United States Department of the Interior

FISH AND WILDLIFE SERVICE
Deepwater Horizon Gulf Restoration Office
341 Greeno Road North, Suite A
Fairhope, Alabama 36532

In Reply Refer To:
FWS/R4/DH NRDAR

Memorandum October 4, 2023

To: Memorandum to File

From: Michael Barron, Deepwater Horizon Gulf Restoration Office

Subject: Regulatory Compliance Determinations for Open Ocean Trustee Implementation Group's Restoration Project: Deep-Sea Benefits Monitoring and Adaptative Management Activities Implementation Plan

Based on our review of the attached Biological Evaluation (Attachment 1), the compliance determinations for the project proposed for implementation by the Open Ocean Trustee Implementation Group: Deep-Sea Benefits Monitoring and Adaptative Management Activities Implementation Plan are indicated below. The appropriate conservation measures will be implemented. This memo does not include any information or effects determinations for protected species under the jurisdiction of the National Marine Fisheries Service.

Project Title	ESA (USFWS)	MMPA (USFWS)	BGEPA (USFWS)	MBTA (USFWS)	CBRA (USFWS)
Deep-Sea Benefits Monitoring and Adaptative Management Activities Implementation Plan	CBEC	CBEC	NT	NT	NA

CBEC – Covered By Existing Consultation; NT – No Take; NA – Not Applicable

Should the project be modified in a way that could adversely impact species or habitats, this determination will be reevaluated as appropriate.

If you have questions or concerns regarding this action, please contact Michael Barron, Fish and Wildlife Biologist, at 251-421-7030 or michael_barron@fws.gov.

Attachments (1)

Attachment 1

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

U.S. Fish and Wildlife Service & National Marine Fisheries Service

This form will be filled out by the Implementing Trustee and used by the regulatory agencies. The form will provide information to initiate informal Section 7 consultations under the Endangered Species Act (ESA) and may be used to document a No Effect determination or to initiate pre-consultation technical assistance.

It is recommended that this form also be completed to inform and evaluate additional needs for compliance with the following authorities: Migratory Bird Treaty Act (MBTA), Marine Mammal Protection Act (MMPA), Coastal Barrier
Resources Act (CBRA), Bald and Golden Eagle Protection Act (BGEPA) and Section 106 of the National Historic Preservation Act (NHPA).

Further information may be required beyond what is captured on this form. Note: if you need additional space for writing, please attach pages as needed.

For assistance, please contact the
compliance liaisons USFWS: Michael
Barron at michael_barron@fws.gov
NMFS: Christy Fellas at christina.fellas@noaa.gov

A. Project Identification

Federal Action Agency(one or more):USFWS ☐ NOAA ☒ EPA ☐ USDA ☐

Implementing Trustee(s): NOAA

Contact Name: Ian Zink Phone: 843-259-3918 Email: ian.zink@noaa.gov

Project Name: Deep-Sea Benefits MAIP

DIVER ID# TBD TIG: Open Ocean TIG Restoration Plan # N/A

B. Project Phase

Please choose the box which best describes the project status, as proposed in this BE form, check ALL that apply:

Construction/Implementation ☒ Planning/Conceptual ☐ Engineering & Design ☐

If "Engineering & Design" was selected, please describe the level of design that has been

completed and is available for review:
N/A

C. Project Location

I. State and County/Parish of action area

NA (federal US EEZ only): See figure below for the action area where this field work would take place.

II. Latitude/Longitude for action area (Decimal degrees and datum [e.g., 27.71622°N, 80.25174°W NAD83) [online conversion: https://www.fcc.gov/encyclopedia/degrees-minutes-seconds-tofrom-decimal-degrees]

The figure below shows the action areas where work will take place. The polygons for the Federal navigation channels used for traveling to/from ports are available here: https://geospatial-usace.opendata.arcgis.com/maps/9227967a2748410983352b501c0c7b39/about

III. Maps, Drawings, and GIS Data

Please insert any maps, aerial photographs, or design drawings here or attach to the end of this BE form. GIS files may be added to the same folder location as where this BE is filed on Sharepoint . Examples of such supporting documentation include, but are not limited to:

- Plan view of design drawings
- Aerial images of project action area and surrounding area, showing state or regional scale
- Map of project area with elements proposed (polygons showing proposed construction elements)
- Map of action area with critical habitat units or sensitive habitats overlayed
- GIS Files to include ARCGIS, KMZ, CAD, or other GIS files are required (WGS 84) for projects with a field component

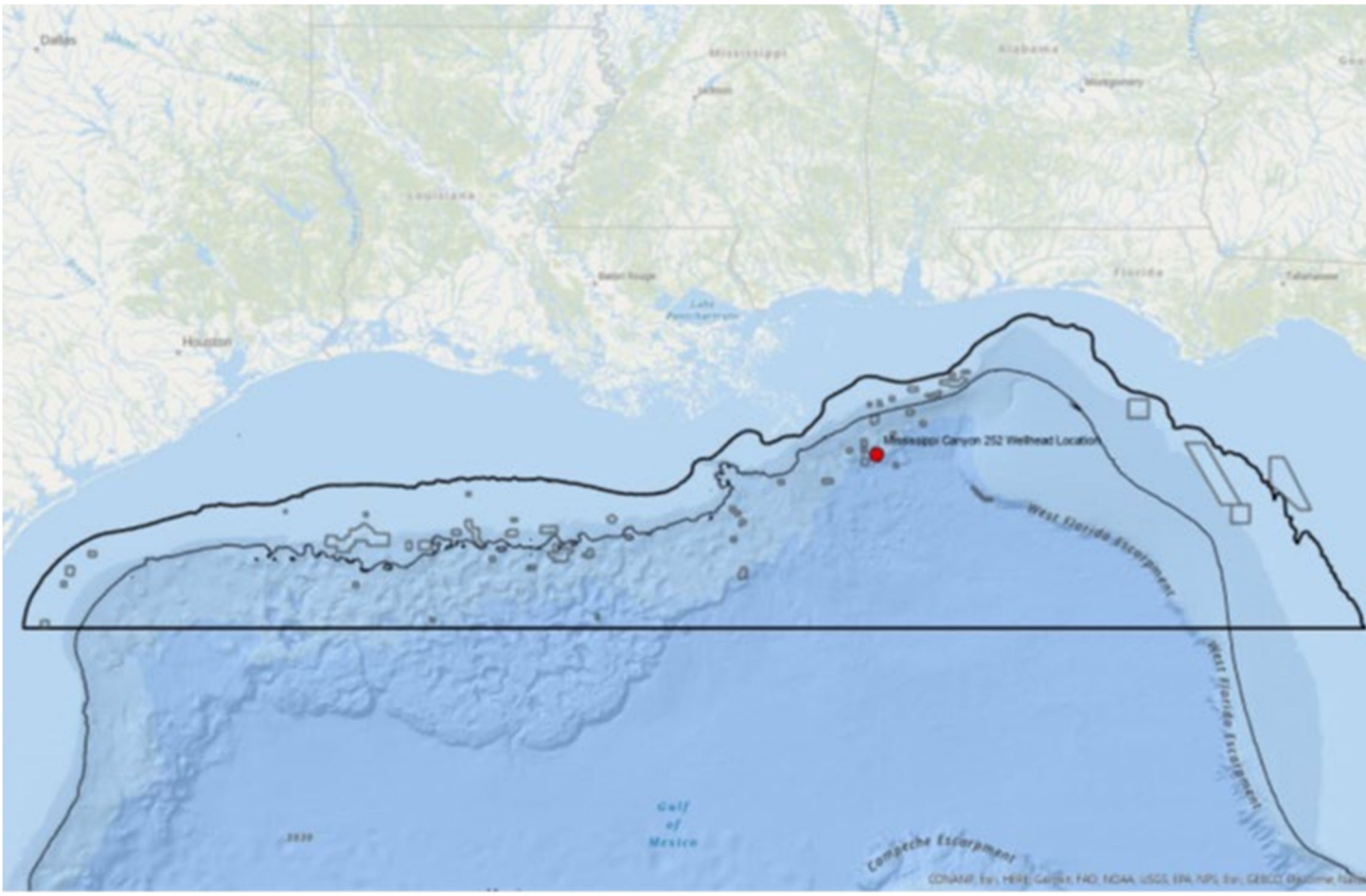


Fig. 1: Project area in the northern Gulf of Mexico as notated by the black outline.

Field work cruises will be conducted during summer months. These boats generally transit to and from the following ports: Pascagoula, MS; Gulfport, MS; Houma/Cocodrie, LA; Fourchon, LA; Panama City, FL; Houston/Galveston, TX; Tampa, FL

D. Existing Compliance Documentation

NEPA Documents

Are there any **existing** draft or final NEPA analyses (not PDARP/PEIS) that cover all or part of this project?

YES☒ NO☐

Examples:
-TIG Restoration Plan/EA or EIS (draft or final)
-USACE programmatic NEPA analysis
-USACE Clean Water Act individual permit for the project
-NEPA analysis provided by a federal agency that gave approval, funding or authorization

Permits

Have any federal permits been obtained for this project, if so which ones and what is the permit number(s)?

YES☐ NO☒ Permit Number and Type: Click or tap here to enter text

Have any federal permits been applied for but not yet obtained, if so which ones and what is the permit number(s)?

YES☐ NO☒ Permit Number and Type: Click or tap here to enter text.

If yes to any question above, please provide details in the text box (i.e. link to the NEPA document, or name of the document, year, lead federal agency, POC, copy of the permit or permit application, etc.). This is needed to check for consistency of the project scope across different sources and to facilitate the NEPA analysis. If you do not have a link, email the documents to the TIG representative for the Trustee designated as lead federal agency for the restoration plan.

Existing USFWS reviews for ESA and MMPA (manatees) from Mesophotic and Deep Benthic Restoration: https://www.fws.gov/doiddata/dwh-ar-documents/2132/DWH-ARZ011910.pdf
https://www.fws.gov/doiddata/dwh-ar-documents/2132/DWH-ARZ011912.pdf
https://www.fws.gov/doiddata/dwh-ar-documents/2132/DWH-ARZ011913.pdf
https://www.fws.gov/doiddata/dwh-ar-documents/2132/DWH-ARZ011911.pdf

Existing NMFS reviews from Mesophotic and Deep Benthic Restoration:
ESA: https://www.fws.gov/doiddata/dwh-ar-documents/2132/DWH-ARZ011916.pdf
EFH and MMPA conclusions in Section 5: https://www.fws.gov/doiddata/dwh-ar-documents/1195/DWHARZ011871.pdf

Any documentation or information provided will be very helpful in moving your project forward.

Name of Person Completing this Form: Ian Zink
Name of Project Lead: Ian Zink
Date Form Completed: 8/2/2023
Date Form Updated: 9/20/23

E. Description of Action Area

Provide a description of the existing environment (e.g., topography, vegetation type, soil type, substrate type, water quality, water depth, tidal/riverine/estuarine, hydrology and drainage patterns, current flow and direction), and land uses (e.g., public, residential, commercial, industrial, agricultural). Describe all areas that may be directly or indirectly affected by the action. If critical habitat (CH) is not designated in the area, then describe any suitable habitat in the area.

a. Waterbody & Wetlands

If applicable. Name the body of water, including wetlands (freshwater or estuarine), on which the project is located. If applicable, please describe water quality, depth, hydrology, current flow, and direction of flow.

The action areas for Deep-Sea Benefits field operations lies within the territorial waters of the Gulf of Mexico, as represented in Figure 1. The project area in the northern Gulf of Mexico is indicated in Figure 1 by the heavy black polygon (bounded by the north, east, and west by the 50 m isobaths and to the south by the 27th N parallel).

Field work cruises will be conducted during summer months. These boats generally transit to and from the following ports:
Pascagoula, MS; Gulfport, MS; Houma/Cocodrie, LA; Fourchon, LA; Panama City, FL; Houston/Galveston, TX; Tampa, FL

Does the project area include a river or estuary?

YES☐ NO☒

If yes, please approximate the navigable distance from the project location to the marine environment. Click or tap here to enter text.

b. Existing Structures

If applicable. Describe the current and historical structures found in the action area (e.g., buildings, parking lots, docks, seawalls, groynes, jetties, marina). If known, please provide the years of construction.

Various oil and gas platforms, associated infrastructure, and artificial reef sites are located throughout the mesophotic and deep benthic (MDBC) field operations project area, including in the vicinity of the sediment sampling areas (Figure 2).

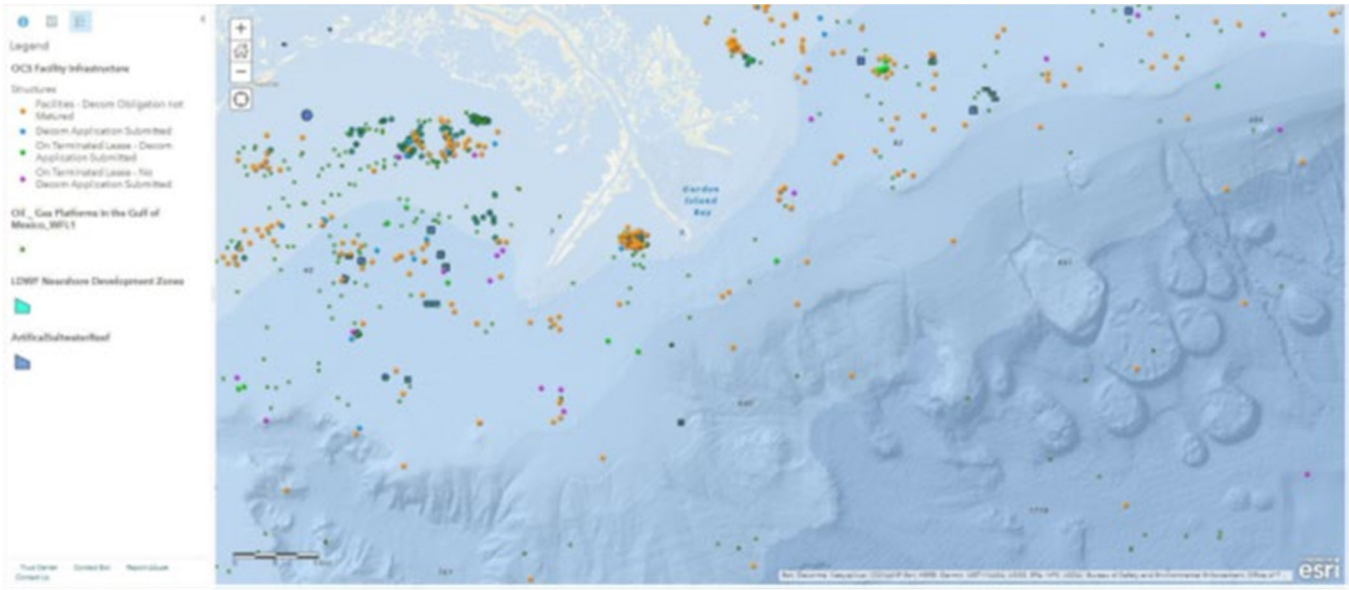


Figure 2. Oil and gas facility infrastructure and artificial reef sites in the MDBC project area.

Cultural Resources

The operations will be performed in a deep water, offshore area where few known cultural or historic resources are present on the sea floor. There are a number of historically significant shipwrecks known to exist throughout the area proposed for MDBC field operations, and project activities will be avoided in proximity to these shipwrecks. Project activities (e.g., passive acoustic equipment deployments) will only minimally disturb the bottom and are unlikely to potentially impact any unknown, buried cultural or historic resources.

Shipwrecks in the vicinity are more fully described in the Flower Garden Banks National Marine Sanctuary Environmental Impact Statement (EIS), Appendix E. Available at this link: https://flowergarden.noaa.gov/management/sanctuaryexpansion.html

In Figure 3, below, from the Flower Garden Banks National Marine Sanctuary EIS, Appendix E, the locations of 10 known, historically significant shipwrecks in the vicinity of the work proposed in this BE form are shown. The sites are: 1. USS Hatteras; 2. Monterrey wrecks; 3. GulfOil; 4. GulfPenn; 5. Mardi Gras wreck; 6. R. E. Lee & U-166; 7. Deepwater Horizon; 8. Anona.

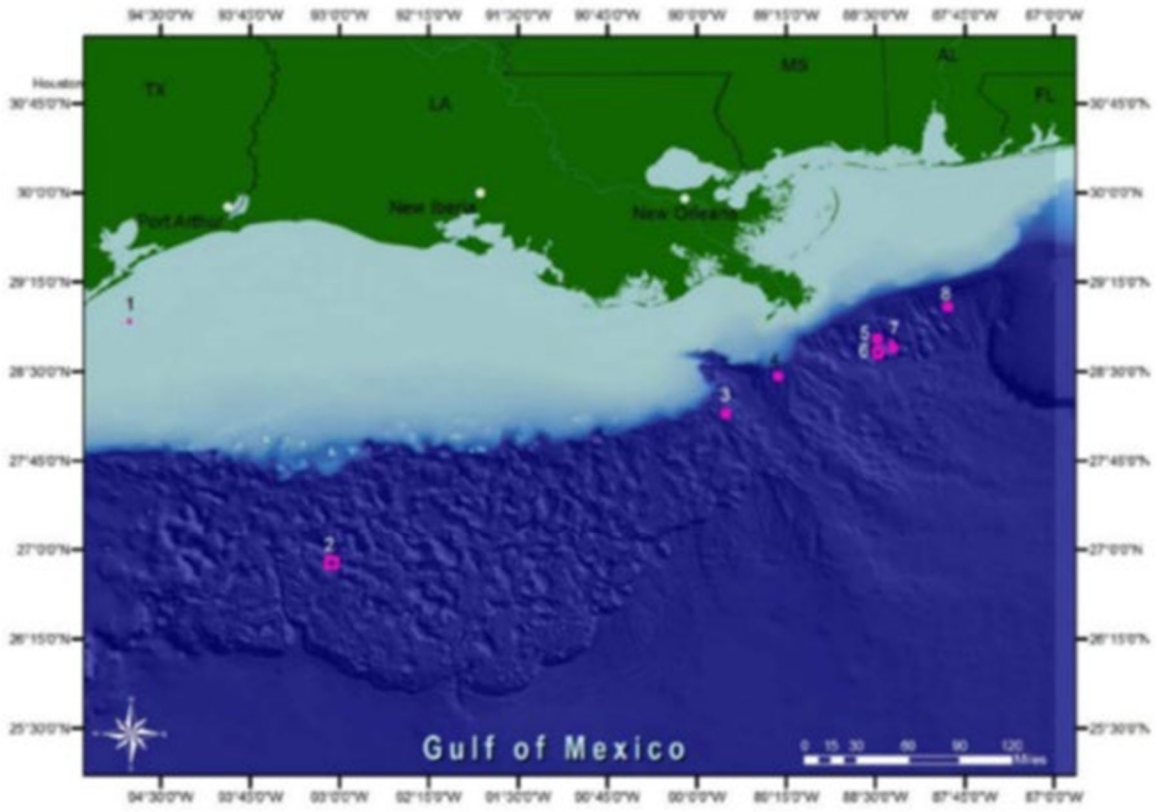


Figure 3: Historically significant shipwrecks in the vicinity of proposed MDBC activities in the northern Gulf of Mexico.

c. Seagrasses & Other Marine Vegetation

If applicable. Describe seagrasses found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the seagrasses in the action area.

Marine micro- and macroalgae suspended in the water column.

d. Mangroves

If applicable. Describe the mangroves found in action area. Indicate the species found (red, black, white), the species area of coverage in square footage and linear footage along project shoreline. Attach a separate map showing the location of the mangroves in the action area.

NA

e. Corals

If applicable. Describe the corals found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the corals in the action area. Click here to enter text.

See https://repository.library.noaa.gov/view/noaa/17609/noaa_17609_DS6.pdf (cut and paste link text and copy to browser address bar if hyperlink does not automatically redirect)

Corals are present in the action area, and have been mapped to some extent (Figure 4), but there is an overall dearth of information on the spatial extent of these understudied mesophotic and deep benthic communities.

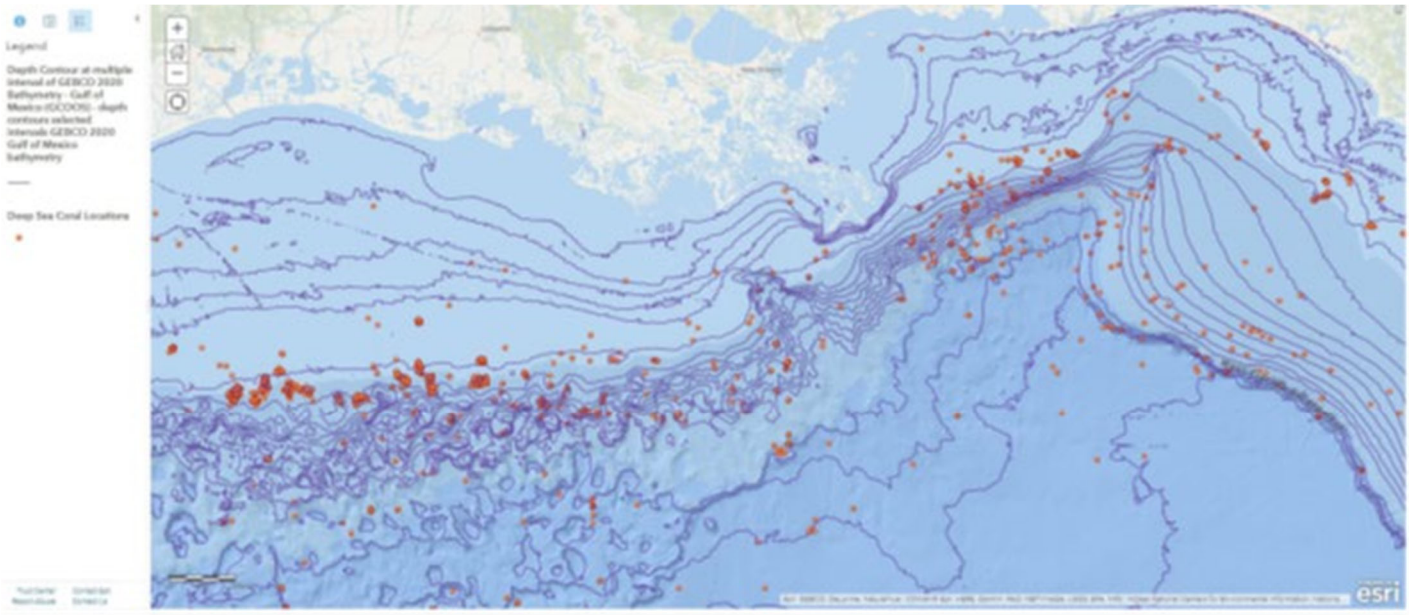


Figure 4. Mapped locations of deep-sea corals and sponges in the project area

(https://deepseacoraldata.noaa.gov/)

f. Uplands

If applicable. Describe the current terrestrial habitat in which the project is located (e.g. pasture, forest, meadows, beach and dune habitats, etc.).

NA

g. Soils and Sediments

If applicable. Indicate topography, soil type, substrate type.

NA

h. Land Use

If applicable. Indicate existing or previous land use activities (agriculture, dredge disposal, etc).

Fishing, oil and gas development.

i. Marine Mammals

Please select the following marine mammals that could be present within the project area:

Dolphins	YES☒	NO☐
Whales	YES☒	NO☐
Manatees	YES☒	NO☐

If applicable. Indicate and describe the species found in the action area. Use NMFS' Stock Assessment Reports (SARs) for more information, see http://www.nmfs.noaa.gov/pr/sars/region.htm

Marine mammals recorded in NMFS stock assessment report for this action area in the GOM include: Rice's whale (*Balaenoptera ricei*), sperm whale (*Physeter microcephalus*), Cuviers beaked whale (*Ziphius cavirostris*), Blainville's beaked whale (*Mesoplodon densirostris*), Gervais' beaked whale (*Mesoplodon europaeus*), common bottlenose dolphin (*Tursiops truncatus truncatus*), Atlantic spotted dolphin (*Stenella frontalis*), pantropical spotted dolphin (*Stenella attenuate*), striped dolphin (*Stenella coeruleoalba*), spinner dolphin (*Stenella longirostris*), rough-toothed dolphin (*Steno bredanensis*), Clymene dolphin (*Stenella clymene*), Fraser's dolphin (*Lagenodelphis hosei*), killer whale (*Orcinus orca*), false killer whale (*Pseudorca crassidens*), pygmy killer whale (*Feresa attenuata*), dwarf sperm whale (*Kogia sima*), pygmy sperm whale (*Kogia breviceps*), Melon-headed whale (*Peponocephala electra*), Risso's dolphin (*Grampus griseus*), and short-finned pilot whale (*Globicephala macrorhynchus*).

West Indian manatees may be present in the nearshore areas where vessels are transiting to/from ports.

F. Project Description

I. *Describe the Proposed Action/Project Objectives: What are you trying to accomplish and how with this project? Describe in detail the construction equipment and methods** needed; long term vs. short term impacts; duration of short term impacts; dust, erosion, and sedimentation controls; restoration areas; if the project is growth-inducing or facilitates growth; whether the project is part of a larger project or plan; and what permits will need to be obtained.*

Attach a separate map showing project footprint, avoidance areas, construction accesses, staging/laydown areas.

***If construction involves overwater structures, pilings and sheetpiles, boat slips, boat ramps, shoreline armoring, dredging, blasting, artificial reefs or fishery activities, list the method here, but complete the next section(s) in detail.*

The Deep-Sea Benefits project will use monitoring/new data collection to address monitoring priorities preliminarily identified by the OO TIG for fish & water column invertebrates (FWCI), marine mammals (MM), sea turtles (ST), and MDBC Restoration Types. The project will use a combination of monitoring approaches/methods to characterize the distribution, abundance, habitat use, community composition, and trophic dynamics with respect to bentho-pelagic coupling, or vertical connectivity, between MDBC and water column habitats impacted by the Deepwater Horizon oil spill and those that were not.

This project will include one year of planning followed by three years of field work mostly conducted from other MDBC or research cruises already planned in the Gulf of Mexico. Many of these project activities will be leveraged with other ongoing projects, such as the MDBC sampling and mapping activities that have already been reviewed previously.

Proposed Methods	Compliance Status
Multiple Opening and Closing Net with Environmental System Sampler-based sampling (MOCNESS), environmental deoxyribose nucleic acid (eDNA) sampling, water quality sampling, benthic lander operations, ship based echosounders, transit of ships in and out of Gulf of Mexico ports	These activities were already reviewed as part of the MDBC field activities and following reviews are complete: NMFS ESA consultation, February 2023 (SERO-2023-00055) USFWS ESA consultation, April 2023 NMFS MMPA review, April 2023 NMFS EFH review, April 2023 NMFS MMPA review, April 2023 These regulatory compliance reviews were determined not applicable to the MDBC activities: USFWS Bald and Golden Eagle Protection Act USFWS Migratory Bird Treaty Act Rivers and Harbors Act/Clean Water Act (USACE permit)

Deployment of three passive acoustic monitoring (PAM) arrays using deployed high-frequency acoustic recording packages (HARPs) (see Figure 5)	Passive acoustic equipment is not emitting sounds. Acoustic equipment will be fixed with taut lines with floats to prevent entanglement. BMPs will be followed on the vessel that retrieves the data from the arrays. There is no evidence of adverse impacts from deployment or operation of these arrays on marine mammals or ESAlisted species under NMFS jurisdiction.
Deployment of passive/active acoustic tracking (PAAT) system including a sound producing WBAT (wide band autonomous transceiver) at 70 and 200 kHz (see Figure 5)	The use of acoustic equipment is not expected to affect marine mammals or result in any take. The active acoustic equipment operating at 70kHz is typical of a fishfinding echosounder. The 200 kHz echosounder is very similar, but at the higher frequency signal that attenuates very rapidly, and would only be detectable at short ranges from the instrument. These signals would NOT be continuously transmitted – ping cycles will likely be every half an hour. Equipment operating at these ranges is not detectable beyond 5km away. 200 kHz is likely above the hearing range of most marine mammals. 70 kHz is probably detectable by some species, but probably not highly detectable by sperm whales or Rice's whales. Active acoustic equipment will be fixed with taut lines with floats to prevent entanglement. Passive acoustic equipment will be situated on fixed equipment that would prevent entanglement. There is no evidence of adverse impacts from these arrays. BMPs will be followed on the vessel that retrieves the data from the arrays. There is no evidence of adverse impacts from deployment or operation of these arrays on marine mammals or ESA-listed species under NMFS jurisdiction.

Additional activities planned in this project include deployment of PAM arrays and PAAT systems for 2023-2027. To quantify MM habitat associations at select monitoring locations:

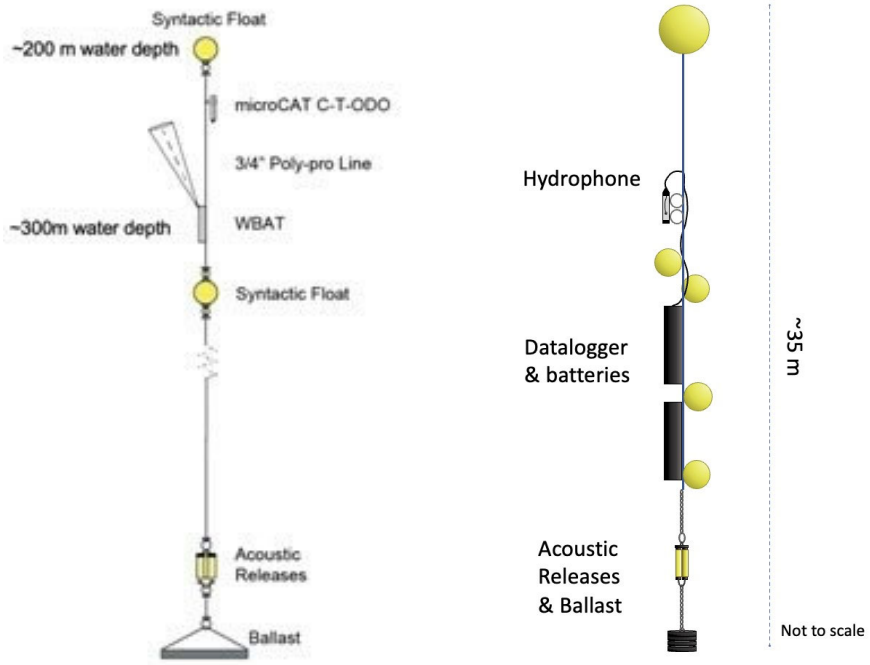
- three (3) HARPs will be deployed (in conjunction with existing cruises) to autonomously record MM vocalizations at the monitoring locations. These 3 HARPs will be deployed for at least the life of the project (3 years). The data will be retrieved 1-2 times per year, but the HARP will remain deployed at the same location.
- one (1) PAAT system coupled with active acoustics (i.e., fish echosounders or Wideband Autonomous Transceiver [WBAT]) will be deployed to monitor odontocete whale behavior and fish and water column invertebrate distributions on a continuous basis. It is anticipated this equipment will be deployed for ~ 3 years in total.

Single channel PAM equipment is moored to the seafloor and consists of a packaged data logger that records data from a calibrated hydrophone suspended above the instrument, batteries, flotation, acoustic release, and ballast weights seafloor package by a float that reaches ~35 m above the seafloor package (see Figure 5 below). This equipment is used to detect the presence and duration of interaction within the vicinity of the deployment site.

PAAT system equipment is similarly moored to the seafloor during deployment, but includes placement of paired 4 channel hydrophone arrays in close proximity (~1 km apart) on separate moorings. This equipment would reach approximately ~7 m into the water column above the ocean floor via a non-flexible fiberglass mast and ABS plastic frame that holds the 4 channel hydrophone array (Figure 5). To

complete the PAAT system, a WBAT would be suspended mid-water column (~300 m water depth) with a suspending float(s) situated above the WBAT (~200 m) to ensure the suspending line is taut lines to prevent entanglement; however, the exact length of this equipment would be dependent on the depth at the deployment site and thus the length of line needed to suspend the WBAT.. The WBAT would be situated between the two 4 channel PAM arrays with its own mooring. Thus, a total of three moorings would be needed to deploy the PAAT system. The PAAT equipment will be used to triangulate/track MM vocalization locations within the water column. The WBAT instrument will be used to characterize water column fish and invertebrate prey fields to determine their interactions with PAM-detected marine mammals. These instruments would be configured with different sample rates and number of hydrophones to maximize detections of a variety of MM species.

Deployment location details and durations will be better defined during project implementation planning work as logistical planning and coordination with existing cruise schedules is completed. This work would leverage equipment and technical expertise associated with the ongoing field work. These longer-term deployments are necessary to detect and quantify MM interactions with MDBC habitats because those interactions are anticipated to be less frequent and more ephemeral in nature. This passive acoustic monitoring would also provide information on soundscapes, which would complement and be useful to other planned OO TIG activities (OO TIG Project ID 229, currently funded project to reduce anthropogenic noise). The near-continuous, consecutive deployments of PAMs will be able to record MM activity throughout each of the three field monitoring years. The near-continuous, consecutive deployments of PAMs will be able to record MM activity throughout each of the three field monitoring years.



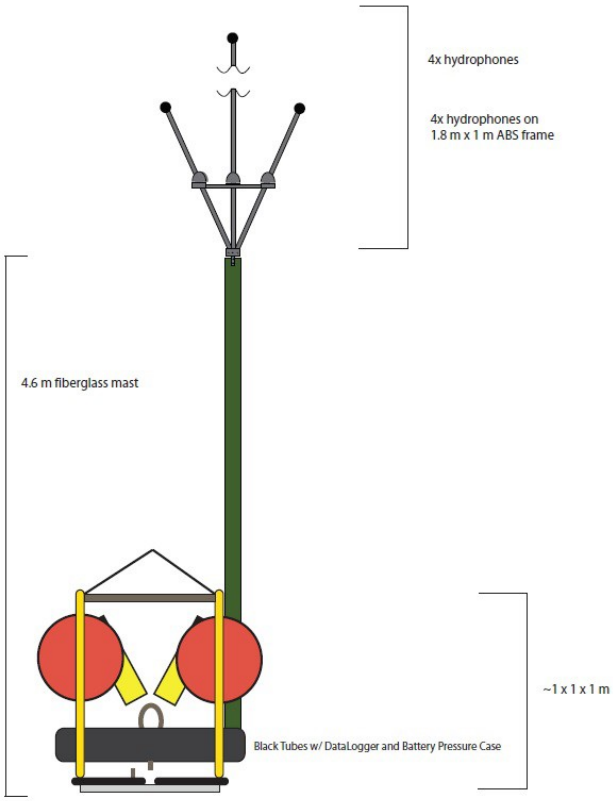


Figure 5. Diagrams depicting the general design of single channel (left) and 4 channel (middle) PAM acoustic arrays and WBAT mooring (right). Note that for deployment of PAAT system, two 4 channel arrays would be moored in close proximity (~1 km) along with a WBAT floated to mid-water column for a total of three moorings to complete the PAAT system. **Graphics are not drawn to scale.**

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)*

Project implementation planning, including final monitoring design and site selection, is planned commence in late 2023. The first field work implementation is anticipated to begin in the summer of 2024 and will field work will be conducted for three years (summer 2025, 2026). However, due to timing of project kickoff and complications with equipment procurement, etc., it may not be feasible to coordinate the deployment of the acoustic equipment for the summer 2024 field season. Therefore, field work activities are being considered up through 2027.

Field work cruises will be conducted during summer months. These boats generally transit to and from the following ports:
Pascagoula, MS; Gulfport, MS; Houma/Cocodrie, LA; Fourchon, LA; Panama City, FL; Houston/Galveston, TX; Tampa, FL

While exact dates of Deep-Sea Benefits project cruises have yet to be planned, we anticipate up to 30 sea days per year for the full suite of project components. Work will be conducted on existing NOAA cruises already scheduled when possible. Up to 15 new sea days may be required.

III. *Specific In-Water and/or Terrestrial Construction Methods*

Please check yes or no for the following questions related to in-water work and overwater structures

Does this project include in-water work?	YES☒	NO☐
Does this project include terrestrial construction?	YES☐	NO☒
Does this project include construction of an overwater structure?	YES☐	NO☒
Will fishing be allowed from this overwater structure?	YES☐	NO☒
Will wildlife observation be allowed from this overwater structure?	YES☐	NO☒
Will boat docking be allowed from this overwater structure?	YES☐	NO☒

If this is a fishing pier, please provide the following information: public or private access to pier, estimated number of people fishing per day, plan to address hook and line captures of protected species, specific operating hours/open 24 hours, artificial lighting of pier (if any), number of fish cleaning stations, and number of pier attendants (if any).

NA

Construction: Provide a detailed account of construction methods. It is important to include step-by-step descriptions of how demolition or removal of structures is conducted and if any debris will be moved and how. Describe how construction will be implemented, what type and size of materials will be used and if machines will be used, manual labor, or both. Indicate if work will be done from upland, barge, or both.)

iii. *Use of "Dock Construction Guidelines"?* https://media.fisheries.noaa.gov/dam-migration/dockkey2002.pdf iv. *Type of decking: Grated – 43% open space; Wooden planks or composite planks – proposed spacing?* v. *Height above Mean High Water (MHW) elevation?*
vi. *Directional orientation of main axis of dock?*
vii. *Overwater area (sq ft)?*

NA

b. *Pilings & Sheetpiles: If this project includes installation of pilings or sheets, please provide answers to questions 1-11 listed below*

1. Method of pile installation	NA
2. Material type of piles used	NA
3. Size (width) of piles/sheets	NA
4. Total number of piles/sheets	NA
5. Number of strikes for each single pile	NA
6. Number of strikes per hour (for a single pile)	NA
7. Expected number of piles to be driven each day	NA
8. Expected amount of time needed to drive each pile (minutes of driving activities)	NA
9. Expected number of sequential days spent pile driving	NA
10. Whether pile driving occurring in-water or on land	NA
11. Depth of water where piles will be driven	NA

c. *Marinas and Boat Slips (Describe the number and size of slips and if the number of new slips changes from what is currently available at the project. Indicate how many are wet slips and how many are dry slips. Estimate the shadow effect of the boats - the area (sqft) beneath the boats that will be shaded.)*

NA

d. *Boat Ramp (Describe the number and size of boat ramps, the number of vessels that can be moored at the site (e.g., staging area) and if this is a public or private ramp. Indicate the boat trailer parking lot capacity, and if this number changes from what is currently available at the project.)*

NA

e. *Shoreline Armoring (This includes all manner of shoreline armoring (e.g., riprap, seawalls, jetties, groins, breakwaters, etc.). Provide specific information on material and construction methodology used to install the shoreline armoring materials. Include linear footage and square footage. Attach a separate map showing the location of the shoreline armoring in the action area.*

NA

f. *Dredging or digging (Provide details about dredge type (hopper, cutterhead, clamshell, etc.), maximum depth of dredging, area (ft2) to be dredged, volume of material (yd3) to be produced, grain size of material, sediment testing for contamination, spoil disposition plans, and hydrodynamic description (average current speed/direction)). If digging in the terrestrial environment, please describe fully with details about possible water jetting, vibration methods to install pilings for dune walk-over structure, or other methods. If using devices/methods/turtle relocation dredging to relocate sea turtles, then describe the methods here.*

NA

g. *Blasting (Projects that use blasting might not qualify as "minor projects," and a Biological Assessment (BA) may need to be prepared for the project. Arrange a technical consultation meeting with NMFS Protected Resources Division to determine if a BA is necessary. Please include explosive weights and blasting plan.)*

NA

h. *Artificial Reefs (Provide a detailed account of the artificial reef site selection and reef establishment decisions [i.e., management and siting considerations, stakeholder considerations, environmental considerations, long term maintenance plan (periodic clean-up of lost fishing gear/debris]), deployment schedule, materials used, deployment methods, as well as final depth profile and overhead clearance for vessel traffic. For additional Information and detailed guidance on artificial reefs, please refer to the artificial reef program websites for the particular state the project will occur in.*

NA

i. *Fishery Activities (Describe any use of gear that could entangle or capture protected species. This includes activities that may enhance fishing opportunities (e.g. fishing piers) or be fishery/gear research related (e.g. involve trawl gear, gillnets, hook and line gear, crab pots etc)).*

PAM/PAAT equipment will include temporary moorings/ballast weights deployed with the equipment. The equipment will be suspended in the water column above these temporary moorings and will be either ~35m from

the PAM mooring (depth of equipment depends on depth at location of deployment) or ~200m from the surface for PAAT equipment.

G. NOAA Essential Fish Habitat (EFH)

If applicable, describe any designated Essential Fish Habitat within the project area in the text box and answer the questions below about habitat effects, conversions or benefits. If there is no EFH in your project area, enter N/A in the box below and move to section F.

Depending on the effects of your project, EFH consultation with NMFS may be required:
https://www.fisheries.noaa.gov/southeast/consultations/essential-fish-habitat-consultations-southeast
The NMFS and the Gulf of Mexico Fishery Management Council (Gulf Council) have identified and described essential fish habitat (EFH) for a variety of federally managed species that overlaps with the Deep-Sea Benefits MAIP field operations project area. For those species managed by the Gulf Council, EFH maps were spatially defined based on five eco-regions (Figure 8). Within each eco-region, three habitat zones (estuarine, nearshore, offshore) are recognized, and specific habitat types are mapped within each eco-region and habitat zone. The Deep-Sea Benefits MAIP field operations project boundary area is located in the offshore habitat zone, and spans all five eco-regions; however, likely locations for field work are located within eco-regions 2, 3, and 4.

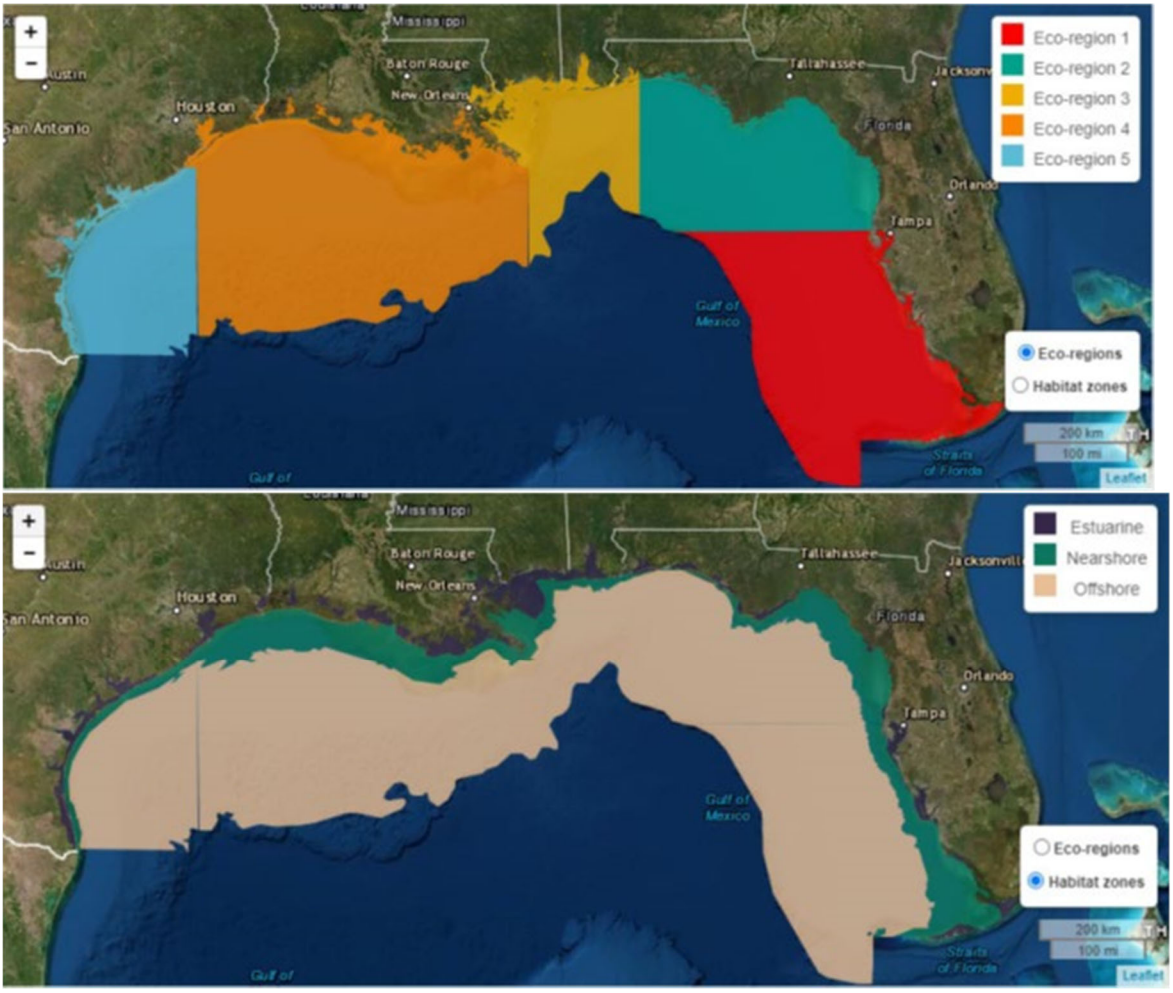


Figure 8. Gulf of Mexico EFH eco-regions (top) and habitat zones (bottom) as described by the Gulf Council

In this table, please use checkboxes to indicate which EFH eco-region(s) and habitat zone(s) in which the project is located. For more information about EFH Eco Regions see the references here:
https://noaasdd.sharepoint.com/:f:/s/tcover/Euupi2PMtXdEqQtJSdKyq-wBdyb42ubMUUbMy7QsijqK7A?e=oYqSsb
https://portal.gulfcouncil.org/EFHreview.html

Gulf of Mexico EFH Eco-Region	Estuarine	Nearshore	Offshore
Eco-Region 1: South Florida (*Florida Keys north to Tarpon Springs, Florida*)	☐	☐	☒
Eco-Region 2: North Florida (*Tarpon Springs, Florida, north and west to Pensacola Bay, Florida*)	☐	☐	☒
Eco-Region 3: East Louisiana, Mississippi, and Alabama (*Pensacola Bay, Florida, west to the Mississippi River Delta)*	☐	☐	☒
Eco-Region 4: East Texas and West Louisiana (*Mississippi River Delta west and south to Freeport, Texas)*	☐	☐	☒
Eco-Region 5: West Texas (*Freeport, Texas south to the U.S./Mexico border)*	☐	☐	☒

Effects to EFH

In this section, please indicate if your project has effects on EFH, either beneficial or adverse. For example, whether the project creates, improves, removes or converts habitat. Please describe the types of habitats that will be affected by the project, including number of acres.

Will this project affect EFH?	YES☒ NO☐
If no, please proceed to section X. (For example, your project is wholly upland or includes only desktop analysis tasks) If yes, please proceed to additional boxes below.	

The offshore marine EFH habitats in the project action area may include vegetated bottoms (e.g., benthic algae), nonvegetated bottoms (e.g., sand/shell bottoms, soft bottoms of mud/clay/silt), live/hard bottoms (e.g., low relief or high relief irregular bottoms), coral and coral reefs (e.g., reef halos, patch reefs, deep reefs), continental shelf/geologic features (e.g., shelf edge, shelf slope, salt domes), marine water column associated, and drift algae (e.g., Sargassum). These habitats areas are associated with various life stages of federally managed species, including all six management units for which the Gulf Council has developed fishery management plans (FMP): coastal migratory pelagics (e.g., cobia and mackerels), red drum, reef fish (e.g., snappers, groupers, jacks, triggerfish, hogfish), shrimp (e.g., brown, white, pink, royal red), spiny lobster, and coral (e.g., hydrozoa and anthozoa).

NMFS is also responsible for identifying and describing EFH in FMPs for highly migratory species (HMS) such as sharks, tunas, and billfish which cross fishery management council boundaries. Due to the highly mobile nature of these species, EFH for HMS is classified by NMFS spatially using point/distribution data to create a probability boundary. As such, the MDBC project area also overlaps with HMS EFH for multiple life stages and species of sharks, tunas, and billfishes.

Additionally, there are two types (HMS and Coral) of EFH Habitat Areas of Particular Concern (HAPCs) that are also included in the MDBC project area. These EFH-HAPCs are described as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically

important, or located in an environmentally stressed area. The Gulf of
Mexico is the only known spawning location for western Atlantic bluefin tuna, and as such it was designated as an EFHHAPC and is the only HAPC designation for HMS in the Gulf. The Gulf Council, through the original Coral FMP and subsequent Amendments, has established HAPCs for coral reef management along with regulations on fishing activities and coral harvest. The original Coral FMP (effective 1984) prohibited harvest of stony coral and seafans, except by scientific permit, and also identified HAPCs in the Gulf where the use of any fishing gear interfacing with the bottom was prohibited (e.g., West and East Flower Garden Banks, Florida Middle Grounds). Subsequent Coral Amendments developed additional harvest regulations and refined definitions for soft corals (e.g., gorgonians), live rock (e.g., assemblage of living marine organisms attached to hard substrate such as dead coral or limestone), and octocorals. Furthermore, Coral Amendment 9 (effective 2020) established 13 new HAPCs with fishing regulations that prohibit deployment of bottom-tending gear and anchoring by fishing vessels (e.g., West Florida Wall, Alabama Alps Reef, L & W Pinnacles and Scamp Reef (combined area),
Mississippi Canyon 118, Roughtongue Reef, Viosca Knoll 826, Viosca Knoll 862/906, AT 047, AT 357, Green Canyon 852, Southern Bank, Harte Bank, and Pulley Ridge South Portion A), and also designated eight new areas without fishing regulations (Figure 9).

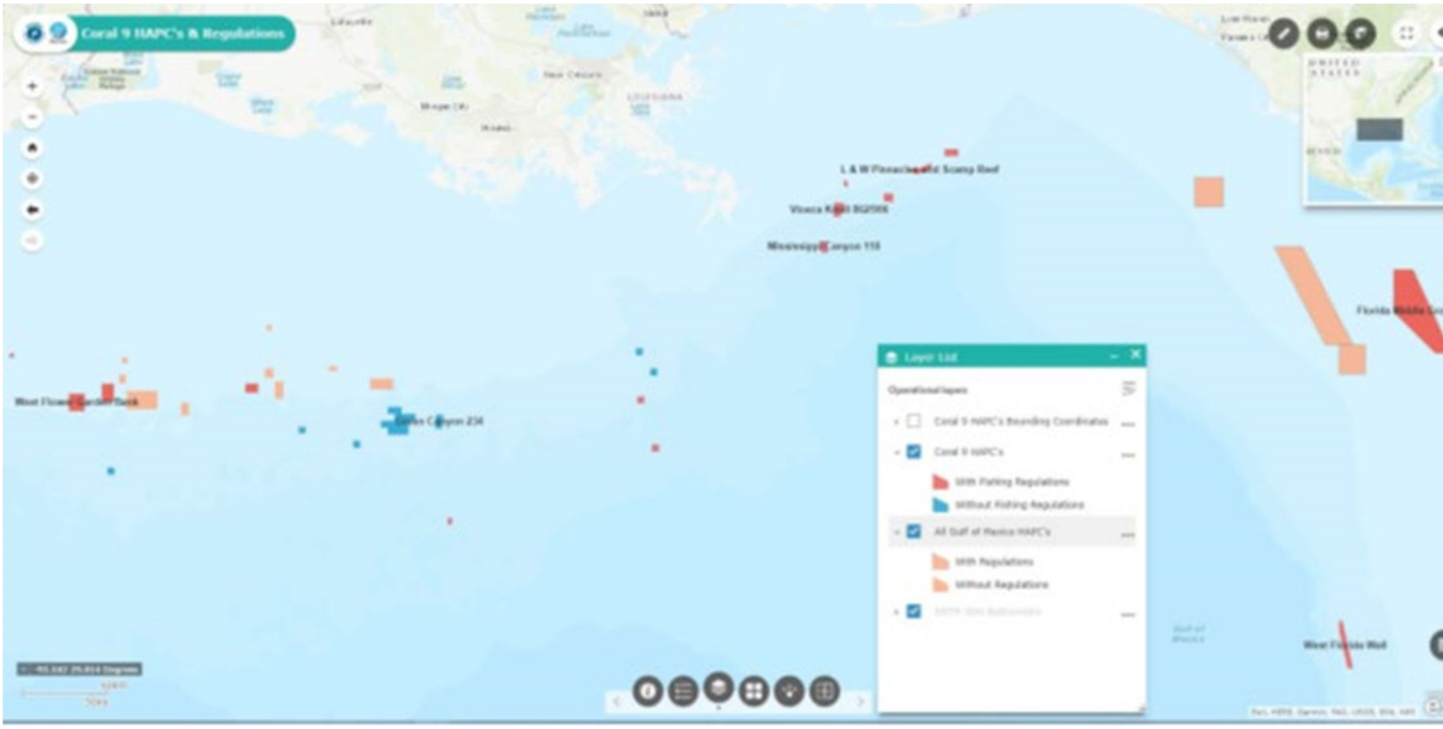


Figure 9. Coral HAPCs in the Gulf of Mexico

Will this project have beneficial effects to EFH?	YES☒ NO☐
If yes, please describe how your project will have beneficial effects the text box below:	

While the Deep-Sea Benefits project area does overlap with EFH and EFH-HAPCs for a variety of federally managed species, the scope of the project is restorative in nature and **will not have adverse effects on EFH**. The limited impacts to EFH for the PAM/PAAT deployments would be minor and temporary. Therefore, the cumulative project activities will provide additional information about the trophic interactions among mesophotic and deep benthic communities, fish and water column invertebrates, and marine mammals in the project area to provide a longterm restoration benefit to designated EFH by better understand oceanic productivity and how EFH supports it.

Will this project have adverse effects on EFH?	YES☐ NO☒
If yes, please describe what type of adverse effects your project will cause to EFH in the text bow below:	

NA

H. NOAA ESA Species and Critical Habitat and Effects Determination Requested

If your project occurs in a location that does not contain any listed NOAA species or designated Critical Habitats, please check the box below. If this box is checked, you may skip Section H. and proceed to Section I.

☐This project occurs in a location that does not contain any listed NOAA species or designated Critical Habitats.

☒ESA effects have been accounted for under an existing consultation.

Some effects have already been analyzed in previous consultations (see table, Section F). The remainder of project activities resulted in a "no effect" determination.

1. List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area. Species that do not currently occur in the action area (but are listed on county species lists) do not need to be listed in drop downs. For species not included in the drop down menu please add manually to the table.

2. Attach a separate map identifying species/critical habitat locations within the action area. For information on species and critical habitat under NMFS jurisdiction, visit: http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/Documents/gulf_of_mexico.pdf.

If Gulf sturgeon in marine waters may be affected, include them in the table here. If Gulf Sturgeon in riverine/freshwater may be affected include them in the USFWS table below in Section H. If sea turtles in water may be affected include them in the table here. If sea turtles on land may be affected include them in the USFWS table below in Section H.

Species and/or Critical Habitat	**CH Unit** (if applicable)	**Location** (Sea turtles and Gulf Sturgeon **only**)	**Determinations** (see definitions below)	**For "No Effect", please select justification.**
Sperm Whale (E)		Choose an item.	No Effect	

Rice's Whale (E)		Choose an item.	No Effect	Project activities no previously analyzed will not affect this species
Loggerhead Sea Turtle (T)		Choose an item.	No Effect	
Green Sea Turtle (T)		Choose an item.	No Effect	
Hawksbill Sea Turtle (E)		Choose an item.	No Effect	
Leatherback Sea Turtle (E)		Choose an item.	No Effect	
Kemp's Ridley Sea Turtle (E)		Choose an item.	No Effect	
Choose an item.		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.

Determination Definitions

Please make the appropriate choice in the drop down menus for both species and designated critical habitat listed in the firs column.

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = may affect, not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = may affect, likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

I. USFWS Species and Critical Habitat and Effects Determination Requested

If your project occurs in a location that does not contain any listed USFWS species or designated Critical Habitats, please check the box below. If this box is checked, you may skip Section I and proceed to Section J.

☐This project occurs in a location that does not contain any listed USFWS species or designated Critical Habitats.

☒ESA effects have been accounted for under an existing consultation.

*1. List all species, critical habitat, proposed species and proposed critical habitat **generated by IPaC** that may be found in the action area*. For species not included in the drop down menu please add manually to the table. The IPaC website can be found here: https://ipac.ecosphere.fws.gov/.

2. Attach a separate map identifying species/critical habitat locations within the action area. For information on species and critical habitat under NMFS jurisdiction, visit: http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/Documents/gulf_of_mexico.pdf.

If Gulf sturgeon in riverine/freshwater waters may be affected, include them in the table here. If Gulf Sturgeon in marine waters may be affected include them in the NMFS table above in Section G. If sea turtles on land may be affected include them in the table here. If sea turtles in water may be affected include them in the NMFS table above in Section G.

Species and/or Critical Habitat	**CH Unit** (if applicable)	**Location** (Sea turtles and Gulf Sturgeon **only**)	**Determinations** (see definitions below)	**For "No Effect", please select justification.**
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.

Determination Definitions

Please make the appropriate choice in the drop down menus for both species and designated critical habitat

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or

cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = may affect, not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = may affect, likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

J. Effects of the Proposed Project to the Species and Actions to Reduce Impacts

NOTE: Species selected as "No Effect" with justification in tables above do not need to be addressed in Section I or J.

I. *Explain the potential beneficial and adverse effects to each species listed above. Describe what, when, and how the species will be impacted and the likely response to the impact. Be sure to include direct, indirect, and cumulative impacts and where possible, quantify effects.*

If species are present (or potentially present) and will not be adversely affected describe your rationale. If species are unlikely to be present in the general area or action area, explain why. This justification provides documentation for your administrative record, avoids the need for additional correspondence regarding the species, and helps expedite review.

Species under USFWS jurisdiction

Effects to manatees under the ESA and MMPA were already evaluated as part of the mesophotic and deep benthic field work, thus we are relying on those previous reviews. See Section D of this form.

Species under NMFS jurisdiction

Most of the activities were previously analyzed for effects to ESA-listed species as part of the consultation for the DWH mesophotic and deep benthic field work. For those activities that were not previously analyzed there will be no effect on ESA-listed species, see explanation in table, Section F.

II. *Explain the actions to reduce adverse effects to each species listed above. For each species for which impacts were identified, describe any Conservation Measures and/or BMPs that will be implemented to avoid or minimize the impacts. Conservation Measures and/or BMPs are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review. Conservation Measures and/or BMPs are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.*

Frequently Recommended Conservation Measures and BMPs: This checklist provides standard practices recommended by NMFS and USFWS. Please select any BMPs that will be implemented:

☒	**USFWS Standard Manatee In Water Conditions**
☐	**NMFS Protected Species Construction Conditions (2021)[1]**
☐	**NMFS Measures for Reducing the Entrapment Risk to Protected Species[1]**
☒	**NMFS Vessel Strike Avoidance Measures (2021)[1]**

Additional BMPs or Conservation Measures

Chapter 6 of the PDARP included an important appendix (6.A) of best practices, see information starting on page 6-173.
http://www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/Chapter-6_Environmental-Consequences_508.pdf
Use the box below to indicate which best management practices or conservation measures you'll be using in your project (that were not listed in Section I above)

N/A

K. Effects to Critical Habitats and Actions to Reduce Impacts

NOTE: Species selected as "No Effect" with justification in table do not need to be addressed in Section I or J.

I. *Explain the potential beneficial and adverse effects to critical habitat listed above. Describe what, when, and how the critical habitat will be impacted and the likely response to the impact. Be sure to include direct, indirect, and cumulative impacts to physical and biological features, and where possible, quantify effects (e.g. acres of habitat, miles of habitat).*

Describe your rationale if designated or proposed critical habitats are present and will not be adversely affected.

N/A

II. *Explain the actions to reduce adverse effects to critical habitat listed above. For critical habitat for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review.*
Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.

[1] https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance

N/A

L. Marine Mammals

I. The Marine Mammal Protection Act prohibits the taking (including disruption of behavior, entrapment, injury, or death) of all marine mammals (e.g.,whales, dolphins, manatees). However, the MMPA allows limited exceptions to the take prohibition if authorized, such as the incidental (i.e., unintentional but not unexpected) take of marine mammals. The following questions are designed to allow the Agencies to quickly determine if your action has the potential to take marine mammals. If the information provided indicates that incidental take is possible, further discussion with the Agencies is required.

Is your activity occurring in or on marine or estuarine waters? ☐NO ☒YES

If yes, is your activity likely to cause large-scale, ecosystem level impacts to the quality (e.g. salinity, temperature) of marine or

estuarine waters? ☒NO ☐YES

II. If Yes, describe activities further using checkboxes. Does your activity involve any of the following:

NO	YES	ACTIVITY
☐	☒	*a) Use of active acoustic equipment (e.g., echosounder) producing sound below 200 kHz*
☒	☐	*b) In-water construction or demolition*
☒	☐	*c) Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls)*
☒	☐	*d) In-water Explosive detonation*
☒	☐	*e) Aquaculture*
☒	☐	*f) Restoration of barrier islands, levee construction or similar projects*
☒	☐	*g) Fresh-water river diversions*
☒	☐	*h) Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas)*
☒	☐	*i) Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters an living shorelines, etc.*
☒	☐	*j) Conducting driving of sheet piles or pilings*
☒	☐	*k) Use of floating pipeline during dredging activities*

III. If you checked "Yes" to any of the activities immediately above or the activity could impact the quality of marine or estuarine waters, please describe the nature of the activities in more detail or indicate which section of the form already includes these descriptions. See the NOAA Acoustic Guidance for more information: http://www.nmfs.noaa.gov/pr/acoustics/faq.htm

The use of acoustic equipment is not expected to affect marine mammals or result in any take. The active acoustic equipment operating at 70kHz is typical of a fish-finding echosounder. The 200 kHz echosounder is very similar, but at the higher frequency that signal will attenuate very strongly, and

would only be detectable at short ranges from the instrument. These signals would NOT be continuously transmitted – ping cycles will likely be every half an hour. Equipment operating at these ranges is not detectable beyond 5km away. 200 kHz is likely above the hearing range of most marine mammals. 70 kHz is probably detectable by some species, but probably not highly detectable by sperm whales or Rice's whales.

Acoustic equipment will be fixed with taut lines with floats to prevent entanglement. There is no evidence of adverse impacts from these arrays.

IV. *Frequently Recommended BMPs for marine mammals (manatees are covered in Section I above): This checklist provides standard BMPs recommended by NOAA. Please select any BMPs that will be implemented:*

☐	NMFS Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines[2]
☐	NMFS Protected Species Construction Conditions (2021)[3]
☐	NMFS Measures for Reducing the Entrapment Risk to Protected Species (2012)[3]
☒	NMFS Vessel Strike Avoidance Measures and Reporting for Mariners (2021)[3]
☐	NMFS Reproducing and posting outreach signs: Dolphin Friendly Fishing Tips sign, Don't Feed Wild Dolphins sign[4]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals. N/A

M. Bald Eagles

Are bald eagles present in the action area? ☒NO ☐YES

If YES, the following conservation measures should be implemented:

1. If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, all activities (e.g., walking, camping, clean-up, use of a UTV, ATV, or boat) should avoid the nest by a minimum of 660 feet. If the nest is protected by a vegetated buffer where there is *no* line of sight to the nest, then the minimum avoidance distance is 330 feet. This avoidance distance shall be maintained from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).
2. If a similar activity (e.g., driving on a roadway) is closer than 660 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.
3. If a vegetated buffer is present and there is no line of sight to the nest and a similar activity is closer than 330 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.

[2] https://www.fisheries.noaa.gov/topic/marine-life-viewing-guidelines
[3] https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance
[4] https://www.fisheries.noaa.gov/southeast/consultations/protected-species-educational-signs

4. In some instances, activities conducted at a distance greater than 660 feet of a nest may result in disturbance. If an activity appears to cause initial disturbance, the activity shall stop and all individuals and equipment will be moved away until the eagles are no longer displaying disturbance behaviors.

Will you implement the above measures? ☒NO ☒YES

If these measures cannot be implemented, then you must contact the Service's Migratory Bird Permit Office.
Texas – (505) 248-7882 or by email: permitsR2MB@fws.gov
Louisiana, Mississippi, Alabama, Florida – (404) 679-7070 or by email: permitsR4MB@fws.gov

N. Migratory Bird Treaty Act

In accordance with the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. 703-712), will this project cause the take of any birds covered under this act? ☒NO ☐YES

If YES, please explain and indicate if the pertinent permits will be or have been obtained:

Project proponent will review the appropriate BMPs and CMs found at this website and implement the appropriate measures to the extent practicable:
https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
☐NO ☒YES

If NO, please explain:

O. Request Approval for Use of NMFS PDCs for This Project

Complete this section only if your project qualifies for streamlined ESA consultation under the ESA Framework Programmatic Biological Opinion completed by NMFS on February 10, 2016.

To be eligible for streamlined ESA consultation with NMFS, you must implement all Project Design Criteria (PDCs) applicable to your project. Check "yes" for PDC categories that apply to the proposed project, and request PDC checklist from NMFS.

NO	YES	ACTIVITY
☒	☐	**Oyster Reef Creation and Enhancement**
☒	☐	**Marine Debris Removal**
☒	☐	**Construction of Living Shorelines**
☒	☐	**Marsh Creation and Enhancement**
☒	☐	**Construction of Non-Fishing Piers**

P. Submitting the BE Form

We request that all BE forms and consultation materials be placed on Sharepoint for review. Upon receipt, we will conduct a preliminary review and provide any comments and feedback, including any requests for modifications or additional information.

If modifications or additional information is necessary, we will work with you until the Biological Evaluation form is considered complete. Once complete, we will use the Biological Evaluation form to initiate appropriate consultations.

Questions may be directed to:

NMFS ESA § 7 Consultation
Christy Fellas, National Oceanic Atmospheric Administration
Email: Christina.Fellas@noaa.gov
Phone: 727-551-5714

USFWS ESA § 7 Consultation
Michael Barron, Department of the Interior
Email: michael_barron@fws.gov
Phone: 251-421-7030