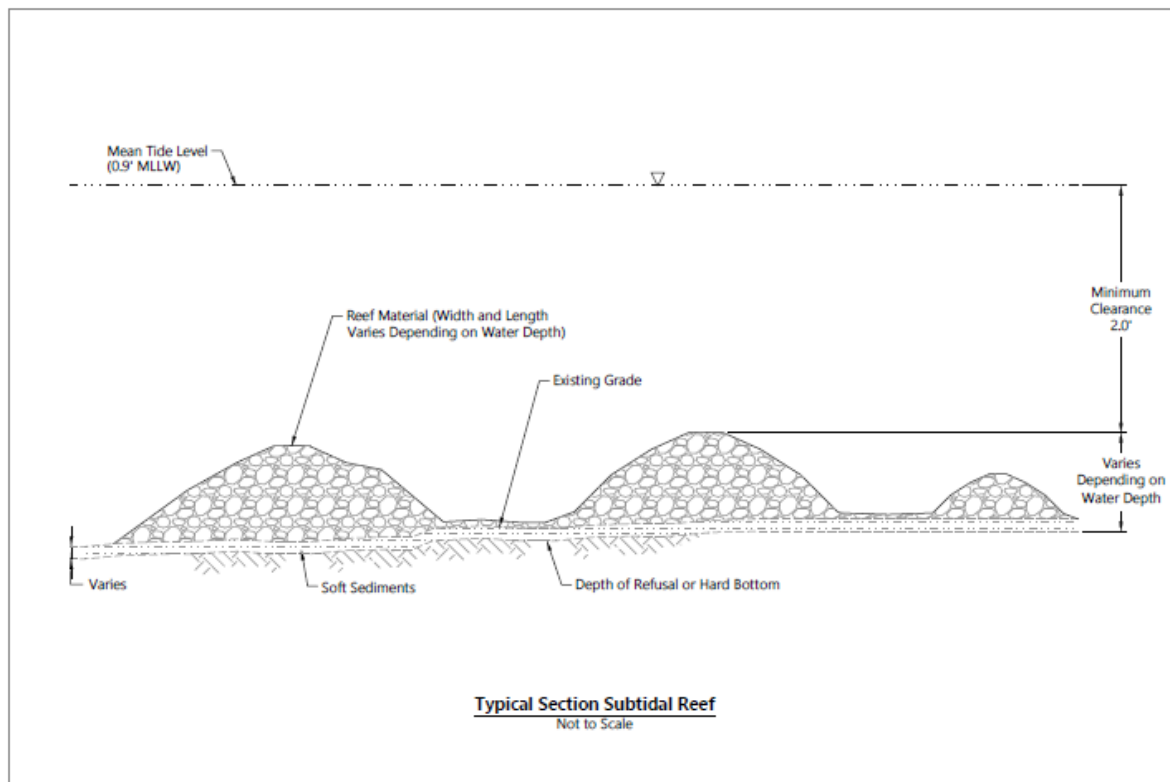
Figure 5
Section A-A' OysterBreak Breakwater Option
 Preliminary Basis of Design Report - Wolf River Living Shoreline and Subtidal Reef
 Restoring Living Shorelines and Reefs in Mississippi Estuaries
 Mississippi Department of Environmental Quality



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Figure 6
Section A-A' Wave Attenuation Device Breakwater Option
 Preliminary Basis of Design Report - Wolf River Living Shoreline and Subtidal Reef
 Restoring Living Shorelines and Reefs in Mississippi Estuaries
 Mississippi Department of Environmental Quality



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Figure 7
Section B-B' Subtidal Reef

Preliminary Basis of Design Report - Wolf River Living Shoreline and Subtidal Reef
 Restoring Living Shorelines and Reefs in Mississippi Estuaries
 Mississippi Department of Environmental Quality

References:

DOI (Department of the Interior), 2015. *Deepwater Horizon Oil Spill: Final Phase IV Early Restoration Plan and Environmental Assessments*. September 2015.