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 June 2, 2023

To: Memorandum to File

From: Michael Barron, Deepwater Horizon Gulf Restoration Office

Subject: Regulatory Compliance Determinations for Restoration Projects Proposed in the Mississippi Trustee Implementation Group's Restoration Plan #4: Restoration of Wetlands, Coastal, and Nearshore Habitats; Nutrient Reduction (Nonpoint Source); and Provide and Enhance Recreational Opportunities

Under the Endangered Species Act (ESA) Section 7(a)(2), each Federal agency shall ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species, or destroy/adversely modify designated critical habitat. If a Federal agency determines that a Federal action will have no effect on ESA-listed species or designated critical habitat, then the Federal agency is not required to consult with the US Fish and Wildlife Service (USFWS) for purposes of ESA. This memo does not include any information or effects determinations for protected species under the jurisdiction of the National Marine Fisheries Service.

Based on our review of the project materials provided, the compliance determinations of seven projects proposed for implementation in the *Draft Restoration Plan and Environmental Assessment #4: Restoration of Wetlands, Coastal, and Nearshore Habitats; Nutrient Reduction (Nonpoint Source); and Provide and Enhance Recreational Opportunities* are indicated below:

Project Title	Endangered Species Act	Marine Mammal Protection Act	Bald and Golden Eagle Protection Act	Migratory Bird Treaty Act	Coastal Barrier Resources Act
Back Bay - Biloxi Davis Bayou Nutrient Reduction	R-SC	NA	NT	NT	R-SC
Big Cedar – Rocky Creek Water Quality Enhancement	CEC	NA	NT	NT	NA
Jourdan River Boardwalk	R-SC	R-SC	NA	NT	NA
Shepard State Park Recreational Enhancements-1	R-SC	NA	NT	NT	NA
Coastwide Habitat Acquisition	NA	NA	NA	NA	NA
Living Shoreline Bulkhead Alternative	R-SC	R-SC	NT	NT	NA
Hancock County Marsh Living Shoreline Phase 6 Breakwater	CEC	CEC	NT	NT	NA

R-SC – Required-Separate Consultation; NA – Not Applicable; NT – No Take; NE – No Effect; CEC – Covered by Existing Consultation

Should any 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 (7)

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): Mississippi Department of Environmental Quality (MDEQ)

Contact Name: Valerie Alley, MDEQ Program Management Division Chief Phone: 601-961-5182 Email:

valley@mdeq.ms.gov

Project Name: Back Bay - Biloxi Davis Bayou Nutrient Reduction

DIVER ID# Click to enter text TIG: Mississippi TIG Restoration Plan # 4

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:
E & D has not commenced

C. Project Location

I. State and County/Parish of action area

Harrison County and Jackson County, Mississippi

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]

NW Corner: 30.4529261°N , 88.9817168°W

SW Corner: 30.3987746°N , 88.9788745°W

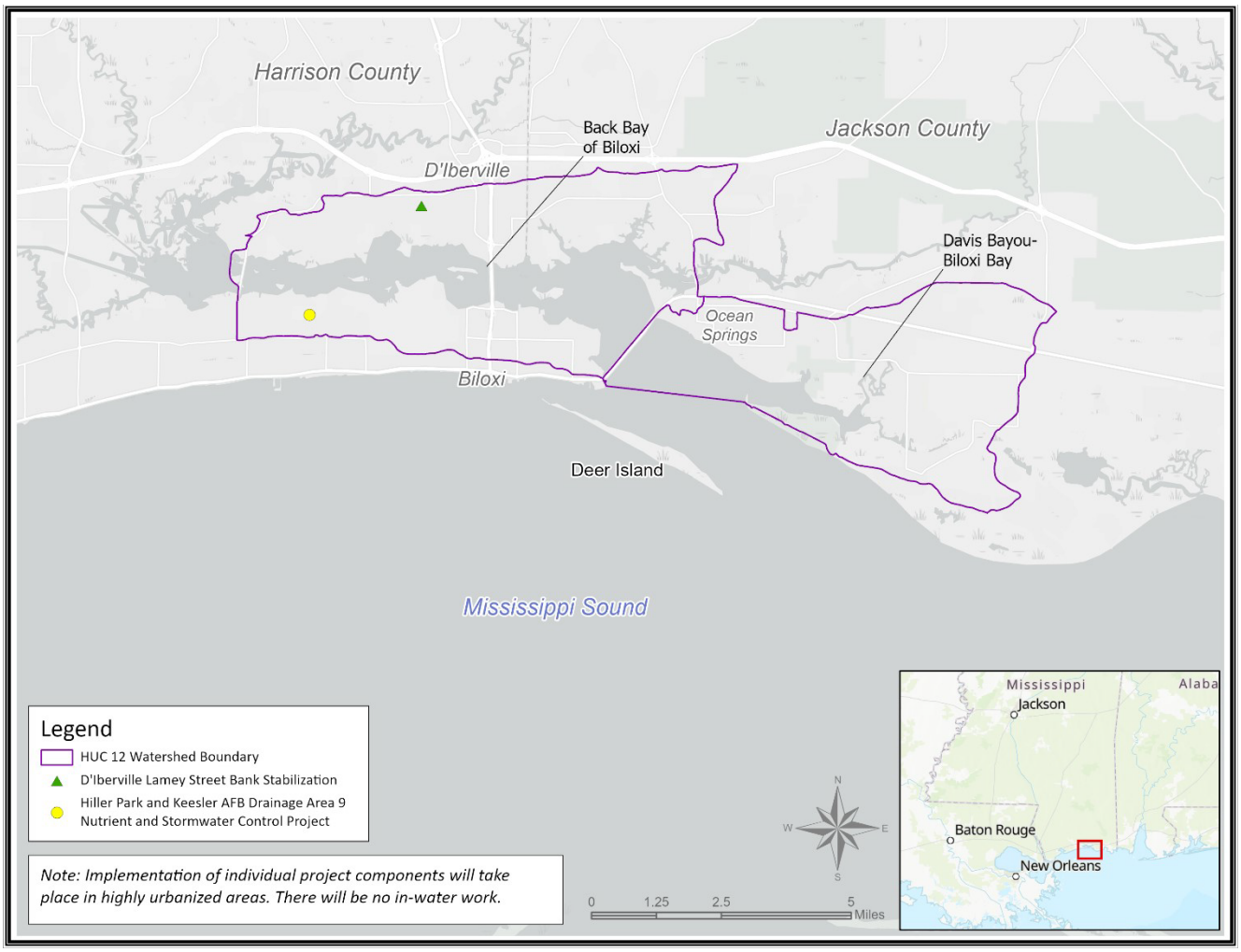
NE Corner: 30.4548351°N , 88.7106534°W

SE Corner: 30.3520558°N , 88.7113011°W

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


Harrison County
Jackson County
Back Bay
of Biloxi
D'Iberville
Davis Bayou-
Biloxi Bay
Ocean
Springs
Biloxi
Deer Island
Mississippi Sound
Legend
HUC 12 Watershed Boundary
D'Iberville Lamey Street Bank Stabilization
Hiller Park and Keesler AFB Drainage Area 9
Nutrient and Stormwater Control Project
Note: Implementation of individual project components will take place in highly urbanized areas. There will be no in-water work.
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Mississippi
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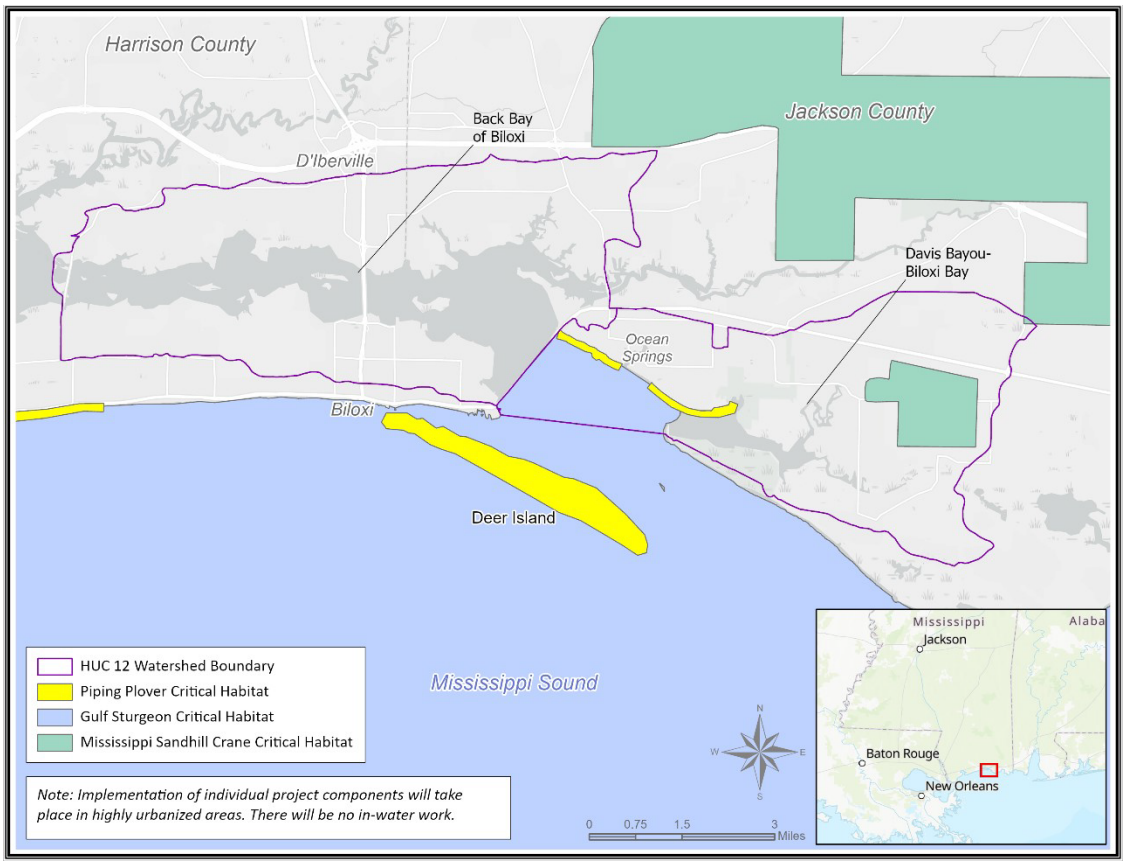
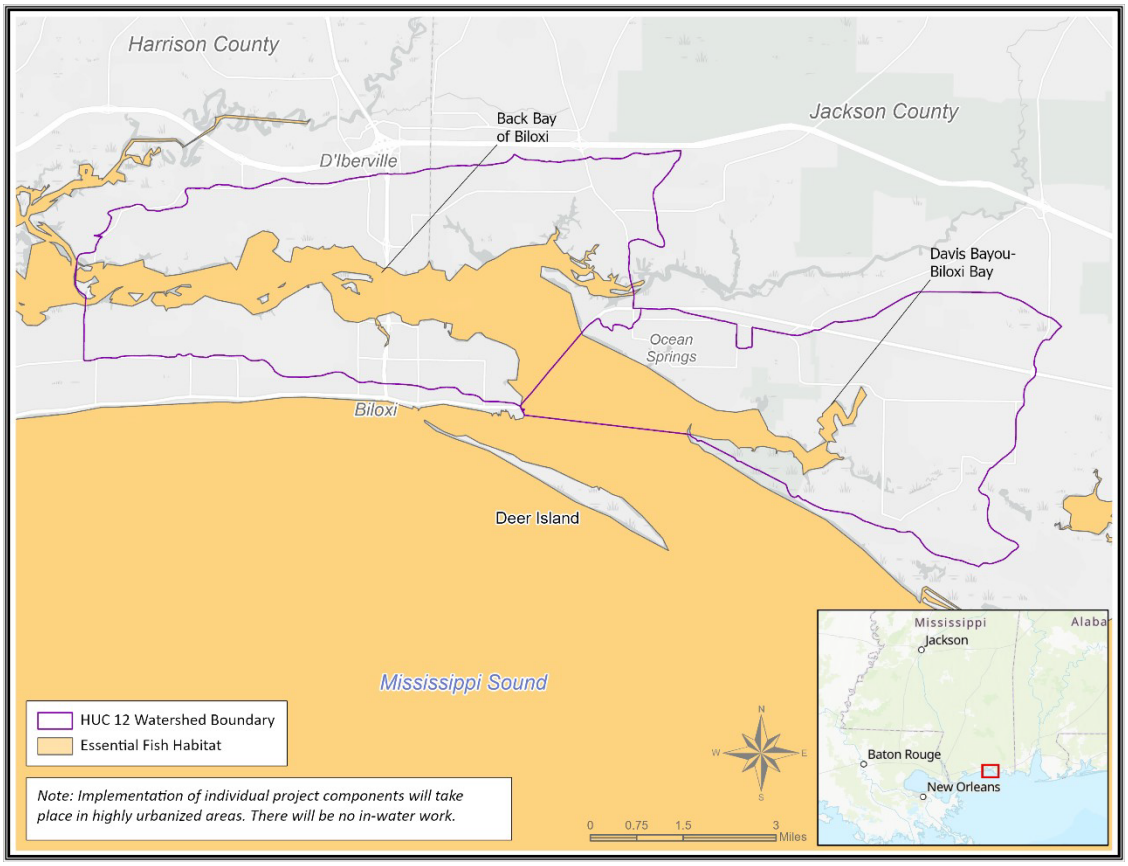
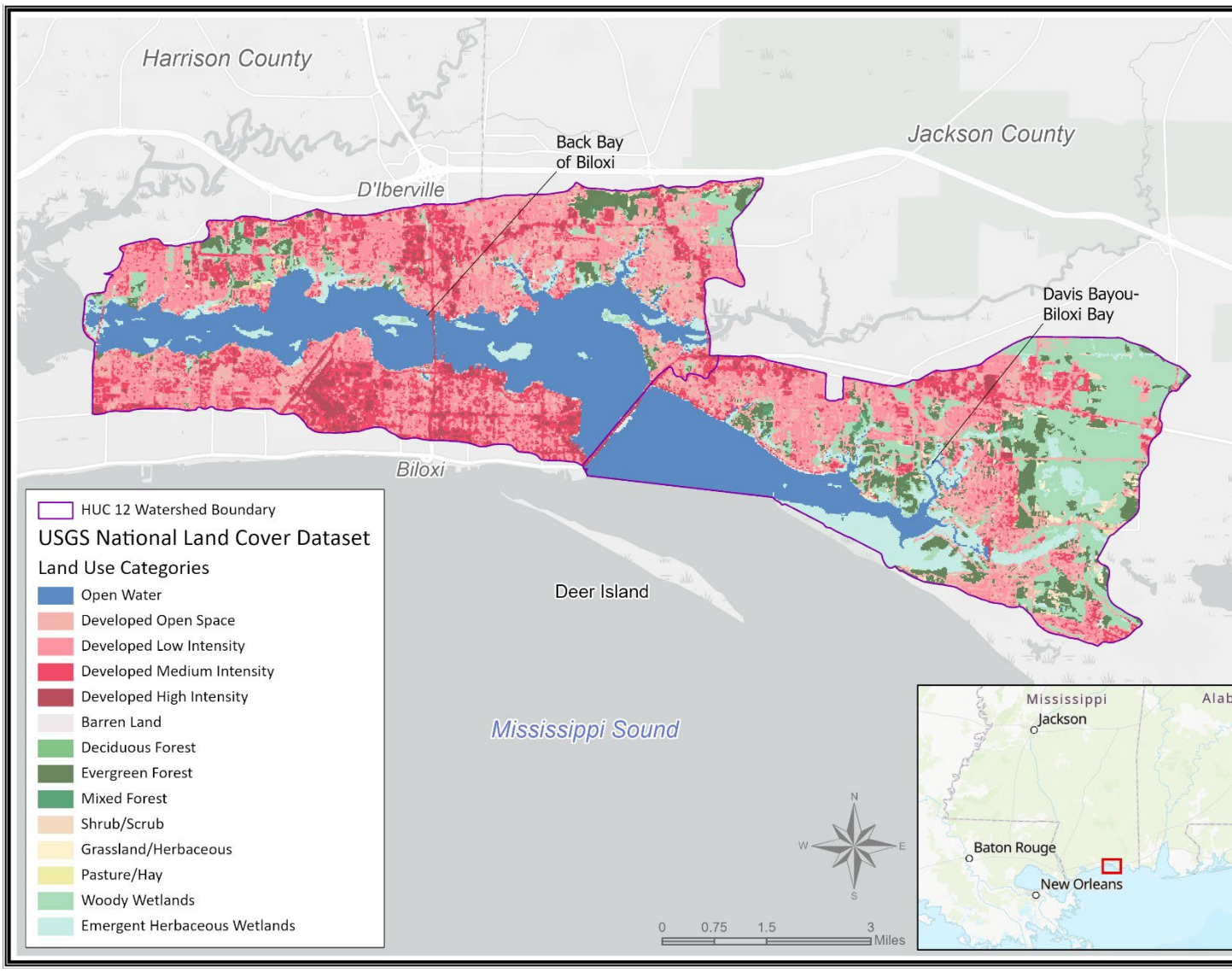
Baton Rouge
New Orleans


Harrison County
Jackson County
Back Bay of Biloxi
D'Iberville
Davis Bayou-Biloxi Bay
Ocean Springs
Biloxi
Deer Island
Mississippi Sound
HUC 12 Watershed Boundary
Piping Plover Critical Habitat
Gulf Sturgeon Critical Habitat
Mississippi Sandhill Crane Critical Habitat
Note: Implementation of individual project components will take place in highly urbanized areas. There will be no in-water work.
0 0.75 1.5 3 Miles
Mississippi
Jackson
Baton Rouge
New Orleans


Harrison County
Jackson County
Back Bay of Biloxi
D'Iberville
Davis Bayou-Biloxi Bay
Ocean Springs
Biloxi
Deer Island
Mississippi Sound
HUC 12 Watershed Boundary
Essential Fish Habitat
Note: Implementation of individual project components will take place in highly urbanized areas. There will be no in-water work.
0 0.75 1.5 3 Miles
Mississippi
Jackson
Baton Rouge
New Orleans


Harrison County
Jackson County
Back Bay
of Biloxi
D'Iberville
Davis Bayou-
Biloxi Bay
Biloxi
Deer Island
Mississippi Sound
HUC 12 Watershed Boundary
USGS National Land Cover Dataset
Land Use Categories
Open Water
Developed Open Space
Developed Low Intensity
Developed Medium Intensity
Developed High Intensity
Barren Land
Deciduous Forest
Evergreen Forest
Mixed Forest
Shrub/Scrub
Grassland/Herbaceous
Pasture/Hay
Woody Wetlands
Emergent Herbaceous Wetlands
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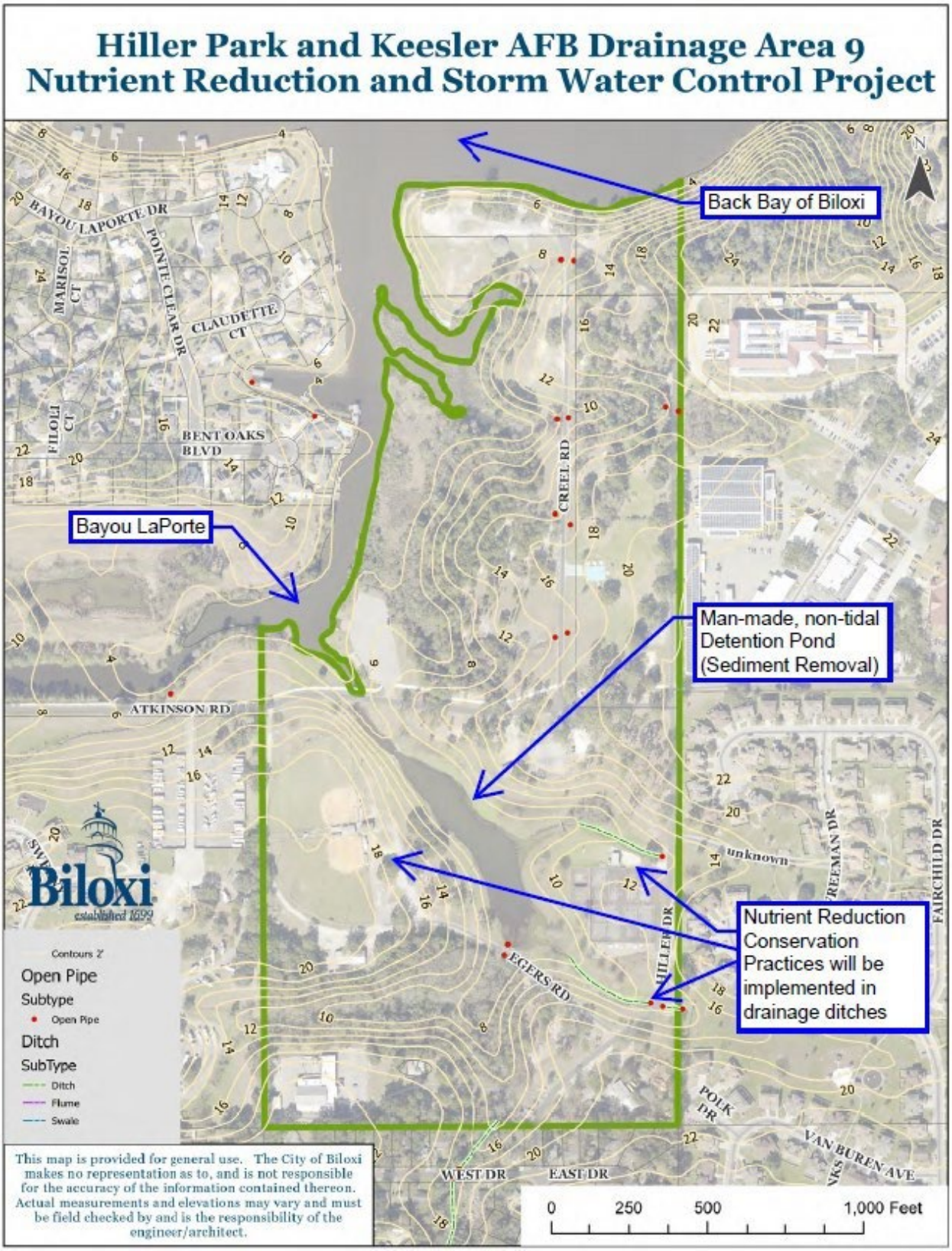
Baton Rouge
New Orleans



Example of Hiller Park project location and nutrient reduction activities in relation to bodies

of water.

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.

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft MS TIG Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project Lead:

Tina Nations Date
Form Completed:
6/1/2023
Date Form Updated: Click here to enter text.

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 project area consists of two Hydrologic Unit Code-12 (HUC) watersheds: The Back Bay of Biloxi (HUC12 – 031700090605) and the Davis Bayou-Biloxi Bay (HUC12 – 031700090606). All of the project components are located in the larger Mississippi Coastal Streams watershed (HUC 8 – 0317009). Winds and tides deliver Gulf waters from the south, and the Tchoutacabouffa River, Biloxi River, and Davis Bayou deliver freshwater from the north. A single daily diurnal tidal cycle influences these bodies of water.

Major rivers carry high sediment loads into the Mississippi Sound. Inland freshwater drainage from these and other smaller rivers, as well as St. Louis Bay and Back Bay of Biloxi, create an estuarine environment in the Mississippi Sound. Variable salinity levels can affect the productivity and survival of organisms living in the Mississippi Sound, as well as economic and recreational activities. Pollution from agriculture, improperly treated sewage, roadways, accidental spills, industry discharges, and other sources also affect the health of the Mississippi Sound.

Of the approximately 30,971 acres encompassed by these two watersheds, approximately 11,605 acres are mapped as wetlands according to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory. Two-thirds of the mapped wetlands are categorized as Estuarine and Marine Deepwater. There are approximately 15% each of Estuarine and Marine Wetlands and Freshwater Forested/Shrub Wetlands.

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.

Major bodies of water in the project area are tidally influenced. The Back Bay of Biloxi is adjacent to the Biloxi Bay, which is adjacent to the Mississippi Sound. However, there will be no in-water work.

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.

Urban land infrastructure and in-water structures are present throughout the project area. The two watersheds are surrounded by a mix of industrial, commercial, and residential properties with large amounts of hardened shorelines.

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.

The water in Back Bay of Biloxi and Biloxi Bay is deep, turbid, heavily trafficked, and generally not conducive to submerged aquatic vegetation (SAV) growth. Surveys completed in 2010 found evidence of SAV further upstream into the Biloxi River. Similarly, Davis Bayou consists of soft bottom substrate where SAV beds are not likely present. There is no known survey of these areas for SAVs, but the waters are turbid and do not support large, continuous beds. Marsh vegetation, where present in the project area, is composed primarily of black needle rush (Juncus roemerianus). Smooth cordgrass (Spartina alterniflora) occurs as narrow, disjunct bands along low marsh fringes.

While SAV may occur in the broader action area, the project activities will not occur in water and therefore would not impact seagrasses. There may be sediment removal activities as part of direct implementation but this activity would occur in man-made detention ponds where SAV is not likely to be present.

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.

N/A

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.

N/A

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.).

Developed, Low Intensity: 6,572 acres
Developed, Open Space: 4,361 acres
Developed, Medium Intensity:
3,712 acres Evergreen Forest:
1,845 acres
Developed, High Intensity:
994 acres Shrub/Scrub: 288
acres
Grassland/Herbaceous: 121 acres
Barren Land: 91 acres
Mixed Forest: 72 acres
Pasture/Hay: 25 acres
Deciduous Forest: 9 acres

g. Soils and Sediments

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

Both watersheds primarily contain soils derived from sandy and loamy marine and fluviomarine deposits (Holocene to upper Pleistocene) derived from sedimentary rock (according to the United States Geological Survey). The United Stated Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey identifies 53 soil-mapping units within these two watersheds. These soils include loams, silt loams, sandy loams, sand, loamy sand, and urban land complex soils. Slopes range from zero to 17 percent with hydrology regimes ranging from well drained in high relief areas to frequently flooded in low relief areas in estuarine marsh, brackish marsh, depressions, and along drainageways.

h. Land Use

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

Habitat Type / Land Use Categories	Percent
Open Water	23.1%
Developed, Low Intensity	21.2%
Developed, Open Space	14.1%
Developed, Medium Intensity	12.0%
Woody Wetlands	11.6%

Emergent Herbaceous Wetlands	6.9%
Evergreen Forest	6.0%
Developed, High Intensity	3.2%
Shrub or Scrub	0.9%
Grassland or Herbaceous	0.4%
Barren Land	0.3%
Mixed Forest	0.2%
Pasture or Hay	<0.1%
Deciduous Forest	<0.1%
TOTAL	**100.0%**

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

Although the project components primarily involve implementation of low-impact development practices, stormwater control measures, and erosion and sediment control measures in small clusters within urban environments, the entirety of the two target watersheds was evaluated as the project area.

Common Bottlenose Dolphin (*Tursiops truncatus truncatus*): Common bottlenose dolphins are distributed throughout the bays, sounds, and estuaries of the northern Gulf of Mexico, per the 2021 NOAA NMFS U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments. The Mississippi Sound, Lake Borgne, Bay Boudreau Stock area ("MS Sound Region") is bordered by the mainlands of Louisiana, Mississippi and Alabama to the north, which includes portions of the Biloxi Bay and Back Bay of Biloxi. The most recent survey, conducted in winter 2018 provided an abundance estimate of 1,265 individuals. Although this species may be present in the project area as a whole, the direct implementation components will not involve in-water work and will not affect this species.

West Indian Manatee (*Trichechus manatus*): Between October and April, manatees concentrate in areas of warmer water. During summer months, the species may migrate as far west as the

Louisiana and Texas coasts on the Gulf of Mexico. Manatees inhabit both salt and fresh water of sufficient depth (about 5 feet to usually less than 18 feet). Manatees will consume any aquatic vegetation available to them including sometimes grazing on the shoreline vegetation. The project location does not overlap with any identified critical habitat for the West Indian manatee. This species uses both fresh and saltwater habitats such as coastal rivers, bays, bayous, and estuaries. The manatee is an occasional visitor to Mississippi's coasts. After wintering in Florida, and perhaps Mexico, manatees migrate northward during spring, including to Mississippi and Alabama waters, although these migrations are not well understood. Manatees frequently seek out freshwater sources such as rivers and river mouths and have been known to be found near estuaries. SAVs are the typical manatee forage material; however, manatees can also consume other aquatic vegetation, algae, and terrestrial vegetation. Manatee occurrence is expected to be transitory. Although this species may be present in the project area as a whole, the direct implementation components will not involve in-water work and will not affect this species.

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 primary goal for the project is water quality improvement by implementing conservation practices to reduce nutrients and sediment runoff in coastal watersheds. The project proposes to implement clusters of projects within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level.

MDEQ and its watershed stakeholders would develop conservation plans to identify conservation practices that reduce nutrient runoff and sediment. MDEQ would work with local municipalities and subcontractors to implement those practices on land in highly urbanized areas. Although the project encompasses two watersheds with many waterbodies, the implementation of practices would not occur in-water. Two project locations identified during project development include D'Iberville Lamey Street and Biloxi Hiller Park.

D'Iberville Lamey Street Bank Stabilization: Includes conservation practices to reduce sediment and nutrient contribution on publicly owned lands adjacent to a waterway that discharges into Biglin Bayou. Hiller Park and Keesler AFB Drainage Area 9 Nutrient and Stormwater Control Project: Includes conservation practices to reduce sediment

and nutrient contribution on publicly owned lands adjacent to a waterway that drains into Bayou Laporte.

The table below provides a comparison of Back Bay-Davis Bayou Project activities with USDA Conservation Practices that are similar in scope:

Back Bay-Davis Bayou Project Activities	USDA Conservation Practice
Streambank Stabilization	Streambank and Shoreline Protection (580)
Removal of Invasive/Non-Native Plants	Brush Management (314)
	Herbaceous Weed Treatment (315)
Establishment of Check Dams	Dike and Levee (356)
Detention Pond Enhancement	Sediment Basin (350)
Planting of Native Vegetation	Critical Area Planting (342)
Low-Impact Development Practices	Stormwater Runoff Control (570)
Stormwater Control Measures and Stormwater Management	
Stream Restoration	Stream Habitat Improvement and Management (395)
Wetlands Creation and Enhancement	Wetland Enhancement (659)
	Wetland Creation (658)
Stormwater Conveyance Stabilization	Water and Sediment Control Basin (638)

Other project locations or conservation practices could be identified during stakeholder outreach.
Please see the following link for all USDA Conservation Practice Standards:
https://www.nrcs.usda.gov/resources/guides-and-instructions/conservation-practice-standards

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

Restoration activities include conservation practices that could be implemented at one to several locations. The project would be implemented over a 5-year period with the first year consisting primarily of stakeholder outreach and planning. Implementation of the conservation plans would begin in year two and continue through year four.

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).

N/A

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)?*

N/A

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

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.)*

N/A

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.)*

N/A

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.*

N/A

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.*

Construction methods for certain conservation practices would be determined on a case-by-case basis and would be subject to site-specific environmental review and permitting. For example, sediment removal within manmade detention ponds with no connectivity to open marine/estuarine waters may occur as part of project activities.

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.)*

N/A

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.*

N/A

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)).*

N/A

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

Essential Fish Habitat is present in the project area, which encompasses bays, wetlands, and rivers which flow into the Mississippi Sound and the larger Gulf. EFH in the project area would primarily apply to aquatic habitat where fish feed or grow to maturity. However, direct implementation of project activities would not occur inwater, as described above.

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.	

Click here to enter text.

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:	

Click here to enter text.

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:	

N
/
A

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.

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.**
			Select Most Appropriate	Choose an item.
			Select Most Appropriate	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.**
West Indian Manatee			No Effect	Species does not occur within action area
Piping Plover			No Effect	Species does not occur within action area
Piping Plover CH			No Effect	No suitable habitat in action area
Red Knot			No Effect	Species does not occur within action area
Gopher Tortoise			May Affect, Not Likely to Adversely Affect	Choose an item.
Green Sea Turtle		Terrestrial	No Effect	Species does not occur within action area
Hawksbill Sea Turtle		Terrestrial	No Effect	Species does not occur within action area
Kemp's Ridley		Terrestrial	No Effect	Species does not occur within action area
Eastern Black Rail			May Affect, Not Likely to Adversely Affect	Choose an item.
Mississippi Sandhill Crane			May Affect, Not Likely to Adversely Affect	Choose an item.
Mississippi Sandhill Crane CH	Fontainebleau, and portion of Gautier Unit		No Effect	No suitable habitat in action area

Red-Cockaded Woodpecker			May Affect, Not Likely to Adversely Affect	Choose an item.
Alabama Red-bellied Turtle			May Affect, Not Likely to Adversely Affect	Choose an item.
Alligator Snapping Turtle			May Affect, Not Likely to Adversely Affect	Choose an item.
Black Pinesnake			No Effect	No suitable habitat in action area
Dusky Gopher Frog			No Effect	No suitable habitat in action area
Louisiana Quillwort			May Affect, Not Likely to Adversely Affect	Choose an item.
Gulf Sturgeon CH	8	Riverine/Freshwater	No Effect	Species does not occur within action area
Monarch Butterfly			May Affect, Not Likely to Adversely Affect	

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.

Locations proposed for implementation of conservation practices within the watershed are heavily urbanized areas. These conservation practices could include low-impact development practices, stormwater control measures, erosion and sediment control measures, streambank stabilization, wetlands habitat management, and other conservation practices. Threatened or endangered species are unlikely to be present in those areas of direct implementation. Indirect impacts from water quality improvements due to nutrient reduction are not anticipated to cause any adverse effects to species.

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.*

Piping Plover CH, Mississippi Sandhill Crane CH, and Gulf Sturgeon CH

Although the project area encompassing two watersheds does overlap with Piping Plover CH and Mississippi Sandhill Crane CH, direct implementation of nutrient reduction conservation practices will not be within the designated CH areas.

Gopher Tortoise

If suitable habitat is present, have a qualified biologist conduct surveys to identify any gopher tortoise burrows. If burrows are within the project area and cannot be avoided through establishing a protective buffer (size determined by USFWS and the state trust resource agency), implement standard procedures to relocate the tortoise within the project site but away from the areas of construction or restoration or consider conservation banks. A Candidate Conservation Agreement with Assurances may be appropriate for project sites within the non-listed range of the species.

Eastern Black Rail (BLRA)

Although historically uncommon in Mississippi, the species may be found in coastal marshes during the winter months (i.e., non-nesting season). While it can be found in salt, brackish, and

freshwater marshes, it has a very specific niche habitat, requiring dense herbaceous vegetation (i.e., rushes, grasses, sedges) to provide shelter and cover. Avoid working within suitable habitat areas if the species are observed. If avoidance is not possible in suitable habitat conduct standard surveys to determine if the habitat is supporting any individuals or presence can be assumed.

Potential Avoidance and Minimization Measures include the following:

1. Avoid or minimize use of heavy machinery and ground disturbance activities.
2. Areas of suitable habitat should not be subjected to water management practices that alter traditional water levels or the seasonally normal drying patterns and rates. Sharp rises in water levels are especially disruptive to feeding and nesting BLRA.
3. The introduction of contaminants, fertilizers, or herbicides into marsh wetlands that contain suitable BLRA habitat should be avoided, especially those compounds that could adversely alter the diversity and numbers of invertebrates, or that could substantially change the composition of marsh vegetation. 4. Project construction should be conducted outside of the wintering season October-April.

If the species is observed, work will cease until the individuals have vacated the area of their own volition.

Mississippi Sandhill Crane

Avoid working within suitable habitat areas if the species are observed. If avoidance is not possible in suitable habitat conduct standard surveys to determine if the habitat is supporting any individuals or presence can be assumed. If the species is observed, work will cease until the individuals have vacated the area of their own volition.

Red-cockaded Woodpecker

Avoid working within active red-cockaded woodpecker clusters (the minimum convex polygon containing the aggregation of cavity trees used by a group of red-cockaded woodpeckers and a 200-foot-wide buffer surrounding the polygon). If avoidance is not possible in red-cockaded woodpecker suitable habitat, conduct standard surveys to determine if the habitat is supporting any individuals or presence can be assumed. If redcockaded woodpeckers are present (or assumed to be), avoid cavity trees and conduct project activities which may include the use of mechanized equipment and/or tree removal only during the non-breeding season (approximately August 1 through March 31). If tree removal is necessary, survey pine trees approximately 60 or more years old for active cavities within one year of the proposed removal. Extend surveys from the project site out to no less than one-half mile. Replace any cavities affected by the project via drilled cavity construction or inserts. If impacts to suitable foraging habitat (pines approximately 30 or more years old and within one-half mile of an active cavity tree) are proposed, a foraging habitat analysis (FHA) will be conducted. If the FHA for the impacted cluster is below standards, or if the project will remove suitable habitat that will take

the habitat below standards, the area will not be subject to project activities and an alternate location for project activities will be determined. Foraging habitat may need to be replanted post-project.

Alabama Red-bellied Turtle

If suitable habitat is present, have a qualified biologist conduct presence/absence surveys or surveys to identify nests during nesting season (April to early August). If nests are within the project area and cannot be avoided through establishing a protective buffer (size determined by USFWS and the state trust resource agency), implement standard procedures to relocate the species within the project site but away from the areas of construction or restoration. If the species is observed during non-nesting season, work will cease until the individuals have vacated the area of their own volition.

Alligator Snapping Turtle

If suitable habitat is present, have a qualified biologist conduct presence/absence surveys or surveys to identify nests during nesting season (April to November). If nests are within the project area and cannot be avoided through establishing a protective buffer (size determined by USFWS and the state trust resource agency), implement standard procedures to relocate the species within the project site but away from the areas of construction or restoration. If the species is observed during non-nesting season, work will cease until the individuals have vacated the area of their own volition.

Monarch Butterfly

If the species is observed, work will cease until the individuals have vacated the area of their own volition. No habitat such as native milkweed will be removed, and such plants will be used in revegetation efforts if appropriate.

Protected Plants (Louisiana Quillwort)

Perform surveys to determine if protected plants (or suitable habitat) are on or adjacent to the project site. Have a qualified individual perform the surveys and follow suitable survey protocols. Conduct plant surveys during appropriate survey periods (usually flowering season). Design projects to avoid known locations and associated habitat to the extent possible. Use “temporary" removal of plants and soil profile plugs (which include the A and B horizons) with the intent to replace to original location post-construction as a last resort. Consider transplanting and seed banking only after all other options are exhausted. Enhance and protect plants on site and in adjacent habitats to the maximum extent possible. Use only native plants for post project restoration efforts.

Land and Vegetation Protection

Develop and implement an erosion control plan to minimize erosion during and after construction and where possible use vegetative buffers (100 feet or greater), revegetate with native species or annual grasses, and conduct work during dry seasons. Develop and implement a spill prevention and response plan, including conducting daily inspections of all construction

and related equipment to ensure there are no leaks of antifreeze, hydraulic fluid, or other substances and cleaning and sealing all equipment that would be used in the water to rid it of chemical residue. Develop a contract stipulation to disallow use of any leaking equipment or vehicles. Prohibit use of hazardous materials, such as lead paint, creosote, pentachlorophenol, and other wood preservatives during construction in, over or adjacent to, sensitive sites during construction and routine maintenance. Where landscaping is necessary or desired, use native plants from local sources. If non-native species must be used, ensure they are noninvasive and use them in container plantings.

Wetland and Aquatic Resource Protection

Complete an engineering design and post-construction inspection for projects where geomorphic elevations are restored in wetlands, marshes, and shallow water habitats to ensure the success of the restoration project. Manage elevation of fill material to ensure projected consolidation rates are accomplished and that habitat suitable for wetland and marsh vegetation is developed. Avoid and minimize, to the maximum extent practicable, placement of dredged or fill material in wetlands and other aquatic resources. Design construction equipment corridors to avoid and minimize impacts to wetlands and other aquatic resources to the maximum extent practicable. To the maximum extent possible, implement the placement of sediment to minimize impacts to existing vegetation or burrowing organisms. Apply herbicide in accordance with the direction and guidance provided on the appropriate U.S. Environmental Protection Agency (EPA) labels and state statutes during landbased activities. Perform maintenance of generators, cranes, and any other stationary equipment operated within 150 feet of any natural or wetland area, as necessary, to prevent leaks and spills from entering the water. Designate a vehicle staging area removed from any natural surface water resource or wetland to perform fueling, maintenance, and storage of construction vehicles and equipment. Inspect vehicles and equipment daily prior to leaving the storage area to ensure that no petroleum or oil products are leaking. Upon completion of construction activities, restore all disturbed areas as necessary to allow habitat functions to return. Create and manage public access developments to enhance recreational experience and educational awareness to minimize effects to habitat within wetland and shallow water areas and to the long-term health of related biological communities.

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]

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

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)

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.

Locations proposed for implementation of conservation practices within the watershed are heavily urbanized areas. These conservation practices will include those discussed above in Section F. Areas of direct implementation are not anticipated to overlap with identified critical habitat. Indirect impacts from water quality improvements due to nutrient reduction are not anticipated to cause any adverse effects to critical habitats present within the project area.

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.

N/A: Areas of direct implementation are not anticipated to overlap with identified critical habitat.

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

N/A

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]

[2] https://www.fisheries.noaa.gov/topic/marine-life-viewing-guidelines

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

☐	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.
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

[4] https://www.fisheries.noaa.gov/southeast/consultations/protected-species-educational-signs

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

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): United States Department of Agriculture

Contact Name: Jon Morton Phone: 601-331-7327 Email: jon.morton@usda.gov

Project Name: Big Cedar – Rocky Creek Water Quality Enhancement

DIVER ID# Click to enter text TIG: Mississippi TIG Restoration Plan # RP/EA #4

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:

Click here to enter text.

C. Project Location

I. State and County/Parish of action area

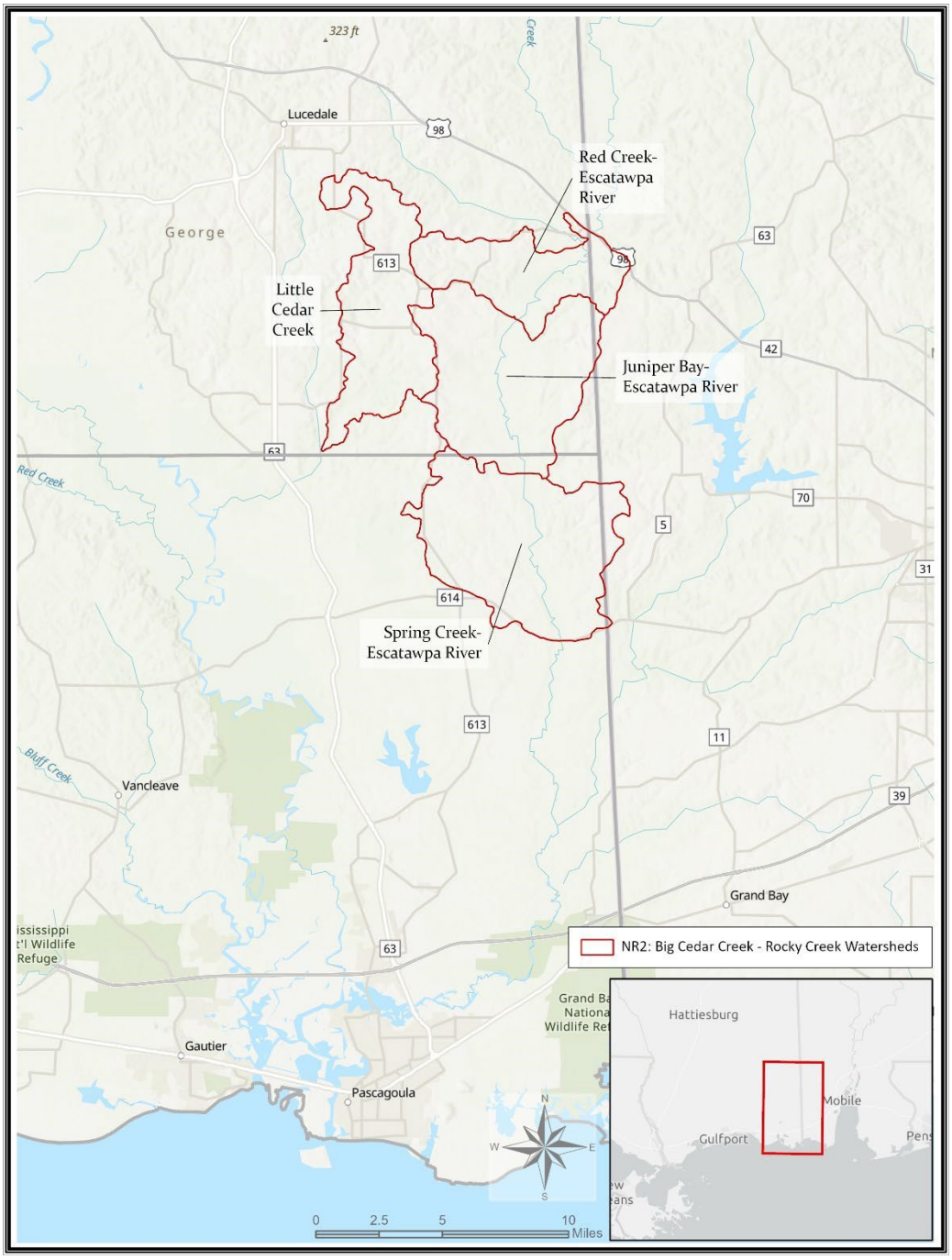
Jackson and George Counties in Mississippi

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] 88.471942W, 30.786966N NAD83

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


323 ft
Lucedale
98
Red Creek-
Escatawpa
River
George
613
Little
Cedar
Creek
63
42
Juniper Bay-
Escatawpa River
Red Creek
70
5
614
Spring Creek-
Escatawpa River
31
613
11
Bluff Creek
Vancleave
39
Grand Bay
ississippi
t'l Wildlife
Refuge
NR2: Big Cedar Creek - Rocky Creek Watersheds
Hattiesburg
Gautier
Pascagoula
Mobile
Gulfport
N
W
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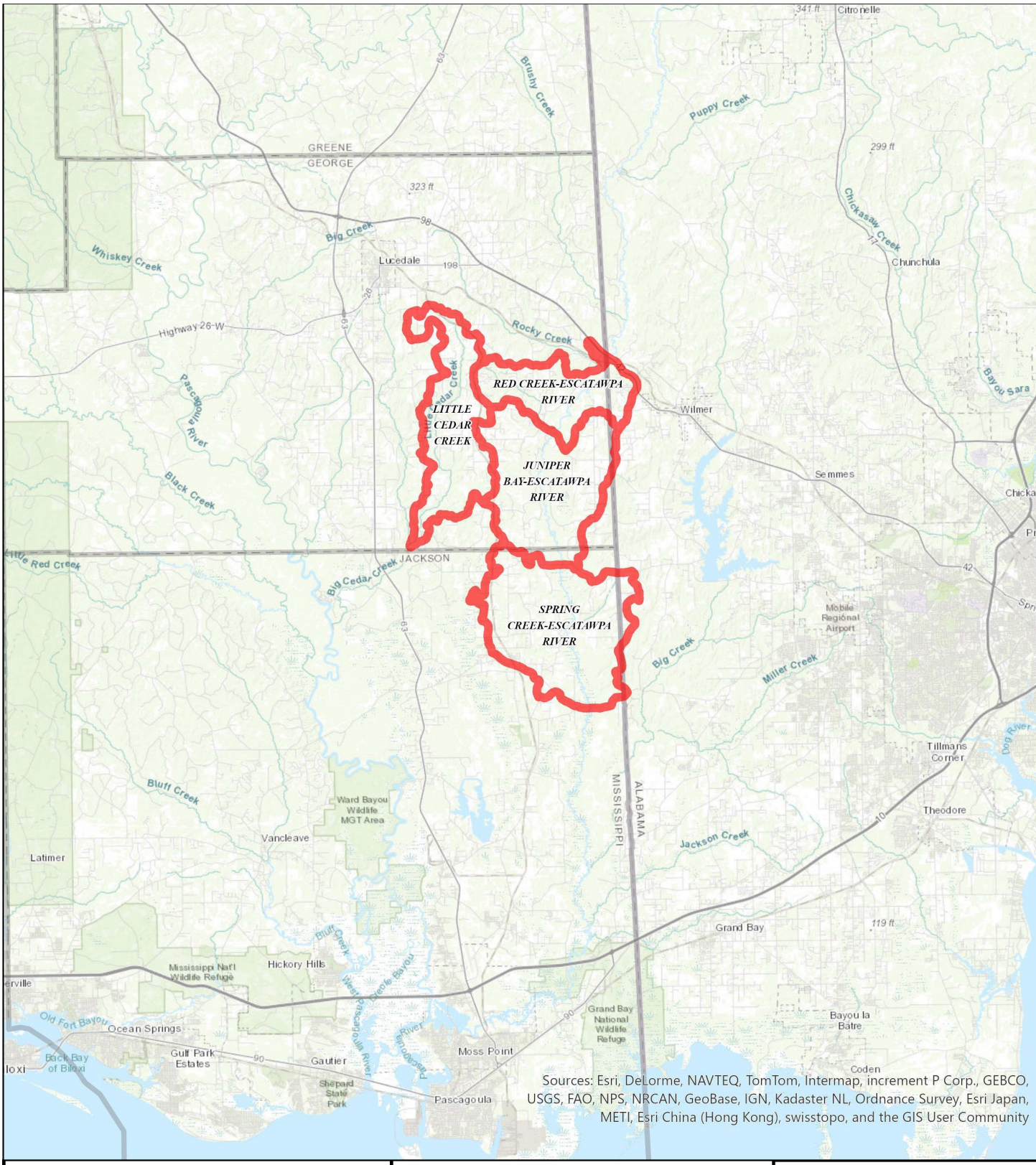


MS RP 4 - Nutrient Reduction
USDA Target Watersheds

HUC 12 Watershed Boundary

0 4 8 Miles

N

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. Click here to enter text.

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

Name of Person Completing this Form: Jon Morton
Name of Project
Lead: Craig Johnson
Date Form
Completed:
6/1/2023 Date Form
Updated:

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.

HUC 6: Pascagoula (031700)
HUC 8: Pascagoula (03170006) & Escatawpa (03170008)
HUC 12: Little Cedar Creek (031700060106), Red Creek-Escatawpa River (031700080402), Juniper BayEscatapa River (031700080403), Spring Creek-Escatawpa River (031700080405)

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.
Approximately 12 miles from the southern end of the action area, the Escatawpa River transitions to being tidally influenced.

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.

The project does not propose activities at specific locations; therefore, presence of structures is unknown. Sites would be selected during implementation of the proposed project.

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.

N/A

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.

N/A

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.

N/A

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.).

The project will target privately owned crop, pasture, and forestland within the action area.

g. Soils and Sediments

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

The dominant soil types within the area are considered well drained sandy loams.

h. Land Use

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

Total land within the action area: 71,031 acres
Cropland: 8,138
acres (11.5%)
Pastureland: 10,961
acres (15.4%)
Forestland: 48,647 acres (68.5 %)
Developed: 3,285 acres (4.6%)

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

N/A

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 proposed project would focus on water quality improvement by nutrient and sediment reduction on privately owned agricultural land within the following 12-digit hydrologic unit code (HUC 12) watersheds: Little Cedar Creek, Red CreekEscatawpa River, Juniper Bay-Escatawpa River, and Spring Creek-Escatawpa River. USDA conservation practices, especially those that avoid, control and trap sediment loses, will be implement by willing landowners on agricultural lands within the watersheds. Outreach and financial and technical assistance would be provided to voluntary participants by the local USDA-NRCS office.

This project would consist of 1) landowner outreach and education, 2) conservation planning, 3) engineering and design (E&D) and environmental compliance, and 4) conservation practice implementation. Participating landowners would be responsible for maintenance and operation of structural measures and application of non-structural measures.

Initial steps would include landowner outreach and education. Landowners within the watersheds would be engaged to solicit nutrient reduction opportunities on private lands. Outreach and technical assistance would be provided to voluntary participants on agricultural lands that are most vulnerable to nutrient and sediment runoff. This includes providing financial assistance to landowners to acquire soil samples, site-specific analyses, and nutrient application methods. Site-specific environmental evaluations would be conducted and documented. A site-specific conservation plan would be developed in cooperation with individual landowners. Implementation of conservation practices would include implementation of structural practices (e.g., earth moving) and non-structural practices (e.g., nutrient management). Engineering plans and designs for structural practices included in the conservation plans and funding would help landowners acquire all local, state, and federal permits required to implement the conservation practice(s). Landowners would receive financial and technical assistance to implement the conservation practices.

Contracts with landowners would serve as an agreement to implement the conservation practices on their properties as outlined in a conservation plan developed according to appropriate standards and

specifications (including any required property access agreement and activities related to project monitoring). Although the landowner would typically implement the conservation practices, if the landowner is not capable of carrying out the work, a third party could be hired implement them. Operation and maintenance (O&M) would be evaluated as specified in the conservation plan and may include, but would not be limited to, addressing soil erosion or vegetation establishment issues due to weather-related events. O&M activities would be identified in the conservation plan based on site evaluations and performance monitoring data and reports.

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)* The proposed project includes outreach, planning, E&D and environmental compliance, and implementation. Implementation of conservation measures may vary in method would be subject to site-specific environmental and permitting review.

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).

N/A

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)?*

N/A

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

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.)*

N/A

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.)*

N/A

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.*

N/A

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.*

Construction methods for certain conservation practices would be determined on a case-by-case basis and would be subject to site-specific environmental review and permitting.

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.)*

N/A

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.*

N/A

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)).*

N/A

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 N/A

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.	

Click here to enter text.

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:	

Click here to enter text.

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:	

Click here to enter text.

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.

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.**
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 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.**

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.

Implementing Natural Resources Conservation Service (NRCS)–developed conservation practices has been proven to successfully address natural resource concerns related to agricultural lands, and many of these practices can be used to achieve a number of the restoration types identified in the PDARP/PEIS (DWH Trustees 2016). Conservation practices (CPs) are technical methods designed to help conserve soil, water, air, energy, and related plant and animal resources.

Conservation on agricultural lands normally begins with a complete operational and natural resource assessment, conducted with the operator's plans and objectives in mind, while striving to address all present and future resource concerns associated with the operation. Ultimately, all conservation concerns and objectives are addressed by developing comprehensive nutrient management plan (CNMP), which would be used to define all conservation practice design parameters. Additionally, NRCS's environmental evaluation process would be followed in which resource concerns, NEPA compliance, and mitigation measures would be documented for each project site.

CPs would be implemented on a site-specific basis and would vary depending on the physical conditions, characteristics, and environmental constraints (endangered species, cultural resources, etc.) associated with each site. Depending on site characteristics, CPs incorporated in the conservation programs could include a combination of structural CPs, annual CPs, and/or long-term conservation cover establishment. These CPs, once implemented, are generally considered permanent.

Given the success of the NRCS Farm Bill programs such as Environmental Quality Incentives Program (EQIP) and their strong acceptance by private landowners, there is a significant opportunity to implement conservation practices on cropland and grazing lands that would reduce the levels of nutrients and sediments entering the Gulf of Mexico from cropland and grazing lands. The primary goal of the Proposed Project is to enhance overall ecosystem health by benefiting the estuaries that are integral habitat providing food, shelter, and nursery grounds for many of the Gulf of Mexico's ecologically and economically important species. Nutrient management planning and implementation of best management practices (BMPs)/conservation practices on farmlands can improve water quality for the receiving water body and the downstream water bodies.

The implementation of conservation practices in agricultural and forestry landscapes are well-known management actions that reduce nonpoint source pollutant loads of nutrients and sediment impacting downstream receiving waters.
Conservation practices would follow the USDA-NRCS paradigm of avoid, control, and trap; thereby, conservation practices would be designed to reduce erosion, slow runoff velocities, and increase hydraulic residence time within the field or tract, and/or edge of field, which affect the physical, chemical, and biological processes that decrease nutrient and sediment loads.

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.

See NRCS-CPS-52 environment worksheet.

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)[5]**
- ☐ **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)

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

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

this consultation.

Click here to enter text.

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 ar 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

N/A

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[6]
☐	NMFS Protected Species Construction Conditions (2021)[7]
☐	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[8]

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.
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

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

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

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): Mississippi Department of Environmental Quality

Contact Name: Valerie Alley Phone: 601-961-5182 Email: VAlley@mdeq.ms.gov

Project Name: Jourdan River Boardwalk

DIVER ID# Project is a Proposed Alternative in DRAFT TIG: Mississippi TIG Restoration Plan # 4

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:

Conceptual

C. Project Location

I. State and County/Parish of action area

Hancock County, Mississippi

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]

Northwest: 30.3680474°N ,

89.3998260°W Northeast:

30.3691232°N , 89.3976648°W

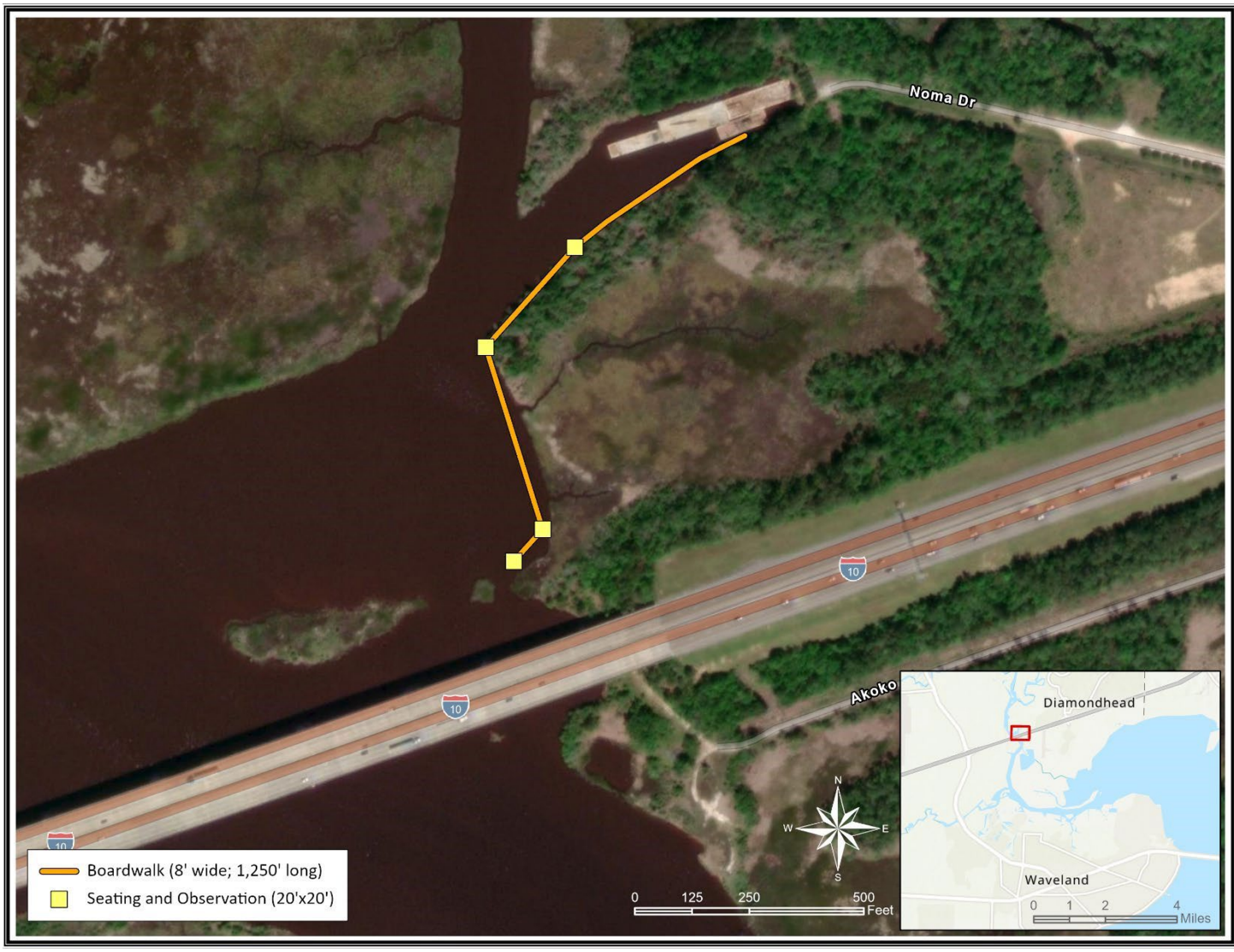
Southwest: 30.3662354°N , 89.3995689°W

Southeast: 30.3661824°N , 89.3992375°W

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



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.

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft Mississippi Trustee Implementation Group (MS TIG) Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project Lead:
Tina Nations Date Form
Completed: 6/1/2023
Date Form Updated: Click here to enter text.

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 project is located along the east bank of the Jourdan River north of Interstate Highway 10 and extends into a man-made canal in Diamondhead, MS. Inland freshwater drainage from northern portions of the Jourdan River and its tributaries, combined with saltwater from the Mississippi Sound, creates an estuarine environment in the Saint Louis Bay and lower Jourdan River. The Jourdan River empties into the west side of the Saint Louis Bay just north of the city of Bay St. Louis.

Both "freshwater forested wetlands" and "estuarine and marine wetlands" are present in the project area. A single daily diurnal tidal cycle influences this body of water. The oligohaline stretch of the mid-Jourdan River is a transition zone with a mixed marsh of saltgrass (*Cladium jamaicense*) and needle rush (*Juncus roemerianus*) north of I-10 with the *Cladium* rapidly declining to the south of the interstate (within - 1 mile). The creeks and rivers are lined with smooth cordgrass (*Spartina alterniflora*) or wild-rice (*Zizania aquatica*) and saltmeadow cordgrass (*Spartina patens*) bands occur along the upland borders. The oligohaline marshes of the lower Jourdan River are dominated by needle rush (*Juncus roemerianus*) with scattered pure stands of big cordgrass (*Spartina cynosuroides*) and common reed (*Pharagmites australis*). These marshes are quite similar to those occurring along the northwest to northeast shores of St. Louis Bay.

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.

To Saint Louis Bay: Approximately 2 miles; To Mississippi Sound: Approximately 7.5 miles

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.

A bulkhead and boat ramp are present at the terminus of the man-made canal. The Interstate 10 (I-10) bridge crossing the Jourdan River is located immediately south of the project area.

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.

Smooth cordgrass (Spartina alterniflora) occurs as a narrow band along the creeks and bayous with eelgrass (Vallisneria americana) occurs in narrow beds along the river.

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.

N/A

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.

N/A

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.).

N/A

g. Soils and Sediments

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

This area contains soils derived from sandy and loamy marine and fluviomarine deposits (Holocene to upper Pleistocene) derived from sedimentary rock (USGS). The nearshore subtidal benthic habitat is composed mostly of unconsolidated bottom types including sand, muddy sand, and mud bottom.

h. Land Use

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

The wetlands in the project vicinity were dredged in the early 1970s for the creation of a public boat ramp for access to the Jourdan River.

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

According to the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (2021), Common bottlenose dolphins are distributed throughout the bays, sounds, and estuaries of the northern Gulf of Mexico (Mullin 1988). Bottlenose dolphins may be present within the project area.

According to the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (2020), various species of large and small whales are dispersed in the Northern Gulf or Mexico, but not throughout the bays, sounds, and estuaries of the northern Gulf of Mexico, and not in estuarine river systems, where the project is located.

According to the West Indian Manatee (Florida) Stock Assessment Report (2014), Florida manatees are found throughout the southeastern US. Florida manatees are generally restricted to the inland and coastal waters of peninsular Florida during the winter, when they shelter in and/or near warm-water springs, heated industrial effluents, and other warm water sites (Hartman 1979, Lefebvre et al. 2001, Laist and Reynolds 2005, Stith et al. 2006, Laist et al. 2013). In warmer months, manatees leave these sites and can disperse great distances throughout the bays, sounds, and estuaries of the northern Gulf of Mexico. According to the USFWS publication, "Federally Endangered, Threatened, and Candidate Species in Mississippi," most manatee sightings in Mississippi occur in tidal rivers such as the Pascagoula and Jourdan Rivers. Manatees have also been spotted in Biloxi Bay, Bay St. Louis, and near shore in the Gulf of Mexico. Most of the sightings in Mississippi occur during the months of June through November.

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.*

This project would fund construction of a public boardwalk along the Jourdan River to provide access to and information about this tidal estuarine ecosystem in coastal Mississippi. The project includes the installation of approximately 1,250 linear feet of 8-foot wide timber pile supported pier and walkway, one 20'x20' elevated nature observatory (with upper level deck), three 20'x20' seating areas, associated low level lighting and safety railing. The decking is anticipated to be timber with an alternate bid item to include fiberglass reinforced plastic grating for better weather resiliency. Educational signs and displays would be placed along the boardwalk to provide information about the wetlands, coastal, and nearshore habitats including the tidal Jourdan River, adjacent estuarine marsh, and wildlife (e.g., birds) that use these habitats.

A U.S. Army Corps of Engineers Section 404/Section permit, a Mississippi Coastal Wetlands Permit, and a

Mississippi Department of Environmental Quality Water Quality Certification (401) would be required, in addition to any applicable local building permits. Engineering and design and permitting is anticipated to take approximately 1.5 years. Construction would take approximately 6 months.

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)* Years 1-2 (2024-2025) Engineering and design; Permitting; Construction

Years 2-5 (2025-2029)- Boardwalk open to public access; Monitoring

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).

Boardwalk structure is a non-fishing pier.

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)?*

The project includes the installation of approximately 1,250 linear feet of 8-foot wide timber

pile supported boardwalk and walkway, 1-20'x20' elevated nature observatory (with upper level deck), and 1-20'x20' seating areas, associated low level lighting and safety railing. The decking is anticipated to be timber with an alternate bid item to include fiberglass reinforced plastic grating for better weather resiliency. Height above will be determined during E&D and permitting. See figure in Section C.III for directional orientation of each section. Overwater area totals 10,800 square feet.

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	Vibratory Hammer
2. Material type of piles used	Timber
3. Size (width) of piles/sheets	12” Diameter
4. Total number of piles/sheets	250-300
5. Number of strikes for each single pile	Vibratory
6. Number of strikes per hour (for a single pile)	Vibratory
7. Expected number of piles to be driven each day	20-30 piles
8. Expected amount of time needed to drive each pile (minutes of driving activities)	15-20 minutes
9. Expected number of sequential days spent pile driving	15-20 days
10. Whether pile driving occurring in-water or on land	In-water
11. Depth of water where piles will be driven	TBD during E&D

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.)*

N/A

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.)*

N/A

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.*

N/A

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.*

N/A

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.)*

N/A

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.*

N/A

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)).*

N/A

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

Essential Fish Habitat is present in the project area, which encompasses bays, wetlands, and rivers which flow into the Mississippi Sound and the larger Gulf. EFH in the project area would primarily apply to aquatic habitat where fish feed or grow to maturity.

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.	

EFH for red drum (*Sciaenops ocellatus*) (larvae, early juveniles, adults), grey snapper (*Lutjanus griseus*) (adults), Spanish mackerel (*Scomberomorus maculatus*) (adults), cobia (*Rachycentron canadum*) (eggs, larvae), lane snapper (*Lutjanus synagris*) (larvae, post larvae, early juvenile), brown shrimp (*Penaeus aztecus*) (all life stages), pink shrimp (*Penaeus duorarum*) (all life stages), and white shrimp (*Penaeus setiferus*) (all life stages) is present in the project area. Primary categories of affected EFH would include estuarine water bottoms, estuarine water column, submerged aquatic vegetation, and estuarine emergent marsh.

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:	

N/A

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 box below: Placement of pilings would result in short-term, minor 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 and construction of the pier. The suspended sediment may be transported into surrounding wetlands, waterways, and the Mississippi Sound. However, the area is currently exposed to elevated turbidity levels as a result of resuspension of sediment from river transport, erosion of existing shoreline and frequent storms, tides, and other typical weather events. Best management practices, along with other avoidance and mitigation measures required by state and federal regulatory agencies, would be employed to minimize potential water quality and sedimentation impacts. Impacts from turbidity would be minor, short term, and limited in spatial extent. In addition to turbidity, the water quality could be impacted by leaks or spills of fuel and lubricants used by vessels and other equipment during the construction of the breakwater. Appropriate best management practices, such as routine maintenance, inspection, and proper refueling of construction equipment, would be used to prevent, control, and mitigate impacts.	

H.

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.

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.**
Green Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Loggerhead Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Kemp's Ridley Sea Turtle (E)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Gulf Sturgeon (T)		Marine	May Affect, Not Likely to Adversely Affect	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 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.**
West Indian Manatee			May Affect, Not Likely to Adversely Affect	Choose an item.
Eastern Black Rail			May Affect, Not Likely to Adversely Affect	Choose an item.
Black Pinesnake			No Effect	No suitable habitat action area
Gopher Tortoise			No Effect	No suitable habitat action area
Alligator Snapping Turtle			May Affect, Not Likely to Adversely Affect	

Louisiana Quillwort			No Effect	Species does not occur within action area
Monarch Butterfly			No Effect	No suitable habitat action area

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.

Gulf Sturgeon

All activities will take place in shallow waters near the shoreline allowing sufficient area for

passage of individuals. Gulf sturgeon are highly mobile and will likely avoid the area due to project activity and noise. Normal behavior patterns of Gulf sturgeon are not likely to be disrupted by the project activities because of the short-term localized nature of the activities and the ability of Gulf sturgeon to avoid the immediate area.

West Indian Manatee - May be present in the project area vicinity during the months of June through November. However, this species is highly mobile and will likely avoid the area due to project activity and noise. Neither the construction nor final structure or usage is anticipated to adversely affect this species.

Eastern Black Rail (BLRA) - Although historically uncommon in Mississippi, the species may be found in coastal marshes during the winter months (i.e., non-nesting season). While it can be found in salt, brackish, and freshwater marshes, it has a very specific niche habitat, requiring dense herbaceous vegetation (i.e., rushes, grasses, sedges) to provide shelter and cover. This species is highly mobile and will likely avoid the area due to project activity and noise during construction. The final structure and usage are not anticipated to adversely affect this species. Potential Avoidance and Minimization Measures include the following:

1. Avoid or minimize use of heavy machinery and ground disturbance activities.
2. Areas of suitable habitat should not be subjected to water management practices that alter traditional water levels or the seasonally normal drying patterns and rates. Sharp rises in water levels are especially disruptive to feeding and nesting BLRA.
3. The introduction of contaminants, fertilizers, or herbicides into marsh wetlands that contain suitable BLRA habitat should be avoided, especially those compounds that could adversely alter the diversity and numbers of invertebrates, or that could substantially change the composition of marsh vegetation. 4. Project construction should be conducted outside of the wintering season October-April.

Alligator Snapping Turtle - May be present in the project area vicinity. This species is highly mobile and will likely avoid the area due to project activity and noise during construction. If the species is observed, work will cease until the individuals have vacated the area of their own volition.

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)**[9]
☐	**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)

None.

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.

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.

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

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

See Section F.

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[10]

[10] https://www.fisheries.noaa.gov/topic/marine-life-viewing-guidelines

☒	NMFS Protected Species Construction Conditions (2021)[11]
☒	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[12]

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.
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

[11] https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance
[12] https://www.fisheries.noaa.gov/southeast/consultations/protected-species-educational-signs

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

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): Mississippi Department of Environmental Quality

Contact Name: Valerie Alley Phone: 601-961-5182 Email: Valley@mdeq.ms.gov

Project Name: Shepard State Park Recreational Enhancements-1

DIVER ID# Project is a Proposed Alternative in DRAFT TIG: Mississippi TIG Restoration Plan # 4

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:

None completed at this time, but to be completed during project implementation.

C. Project Location

I. State and County/Parish of action area

Gautier, Jackson County, Mississippi

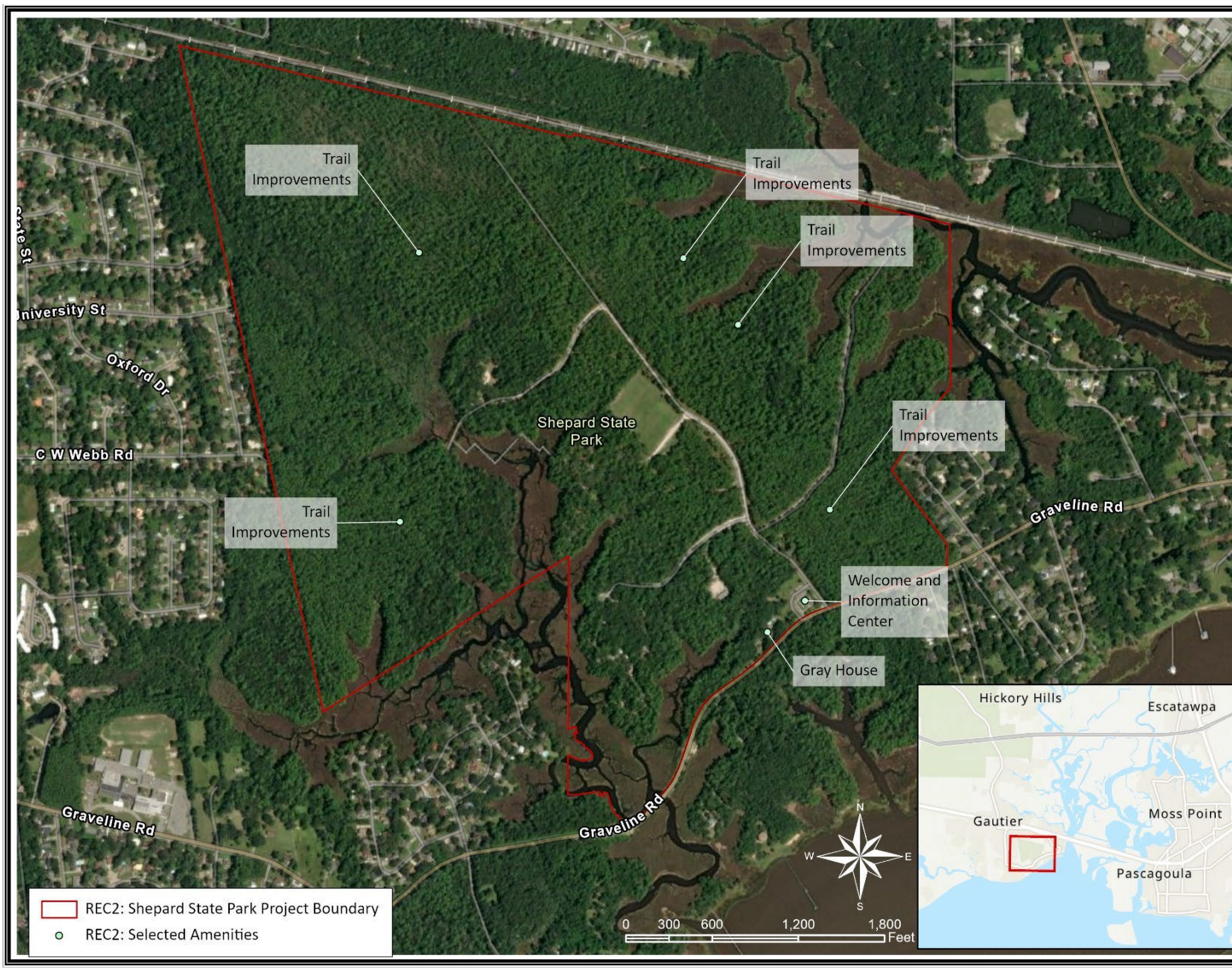
II. Latitude/Longitude for action area (Decimal degrees and datum [e.g., 27.71622°N, 80.25174°W NAD83)

[online conversion: https://www.fcc.gov/encyclopedia/degrees-minutes-seconds-tofrom-decimal-degrees] Centroid: 30.37609985°N, -88.63161591°W

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



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.

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft Mississippi Trustee Implementation Group (MS TIG) Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project
Lead: Tina Nations
Date Form
Completed:
6/1/2023
Date Form Updated: Click here to enter text.

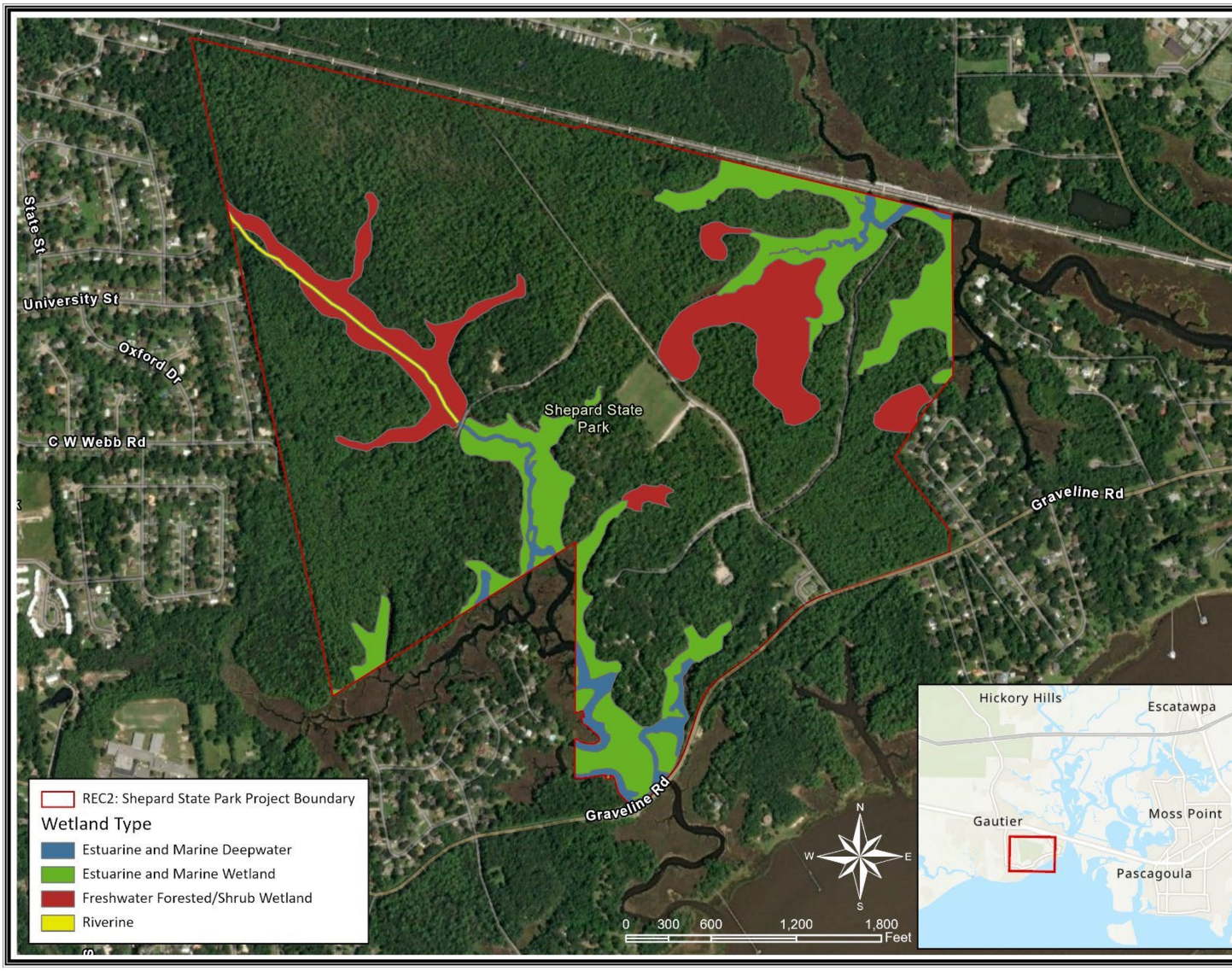
E. Description of Action Area

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.

Tidally influenced bayous connecting to the Pascagoula Bay south of the project area are present throughout the southern, western, and northeastern portions of the park. Estuarine and marine wetlands are adjacent to the bayous, and freshwater forested wetlands extend past the estuarine marsh, as seen in the figure below. A single daily diurnal tidal cycle influences these bodies of water.



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.

0 - 1.25 miles to the Pascagoula Bay and Mississippi Sound

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.

There are multiple paved or gravel roads, parking lots, and established trails at Shepard State Park. Other existing amenities include a boat launch, pavilions, campgrounds, picnic areas, a disc golf course, an archery range, dog park, bath house and restrooms, a boardwalk over marsh, log cabin, welcome center, and a former ranger house.

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.

N/A

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.

N/A

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.

N/A

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.).

Uplands are primarily forested with pine savannas and pine flatwoods. Some areas have been cleared for use as recreational fields, trails, and campsites.

g. Soils and Sediments

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

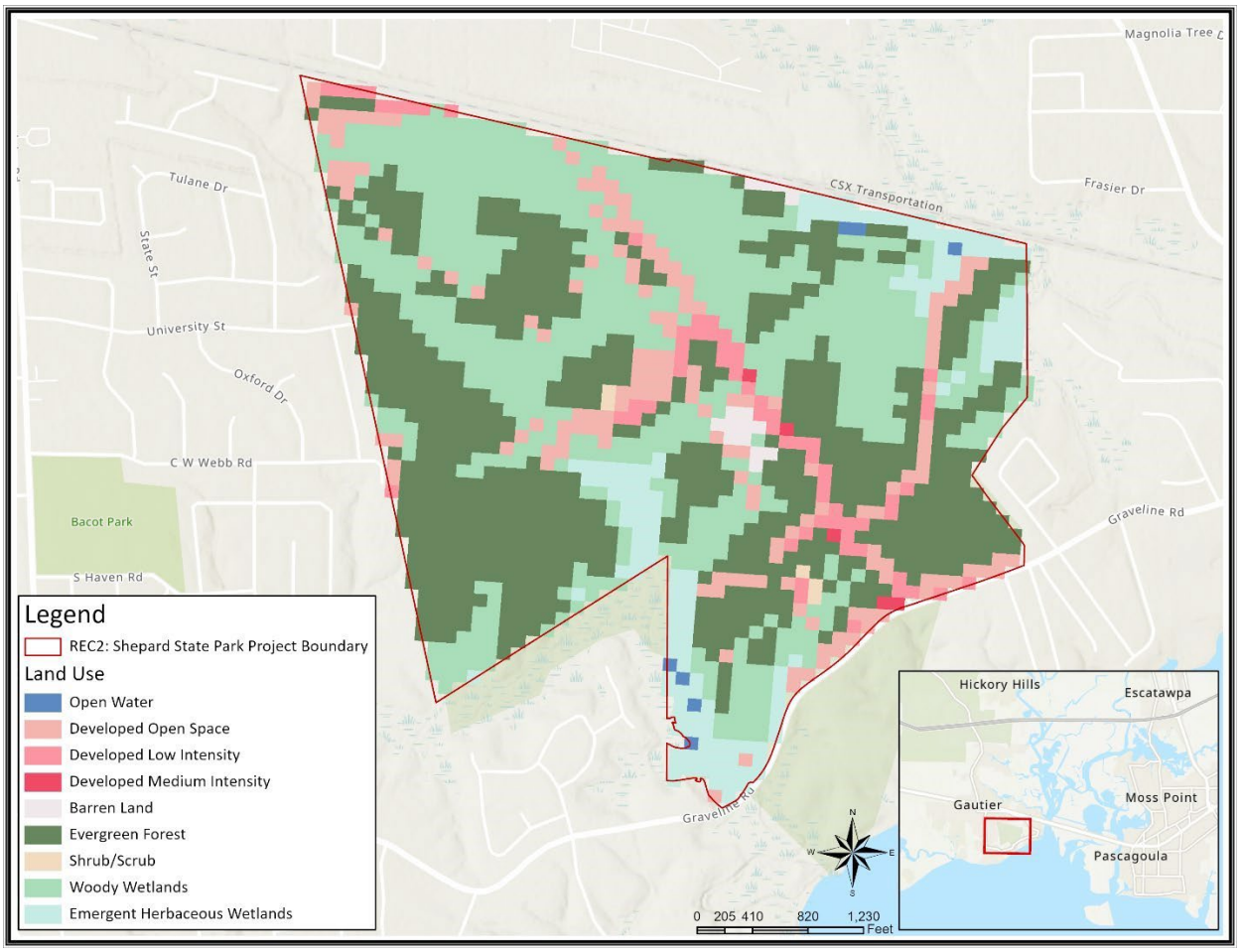
The project area primarily contains soils derived from sandy and loamy marine and fluviomarine deposits (Holocene to upper Pleistocene) derived from sedimentary rock. The US Department of Agriculture Natural Resources Conservation Service Web Soil Survey identifies thirteen soil-mapping units within the project boundary, over half of which are categorized as very fine sandy

loams and loamy fine sands. Additional soil types include loams, silt loams, sandy loams, clay loams. Slopes range from zero to five percent with hydrology regimes ranging from well drained in high relief areas to frequently flooded in low relief areas in estuarine marsh, depressions, and along drainageways.

h. Land Use

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

Habitat Type / Land Use Categories	Percent
Evergreen Forest	39.9%
Woody Wetlands	37.2%
Developed, Open Space	9.3%
Emergent Herbaceous Wetlands	8.2%
Developed, Low Intensity	3.6%
Barren Land	0.8%
Open Water	0.4%
Developed, Medium Intensity	0.3%
Shrub or Scrub	0.3%
TOTAL	**100.0%**



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

N/A

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 purpose of the Shepard State Park Enhancements is to provide additional visitor use experience and enhance access to natural resources by the creation of new facilities, improvements to existing facilities and to provide enhanced natural resources related education programs for park visitors including students.

The City of Gautier assumed the daily operations and management of Shepard State Park in January of 2013. Shepard State Park is a 395-acre park located south of U.S. Highway 90 on Graveline Road in Gautier, MS. The park is open year-round and currently has a mix of developed campsites and primitive camping sites. The park offers approximately eight miles of trails over five distinct locations and traverses coastal habitats including maritime forests, bottomland hardwoods, pine savanna and estuarine marsh. Other recreational opportunities include an RV park, a disc golf course, a marsh walk, and other recreational opportunities. The park also is part of the Audubon's Mississippi Coastal Birding Trail. The following recreational enhancements are proposed:

Environmental Education Center/Gray House Renovation: The "Gray House" is adjacent to the log cabin at the park entrance and was used previously as a park ranger house. Funds would be used to renovate the house for use as an interactive Environmental Education Center where schoolchildren can come for field trips. The center would also be used for hosting nature-based classes and events. There would be interactive components to help children/visitors to learn about natural resources at Shepard State Park. The center would be used to host events such as the annual Earth Day event. There would be no charge for visitors and students to attend events at the Environmental Education Center. This project would provide recreational and educational opportunities to schools. The City of Gautier would build upon their current relationship with the Pascagoula-Gautier School District to bring elementary and middle school students to Shepard State Park for field trips and would provide an enhanced learning experience. The fees for the school would be waived and school field trips and students would be allowed to use the marsh walk and different amenities throughout the park.

Educational Signage and/or Educational Programs: Educational signage and/or educational programs would highlight habitats and resources that were injured by the spill and/or are being restored by the Trustees (e.g., Wetlands, Coastal, and Nearshore Habitats; Birds). The city has partnered with a local ecologist in the past for educational projects at Shepard State Park.

Trail Enhancement and Maintenance: Funding would be used to complete trail maintenance and/or hiring a contractor to clear trails once every two to three years for a four-to-six-year period.

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)* The preliminary implementation schedule is provided here:

Years 1-3 (2024-2026): Engineering and Design, Permitting and Construction, trail maintenance.
Years 4-8 (2027 -2029): Amenities open to the public and educational programs in place, monitoring, trail maintenance

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).

N/A

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)?*

N/A

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

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.)*

N/A

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.)*

N/A

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.*

N/A

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.*

N/A

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.)*

N/A

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.*

N/A

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)).*

N/A

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 N/A

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.	

N/A

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:	

N/A

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:	

N
/
A

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.

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.**
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 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.**
Gulf Sturgeon		Riverine/Freshwater	No Effect	Species does not occur within action area

Piping Plover			No Effect	No suitable habitat in action area
Red Knot			No Effect	No suitable habitat in action area
Gopher Tortoise			May Affect, Not Likely to Adversely Affect	
Green Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Hawksbill Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Kemp's Ridley		Terrestrial	No Effect	No suitable habitat in action area
Leatherback Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Loggerhead Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
West Indian Manatee			No Effect	Species does not occur within action area
Eastern Black Rail			May Affect, Not Likely to Adversely Affect	
Mississippi Sandhill Crane			May Affect, Not Likely to Adversely Affect	
Alabama red-bellied turtle			No Effect	No suitable habitat in action area
Monarch Butterfly			No Effect	No suitable habitat in action area
Wood Stork			No Effect	Species does not occur within action area

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.

Gopher Tortoise

This species may be present in the project area during trail maintenance activities. If encountered, activities would cease until the species have vacated the area of their own volition.

Eastern Black Rail

This species may be present in the project area during trail maintenance activities. Potential avoidance and minimization measures include:

1. Avoid or minimize use of heavy machinery and ground disturbance activities.
2. The introduction of contaminants, fertilizers, or herbicides into marsh wetlands that contain suitable BLRA habitat should be avoided, especially those compounds that could adversely alter the diversity and numbers of invertebrates, or that could substantially change the composition of marsh vegetation. 3. Project construction should be conducted outside of the wintering season October-April.

If encountered, activities would cease until the species have vacated the area of their own volition.

Mississippi Sandhill Crane

This species may be present in the project area during trail maintenance activities. If encountered, activities would cease until the species have vacated the area of their own volition.

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)[13]**

- ☐ **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)

Migratory Birds

Use care to avoid birds when operating machinery or vehicles near birds. During the project design phase, coordinate with the USFWS and the state trust resource agency to site and design projects to avoid or minimize impacts to migratory bird nesting habitats or important feeding/loafing areas. Avoid working in migratory bird nesting habitats during breeding, nesting, and fledging (approximately mid-February through late August). If project activities must occur during this timeframe and breeding, nesting, or fledging birds are present, contact the state trust resource agency to obtain the most recent guidance to protect nesting birds or rookeries, and their recommendations will be implemented. Conservation areas may already be marked to protect bird nesting areas. Stay out of existing marked areas. If vegetation clearing is necessary, clear vegetation outside the migratory bird nesting season (approximately mid-February through late August) or have a

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

qualified biologist inspect for active nests. If no active nests are found, vegetation may be removed. If active nests are found, vegetation may be removed after the nest successfully fledges.

Gopher Tortoise

If suitable habitat is present, have a qualified biologist conduct surveys to identify any gopher tortoise burrows. If burrows are within the project area and cannot be avoided through establishing a protective buffer (size determined by USFWS and the state trust resource agency), implement standard procedures to relocate the tortoise within the project site but away from the areas of construction or restoration or consider conservation banks. A Candidate Conservation Agreement with Assurances may be appropriate for project sites within the non-listed range of the species.

Land and Vegetation Protection

Develop and implement an erosion control plan to minimize erosion during and after construction and where possible use vegetative buffers (100 feet or greater), revegetate with native species or annual grasses, and conduct work during dry seasons. Develop and implement a spill prevention and response plan, including conducting daily inspections of all construction and related equipment to ensure there are no leaks of antifreeze, hydraulic fluid, or other substances and cleaning and sealing all equipment that would be used in the water to rid it of chemical residue. Develop a contract stipulation to disallow use of any leaking equipment or vehicles. Prohibit use of hazardous materials, such as lead paint, creosote, pentachlorophenol, and other wood preservatives during construction in, over or adjacent to, sensitive sites during construction and routine maintenance. Where landscaping is necessary or desired, use native plants from local sources. If non-native species must be used, ensure they are noninvasive and use them in container plantings.

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.

No Critical Habitats in project area.

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.

No Critical Habitats in project area.

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

See Section F for project description including construction of fishing platform and fish cleaning stations.

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[14]
☐	NMFS Protected Species Construction Conditions (2021)[15]
☐	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[16]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals. Click here to enter text.

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.
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

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

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

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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

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): Mississippi Department of Environmental Quality

Contact Name: Valerie Alley Phone: 601-961-5182 Email: Valley@mdeq.ms.gov

Project Name: Coastwide Habitat Acquisition

DIVER ID# Project is a Proposed Alternative in DRAFT TIG: Mississippi TIG Restoration Plan # 4

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:

Click here to enter text.

C. Project Location

I. State and County/Parish of action area

Hancock, Harrison, and Jackson counties of Mississippi

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]

Northwest Corner: 30.7435002°N ,

89.8344765°W Northeast Corner:

30.7359496°N , 88.4123967°W

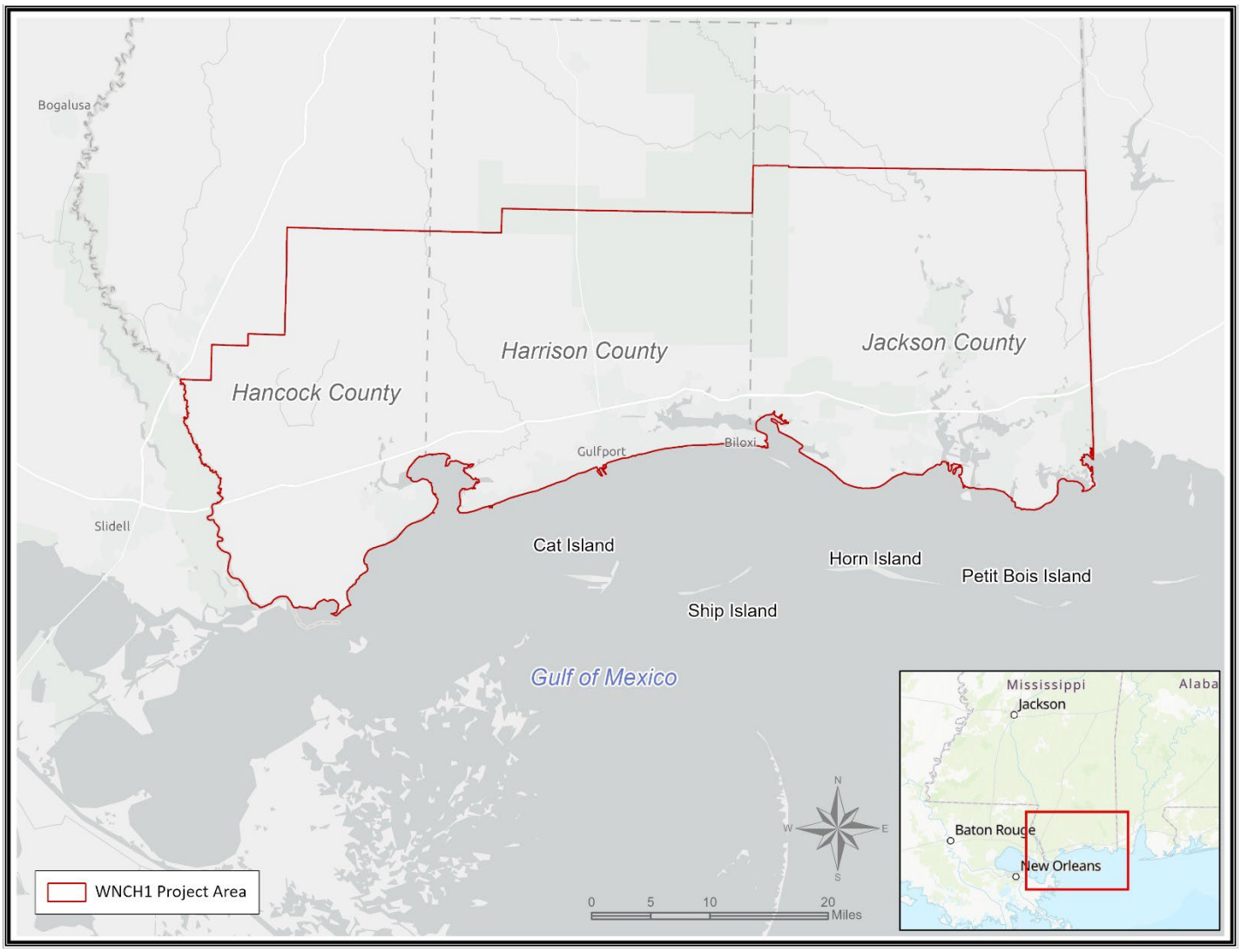
Southwest Corner: 30.1486967°N , 89.5924421°W

Southeast Corner: 30.3236349°N , 88.3876693°W

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



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.

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft Mississippi Trustee Implementation Group (MS TIG) Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project Lead:
Tina Nations Date Form
Completed: 6/1/2023
Date Form Updated: Click here to enter text.

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.

Land acquisition will take place on uplands, freshwater wetlands, and estuarine wetlands within the three coastal counties. Acquisition boundaries will not include tidally influenced

waters and water bottoms below Mean High Water (MHW), which are owned by the State of Mississippi. Some parcels may include other waterbodies such as non-tidal creeks, streams, ponds, etc.

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. Will be determined as individual parcels are acquired.

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.

Will be determined as individual parcels are acquired.

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.

N/A

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.

N/A

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.

N/A

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.).

Coastal wetland and nearshore habitats within the project area include estuarine marsh, freshwater forested wetlands, beach, beech-magnolia forests, coastal plain small stream forests, and fire suppressed pine savannas.

g. Soils and Sediments

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

Soils in the three coastal counties are primarily derived from sandy and loamy marine and fluviomarine deposits (Holocene to upper Pleistocene) derived from sedimentary rock (U.S. Geological Survey). Soils in individual acquisition areas will be analyzed during NEPA of those individual areas.

h. Land Use

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

Target habitats include estuarine marsh, dune/shoreline (beach), islands, and other coastal riparian habitats.

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

N/A

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 project would acquire land in coastal areas for conservation that have high ecological value and/or where wetlands, coastal, and nearshore habitat creation, restoration, and preservation

projects could be implemented in future restoration actions (for example, lands adjacent to coastal bays and estuaries). Conserving and protecting land parcels via acquisition can protect wetlands and other significant coastal, estuarine, riverine and riparian habitats; create connections between protected areas; and remove direct threats of development. Once acquired, parcels would be conserved, complementing, and advancing the goals of coastal management, habitat conservation, and other applicable plans. In addition, parcels may be sites for future restoration activities not currently a part of this project budget (e.g., habitat management, installation of living shorelines, intertidal and subtidal oyster reef restoration, hydrologic connectivity projects, and/or expansion/enhancement of marsh habitat using beneficial use materials).

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)* No construction for this project. Land acquisition only.

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).

N/A

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)?*

N/A

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

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.)*

N/A

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.)*

N/A

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.*

N/A

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.*

N/A

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.)*

N/A

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.*

N/A

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)).*

N/A

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 N/A

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.	

N/A

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:	

N/A

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:	

N/A

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.

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.**
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 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.
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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.

Land acquisition will have No Effect on ESA listed species.

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)**[17]
- ☐ **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*

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

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.

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

N/A

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[18]
☐	NMFS Protected Species Construction Conditions (2021)[19]
☐	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[20]

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

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

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.
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

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): Mississippi Department of Environmental Quality

Contact Name: Valerie Alley Phone: 601-961-5182 Email: Valley@mdeq.ms.gov

Project Name: Living Shoreline Bulkhead Alternative

DIVER ID# Click to enter text TIG: Mississippi TIG Restoration Plan # 4

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:
Click here to enter text.

C. Project Location

I. State and County/Parish of action area
Various locations in Harrison and Jackson Counties, MS Proposed locations as follows:

Land Trust Parcel, Pass Christian, Harrison, County, MS (Figure 1, #1)
The site is on the eastern shore of St. Louis Bay and is owned by the Land Trust for the Mississippi Coastal Plain. The living shoreline length would be a maximum of 500 linear feet.

James Hill Park, Gulfport, MS Harrison County, MS (Figure 1, #2)
The site is adjacent to Bayou Bernard and is owned by the City of Gulfport. The living shoreline length would be a maximum of 500 linear feet.

River Park Site, Pascagoula, Jackson County, MS (Figure 1, #3)
The site is located on the shore of the western fork of the Pascagoula River. The park is owned by the City of Pascagoula. The living shoreline length would be a maximum of 500 linear feet.

Other project locations may be identified in further project planning, at which time, additional analysis would be conducted by the MS TIG, as appropriate.

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]
Land Trust Parcel, Pass Christian, Harrison, County, MS (Figure 1, #1): 30.3155146°N , 89.2904975°W **James Hill Park, Gulfport, MS Harrison County, MS (Figure 1, #2):** 30.4106972°N , 89.0164354°W **River Park Site, Pascagoula, Jackson County, MS (Figure 1, #3):** 30.3738420°N , 88.5639160°W

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

Figure 1: Project Location Map

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.

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft and final Mississippi Trustee Implementation Group (MS TIG) Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project Lead:
Tina Nations Date
Form Completed:
6/1/2023
Date Form Updated: Click here to enter text.

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.

Three locations have been identified for this project in the following water bodies: Saint Louis Bay, Bayou Bernard, and Pascagoula River. Winds and tides deliver Gulf waters from the south, and the Mississippi Coastal Streams watershed delivers freshwater from the north. A single daily diurnal tidal cycle influences these bodies of water. Demonstration projects would consist of living shorelines constructed in the intertidal, nearshore environment (depths of 1-3 feet) not more than 30 feet from the shoreline. Marsh vegetation, where present, is composed primarily of black needle rush (*Juncus roemerianus*). Smooth cordgrass (*Spartina alterniflora*) occurs as narrow, disjunct bands along low marsh fringes.

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.

Land Trust Parcel, Pass Christian, Harrison, County, MS (Figure 1, #1): Approximately 1 mile from proposed project location to Mississippi Sound

James Hill Park, Gulfport, MS Harrison County, MS (Figure 1, #2): Approximately 1.1 miles from proposed project location to Big Lake, or approximately 10 miles from proposed project location to the Back Bay of Biloxi/Biloxi Bay

River Park Site, Pascagoula, Jackson County, MS (Figure 1, #3): Approximately 2.4 miles from proposed project location to Mississippi Sound

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.

Urban land infrastructure and in-water structures are present near each proposed project area. The areas are surrounded by a mix of industrial, commercial, and residential properties with large amounts of hardened shorelines.

Land Trust Parcel, Pass Christian, Harrison, County, MS (Figure 1, #1): Residential homes

with piers and bulkheads present to the south, Highway 90 Saint Louis Bay Bridge to the north. Henderson Point Park present to the east.

James Hill Park, Gulfport, MS Harrison County, MS (Figure 1, #2): James Hill Park (dedicated in July 1971) east and south of proposed project area. The park includes a marsh overlook boardwalk which connects to other developed walking trails. A fishing pier and riprap are present in/over water south of the proposed project location.

River Park Site, Pascagoula, Jackson County, MS (Figure 1, #3): River Park is an 8.6-acre park with a fishing pier 650 feet in length, a boat ramp, picnic tables, kayak launch, pavilion, dog park, museum, bait shop, and ample parking. Riprap and bulkheads line the majority of the shoreline surrounding the park.

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.

Eelgrass (*Vallisneria americana*) occurs in narrow beds along the bayous and may be present in project areas. Submerged Aquatic Vegetation (SAV) surveys will be performed prior to permitting during Engineering and Development (E&D).

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.

N/A

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.

N/A

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.).

N/A – all projects to take place in water.

g. Soils and Sediments

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

Project areas primarily contain soils derived from sandy and loamy marine and fluviomarine

deposits (Holocene to upper Pleistocene) derived from sedimentary rock (U.S. Geological Survey). The nearshore subtidal benthic habitat is composed mostly of unconsolidated bottom types including sand, muddy sand, and mud bottom.

h. Land Use

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

N/A – All project areas are in "Open Water" land use category.

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

Common Bottlenose Dolphin (*Tursiops truncatus truncatus*): Common bottlenose dolphins are distributed throughout the bays, sounds, and estuaries of the northern Gulf of Mexico, per the 2021 National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments. The Mississippi Sound, Lake Borgne, Bay Boudreau Stock area ("MS Sound Region") is bordered by the mainlands of Louisiana, Mississippi and Alabama to the north, which includes portion of the Saint Louis Bay and mouth of the Pascagoula River. The most recent survey, conducted in winter 2018 provided an abundance estimate of 1,265 individuals.

West Indian Manatee (*Trichechus manatus*): Between October and April, manatees concentrate in areas of warmer water. During summer months, the species may migrate as far west as the Louisiana and Texas coasts on the Gulf of Mexico. Manatees inhabit both salt and fresh water of sufficient depth (about 5 feet to usually less than 18 feet).
Manatees will consume any aquatic vegetation available to them including sometimes grazing on the shoreline vegetation. The project location does not overlap with any identified critical habitat for the West Indian manatee. This species uses both fresh and saltwater habitats such as coastal rivers, bays, bayous, and estuaries. The manatee is an occasional visitor to Mississippi's coasts. After wintering in Florida, and perhaps Mexico, manatees migrate northward during spring, including to Mississippi and Alabama waters. Manatees frequently seek out freshwater sources such as rivers and river mouths and have been known to be found near estuaries (Fertl et al. 2005). SAVs are the typical manatee forage material; however, manatees can also consume other aquatic vegetation, algae, and terrestrial vegetation (Fertl et al. 2005). Manatee occurrence is expected to be transitory.

Whales

According to the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (2020), various species of large and small whales are dispersed in the Northern Gulf or Mexico, but not throughout the bays, sounds, and estuaries of the northern Gulf of Mexico, where the project is located.

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 project would construct small-scale living shorelines that would reduce shoreline erosion and incorporate vegetation or other living, natural "soft" elements alone or in combination with some type of harder shoreline protection structure (e.g., oyster or mussel reefs or rock sills) for added habitat, protection, and stability. Projects would be located adjacent to properties with public shoreline access to view the demonstration projects. The project would protect coastal wetland habitat through the construction of nearshore breakwaters parallel to the shoreline for the purpose of reducing shoreline erosion.

Each living shoreline would be no longer than 500 linear feet, and the footprints of individual project
components would be determined during E&D. The structures would not extend into the waterbody more than
30 feet from the mean low water line or more than 25% of the distance across the waterbody. Specific construction equipment and methods to be used will be determined during individual project development and E&D.

Permits required for each site include a U.S. Army Corps of Engineer Nationwide Permit 54 and a Mississippi Department of Marine Resources Waiver for Alternative Bulkhead Designs/Living Shorelines in Mississippi's State Waters.

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

Construction of the living shorelines in any particular location will depend on weather conditions but is expected to take 1 to 6 months. Construction could take place year-round.

A preliminary project implementation schedule is provided here:

Years 1-3 (2024-2026) Engineering and design, permitting, and construction Years 4-7 (2027-2030) Monitoring

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).

N/A

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)?*

N/A

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	
2. Material type of piles used	
3. Size (width) of piles/sheets	
4. Total number of piles/sheets	
5. Number of strikes for each single pile	
6. Number of strikes per hour (for a single pile)	

7. Expected number of piles to be driven each day	
8. Expected amount of time needed to drive each pile (minutes of driving activities)	
9. Expected number of sequential days spent pile driving	
10. Whether pile driving occurring in-water or on land	
11. Depth of water where piles will be driven	

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.)*

N/A

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.)*

N/A

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.*

Each living shoreline would be no longer than 500 linear feet, and the footprints of individual project components would be determined during E&D. Each living shoreline would incorporate vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline protection structure (e.g., oyster or mussel reefs or rock sills) for added habitat, protection, and stability.

Specific construction equipment and methods to be used will be determined during individual project development and E&D.

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.*

N/A

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.)*

N/A

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.*

N/A

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)).*

N/A

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

Essential Fish Habitat is present in the project area, which encompasses bays, wetlands, and rivers which flow into the Mississippi Sound and the larger Gulf. EFH in the project area would primarily apply to aquatic habitat where fish feed or grow to maturity.

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 NOAA Fisheries has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. The habitat in the individual project areas consists primarily of soft bottom and sandy substrate consistent with sediment along the northern 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:	

Short-term to long-term benefits to EFH are anticipated as a result of habitat creation, preservation, and increased biological productivity.

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:	

During construction, adverse impacts to the submerged habitat are expected to be short-term and minor. Post construction, there will be long-term, minor impacts to submerged habitats due to the filling of small areas (<1 acre per project area), and potential replacement of fine-grained sediment with hard structure. However, the project areas constitute a small fraction of the total available habitat for the listed species in each area.

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.

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.**
Gulf Sturgeon (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Loggerhead Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Kemp's Ridley Sea Turtle (E)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Green Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	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.**

West Indian Manatee			May Affect, Not Likely to Adversely Affect	
Piping Plover			No Effect	No suitable habitat in action area
Red Knot			No Effect	No suitable habitat in action area
Eastern Black Rail			No Effect	No suitable habitat in action area
Gopher Tortoise			No Effect	No suitable habitat in action area
Hawksbill Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Green Sea Turtle (Pascagoula Site only)		Terrestrial	No Effect	No suitable habitat in action area
Kemp's Ridley		Terrestrial	No Effect	No suitable habitat in action area
Leatherback Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Loggerhead Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Gulf Sturgeon		Riverine/Freshwater	May Affect, Not Likely to Adversely Affect	
Gulf Sturgeon	2	Riverine/Freshwater	May Affect, Not Likely to Adversely Affect	
Louisiana Quillwort (Gulfport site only)			No Effect	No suitable habitat in action area
Alabama Red-bellied Turtle (Gulfport and Pascagoula sites only)			No Effect	No suitable habitat in action area
Dusky Gopher Frog (Pascagoula Site only)			No Effect	No suitable habitat in action area
Mississippi Sandhill Crane			No Effect	Species does not occur within action area
Wood Stork			No Effect	Species does not occur within action area
Monarch Butterfly			No Effect	No suitable habitat in action area

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.

Gulf Sturgeon

All activities will take place in shallow waters near the shoreline allowing sufficient area for passage of individuals. Gulf sturgeon are highly mobile and will likely avoid the area due to project activity and noise. Normal behavior patterns of Gulf sturgeon are not likely to be disrupted by the project activities because of the short-term localized nature of the activities and the ability of Gulf sturgeon to avoid the immediate area.

Sea Turtles

Most of these species do not typically use the mainland beaches for nesting, although it is possible that both Kemp's ridley and loggerhead sea turtles could use the offshore barrier islands for nesting. The shoreline habitat in the action area is unsuitable for sea turtle nesting

(i.e., no sandy beach above high tide) and we do not expect nesting in the action area. Both the Kemp's Ridley and Loggerhead have been caught close to the shoreline by land-based fishermen indicating use of the Mississippi nearshore areas for foraging and/or movement. Additionally, sea turtles are highly mobile and will likely avoid the area due to project activity and noise. If individuals are encountered during construction, work will cease until the individuals have vacated the area of their own volition.

West Indian Manatee

All activities will take place in shallow waters near the shoreline allowing sufficient area for passage of individuals. Manatees are highly mobile and will likely avoid the area due to project activity and noise. Normal behavior patterns are not likely to be disrupted by the project activities because of the short-term localized nature of the activities and the ability of the species to avoid the immediate area. If individuals are encountered during construction, work will cease until the individuals have vacated the area of their own volition.

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.*

Individual living shoreline projects will, at a minimum, be designed to minimize any potential adverse effects. No activity is authorized under any USACE Nationwide Permit which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed.

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)**[21]
☒	**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)

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

General BMPs

1. Watch for and avoid collisions with wildlife while traveling on foot, equipment, vehicles or vessel.
    a. Activities shall occur during daylight (dawn to dusk) hours only.
    b. Vehicles and equipment shall be operated at speeds slow enough to avoid wildlife while still safely operating the vehicle.
    c. Avoid marked wildlife or other conservation areas.

2. Minimize the risk of attracting invasive species and predators to the action area.
    a. Prior to bringing any equipment (including personal gear, machinery, vehicles or vessels) to the work site, inspect each item for mud or soil, seeds, and vegetation. If present, the equipment, vehicles, or personal gear shall be cleaned until they are free from mud, soil,

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seeds, and vegetation. This inspection will occur each time equipment, vehicles, and personal gear are being prepared to go to a site or prior to transferring between sites to avoid spreading exotic, nuisance species.
    b. Inspect sites periodically to identify and control new colonies/individuals of an invasive species not previously observed prior to construction.
    c. Remove trash or anything that would attract nuisance wildlife to work areas daily.
    d. Project related trash or debris shall not be allowed to blow into open water or onto beaches.

3. Minimize unnecessary habitat disturbance.
    a. The nearest, existing staging, access and egress areas, travel corridors, pathways, and roadways shall be used (including those provided by the State, local governments, land managers, trustee, or private property owner, with proper permissions). b. Do not modify existing access.
    c. Minimize vegetation removal.
    d. Avoid driving over the wrack line or areas of dense seaweed, as these habitats may contain baby birds or other organisms that are difficult to see.

4. Minimize lighting impacts to wildlife
5. Prevent spills. Conduct daily inspections of all construction and related equipment to assure there are no leaks of antifreeze, hydraulic fluid, or other substances.
6. Prohibit use of hazardous materials, such as: lead paint, creosote, pentachlorophenol, and other wood preservatives during construction in, over, or adjacent to, sensitive sites during construction and routine maintenance.

Gulf Sturgeon

1. Project construction activities will be subject to a stop work order if the species is observed in the project footprint. Work will continue once the species leaves the area.

The five sea turtles species on the endangered species list are rarely observed in Mississippi waters (MDWFP
2001). There is no sawfish critical habitat in or near the project action area. The Trustee would adhere to the 2021 NMFS Protected Species Construction Conditions as a cooperative and voluntary measure, working cooperatively with NOAA and in order to avoid any possible adverse effect.

Wetland and Aquatic Resource Protection

Complete an engineering design and post-construction inspection for projects where geomorphic elevations are restored in wetlands, marshes, and shallow water habitats to ensure the success of the restoration project. Manage elevation of fill material to ensure projected consolidation rates are accomplished and that habitat suitable for wetland and marsh vegetation is developed. Avoid and minimize, to the maximum extent practicable, placement of dredged or fill material in wetlands and other aquatic resources. Design construction equipment corridors to avoid and minimize impacts to wetlands and other aquatic resources to the maximum extent practicable. To the maximum extent possible, implement the placement of sediment to minimize impacts to existing vegetation or burrowing organisms. Place protective warning signs and buoys around at-risk habitats for infrastructure projects that could increase recreational uses in SAV or oyster areas. Perform maintenance of generators, cranes, and any other stationary equipment operated within 150 feet of any natural or wetland area, as necessary, to prevent leaks and spills from entering the water. Inspect vehicles and equipment daily prior to leaving the storage area to ensure that no petroleum or oil products are leaking. Upon completion of construction activities, restore all disturbed areas as necessary to allow habitat functions to return. Create and manage public access developments to enhance recreational experience and educational awareness to minimize effects to habitat within wetland and shallow water areas and to the long-term health of related biological communities. Incorporate containment levees for fill cells for projects using marsh creation or other barrier island restoration. Remove these containment levees after construction to allow for the restoration of natural tidal exchange. Use silt fencing where appropriate to reduce increased turbidity and siltation in the project vicinity. This would apply to both on land and in water work.

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.

The River Park site overlaps with Unit 2 - Pascagoula River System Subunit: East Pascagoula River Gulf Sturgeon CH. None of the other proposed living shoreline demonstration projects overlap with any designated critical habitat. All activities will take place in shallow waters near the shoreline allowing sufficient area for passage of individuals. Gulf sturgeon are highly mobile and will likely avoid the area due to project activity and noise. Normal behavior patterns of Gulf sturgeon are not likely to be disrupted by the project activities because of the short-term localized nature of the activities and the ability of Gulf sturgeon to avoid the immediate area.

Gulf Sturgeon Critical Habitat

Gulf sturgeon critical habitat exists in one of the three project areas (River Park Site) and is represented on the habitat resources map. However, no effects to Primary Constituent Elements (PCE) from the proposed project are expected. PCEs include abundance of prey items, water quality, sediment quality, and safe and unobstructed migratory pathways. All restoration activities will take place in shallow estuarine waters near the shoreline allowing sufficient area for passage of individuals if present during implementation. Additionally, the benthic habitat in the project area is not preferred foraging habitat for Gulf sturgeon. Well oxygenated, clear water with sandy substrates are primarily used for feeding by the species. Benthic habitat in the project footprint is largely composed of soft, silty substrates with turbid waters.

Sediment Quality

The non-motile benthic community within the project area would be temporarily, adversely impacted as a result of the placement operations, but would recover within several months to 1 year following construction. The majority of the motile species present within the project area will abandon the area during construction activities. They will return once the activities have been completed.

During construction of the living shorelines, the fine-grained soft bottom habitat would be altered by the placement of living shoreline materials. The total footprint any individual project would be less than 500 linear feet in size, resulting in a long-term, minor impact to a relatively small project footprint. Adverse impacts to the submerged habitat during construction are expected to be short-term and minor.

The project area constitutes a small fraction of the total available habitat for the listed species in the area. The net benefits of the habitat protection and restoration would include increased benthic habitat diversity, structural complexity, greater diversity and abundance of marine aquatic species. In addition, the entire Hancock County marsh would experience reduced shoreline erosion.

Water Quality

Placement of the breakwater would 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. The suspended sediment may be transported into surrounding wetlands, waterways, and the Mississippi Sound. However, the area is currently exposed to elevated turbidity levels as a result of re-suspension of sediment during frequent storms, tides and other typical events. It is expected that suspended particles will settle out within a short time frame, with no measurable effects on water quality.

Prey Abundance

As Gulf sturgeon feed principally on benthic invertebrates, potential impacts to the foraging constituent element would be confined to possible impacts to the benthic community. However, past observances have recorded subpopulations found within the Pearl and Pascagoula Rivers utilize sandy substrates around the Mississippi barrier islands in depths from 5-20 feet as foraging grounds during the fall migration and winter months (Fox et al., 2002; Ross et al., 2009). Additionally, construction would occur in depths shallower than those typically utilized by Gulf sturgeon. Benthic habitat in the project footprint is largely composed of soft, silty substrates with turbid waters, therefore there would be no adverse impact on prey abundance.

Safe and Unobstructed Migratory Pathways

Within Unit 2, subadult and adult Gulf sturgeon move from the rivers through estuarine and marine areas to feeding areas. Unit 2 is known to support migratory pathways for Gulf sturgeon sub-populations (Pascagoula River). Gulf sturgeon use the West and East distributaries of the Pascagoula River during spring and fall migrations. Summer resting areas have been consistently documented on Big Black Creek and on the Pascagoula River. Confirmed use for migration and/or summer resting areas and probable feeding use by juveniles supports inclusion of these river reaches. Construction would occur in water depths of around 3.5 feet and less. This provides ample opportunity for Gulf sturgeon to migrate through the immediate area. Given this information, no adverse impacts to migratory pathways are anticipated.

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.

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

See Section F for full project description of project.

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[22]
☒	NMFS Protected Species Construction Conditions (2021)[23]
☒	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[24]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals. See Section J, above.

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.
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

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

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

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): Mississippi Department of Environmental Quality, National Oceanic and Atmospheric Administration

Contact Name: Valerie Alley Phone: 601-961-5182 Email: Valley@mdeq.ms.gov

Project Name: Hancock County Marsh Living Shoreline Phase 6 Breakwater

DIVER ID# 38 TIG: Mississippi TIG Restoration Plan # 4

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:

90% design

C. Project Location

I. State and County/Parish of action area

Hancock County, Mississippi

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]

Coordinates for Segment 1: (1.5 miles): Beginning: 32.2183°N, -89.4340°W NAD83 / Ending: 30.2326°N, -89.4177°W NAD83

Coordinates for Segment 2: (0.2 miles) Beginning: 30.2376°N, -89.4201°W NAD83 / Ending: 30.2381°N, -89.4209°W NAD83

Construction Fleeting Area:

Bounding Corner	Latitude	Longitude
North	30.2316478°N	-89.4141423°W
West	30.2155554°N	-89.4340929°W
East	30.2300360°N	-89.4124186°W
South	30.2139438°N	-89.4323691°W

Heron Bay Anchorage Area:

Bounding Corner	Latitude	Longitude
Northwest	30.1778905°N	-89.4949419°W
Northeast	30.1779304°N	-89.4783337°W
Southwest	30.1730162°N	-89.4949334°W
Southeast	30.1730010°N	-89.4783259°W

Pearl River Light Loading and Anchorage Area:

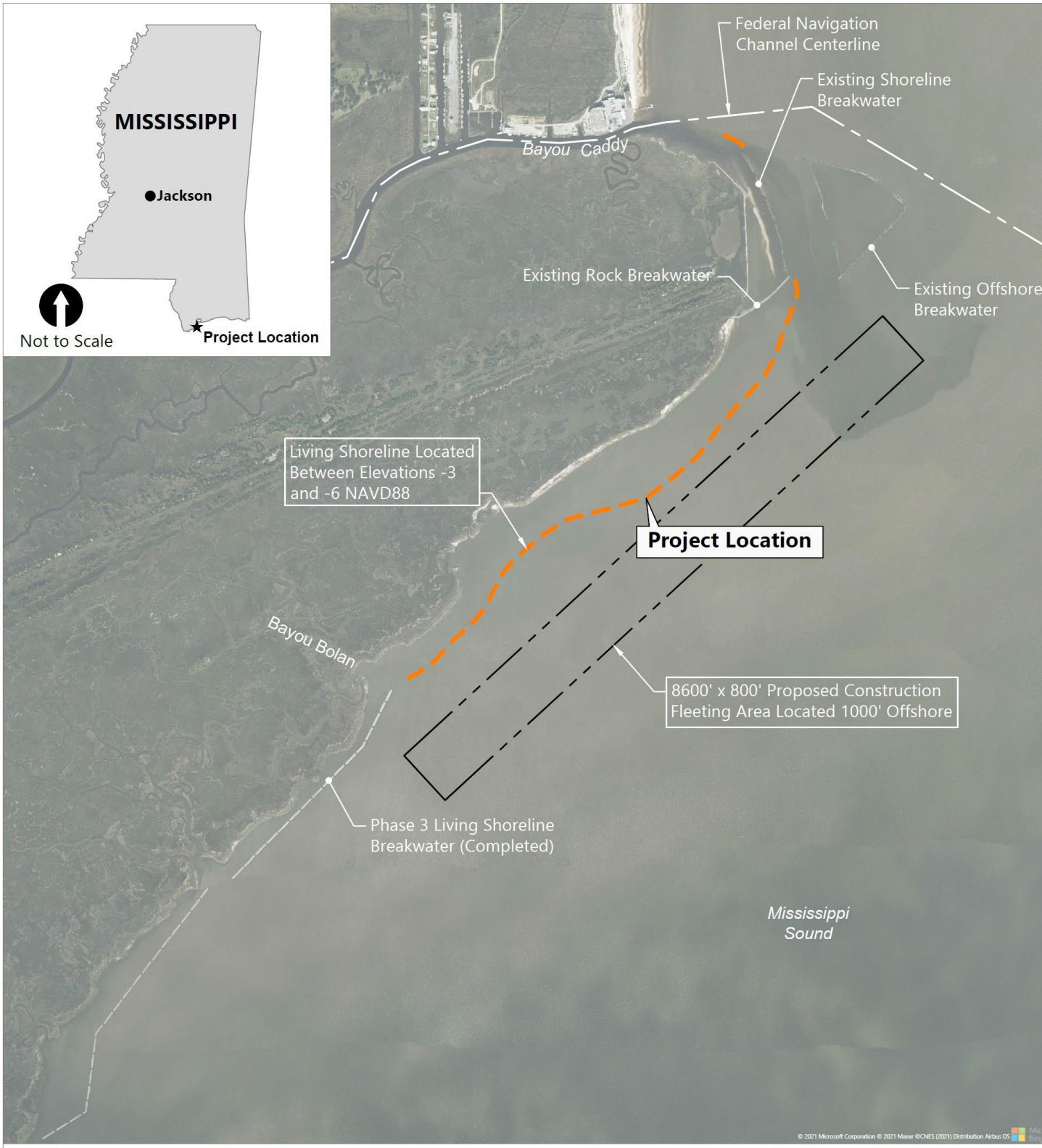
Bounding Corner	Latitude	Longitude
North	30.1923024°N	-89.5309265°W
West	30.1918639°N	-89.5318657°W
East	30.1881848°N	-89.5283155°W
South	30.1877264°N	-89.5292453°W

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


N
Lakeshore Rd
Ladner Ave
Central Ave
Lambert Ln
Pleasure St
Ohio St
Chicago Ave
Ann St
S Beach Blvd
Shipyard Rd
Bayou Caddy
Approximate Project Location
Existing USACE Breakwaters
Approximate Project Location
Bayou Bolan
Phase 3 Breakwater (Completed)
Mississippi Sound
Hancock County Mississippi
0
1,000
2,000
4,000
Fee



SOURCE: ©2021 Microsoft Corporation ©2021 Maxar ©CNES (2021) Distribution Airbus DS
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

Proposed Breakwater Alignment

0 2000
Feet

LEGEND:

APPROVED ANCHORAGE AREAS

NORTH

0 1500 3000

SCALE IN FEET

ONE INCH AT FULL SIZE. IF NOT ONE INCH SCALE ACCORDINGLY

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

FC&E Engineering, LLC

ANCHOR QEA

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: R. COUPE
DRAWN BY: D. HOLMER
CHECKED BY: W. MEARS
APPROVED BY: R. MOHAN
SCALE: AS NOTED
DATE: AUGUST 2022

HANCOCK COUNTY MARSH LIVING SHORELINE, PHASE 6, MS SAM-2022-00174 / DMR22-000087

APPROVED STAGING AREAS

C1

SHEET NO. 3 OF 12

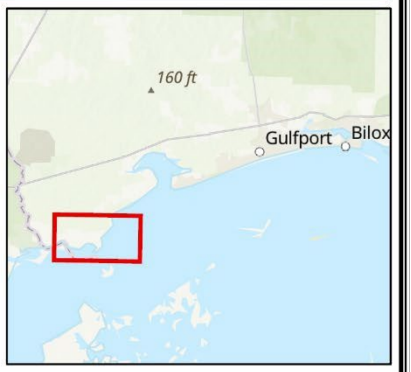
K:\Projects\1275-FC & E Engineering, LLC\West Hancock Co. Living Shoreline_MDEQ Hancock County Living Shoreline\Construction Plans_Phase 6 Living Shoreline\1275-PHASE 6-C1 STAGING AREAS.dwg C1

Aug 22, 2022 3:13pm dholmer

Restoration Plan 4: Hancock County Marsh Living Shoreline Phase 6 Breakwater

Legend

- HCMLS Phase 6 Alignment
- HCMLS Phase 6 Construction Fleeting Area
- HCMLS Phase 6 Anchorage Areas
- HCMLS Phase 6 Light Loading and Anchorage Area



SOURCE: ©2021 Microsoft Corporation ©2021 Maxar ©CNES (2021) Distribution Airbus DS
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

- Bathymetric Contours (1' Interval)
- 14+00 — Project Alignment and Station
- Proposed Breakwater Contours
- BB-1 — Breakwater Segment Designation

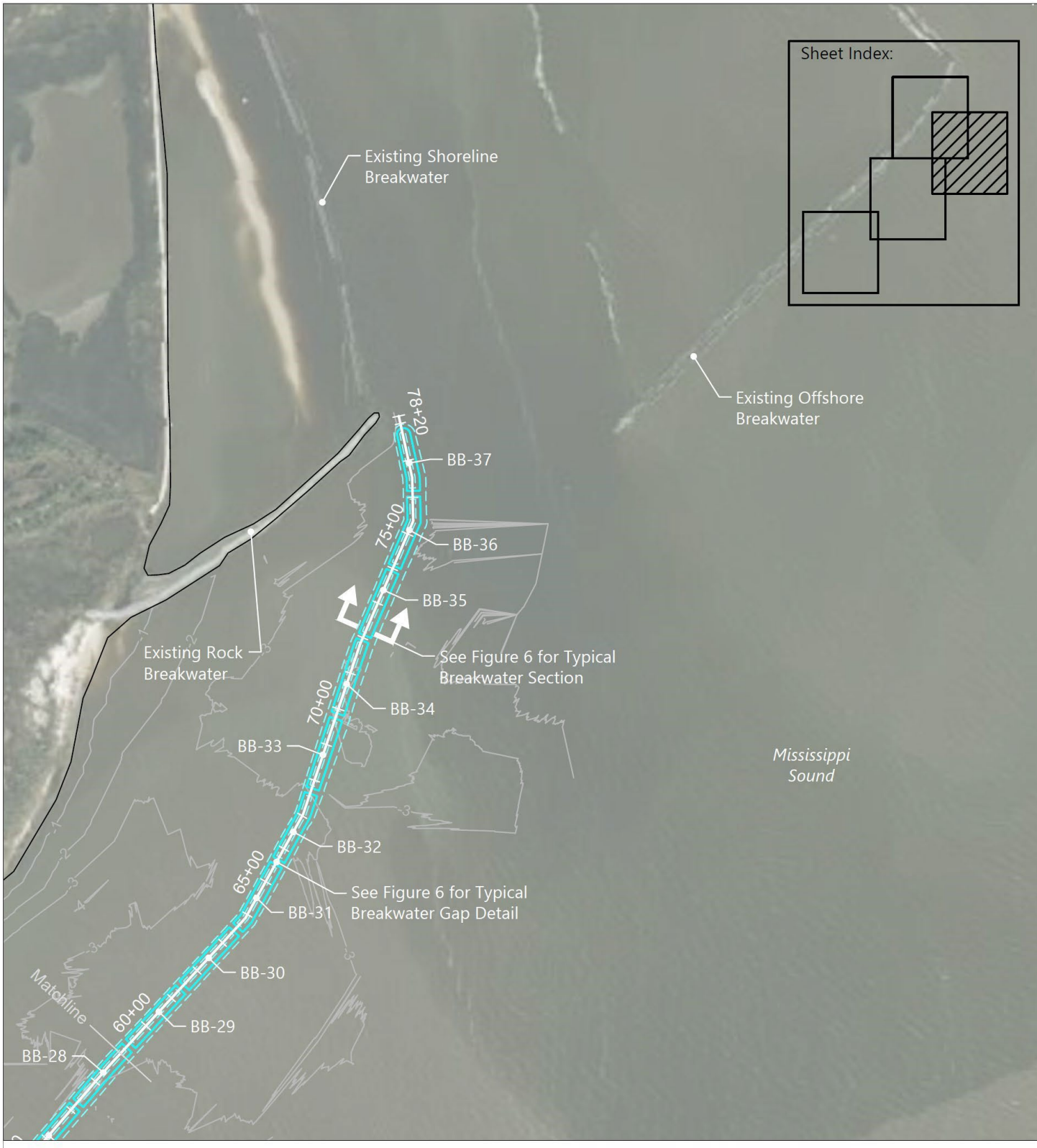
0 400
Feet

SOURCE: ©2021 Microsoft Corporation ©2021 Maxar ©CNES (2021) Distribution Airbus DS
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

- Bathymetric Contours (1' Interval)
- 14+00 Project Alignment and Station
- Proposed Breakwater Contours
- BB-1 Breakwater Segment Designation

0 400
Feet

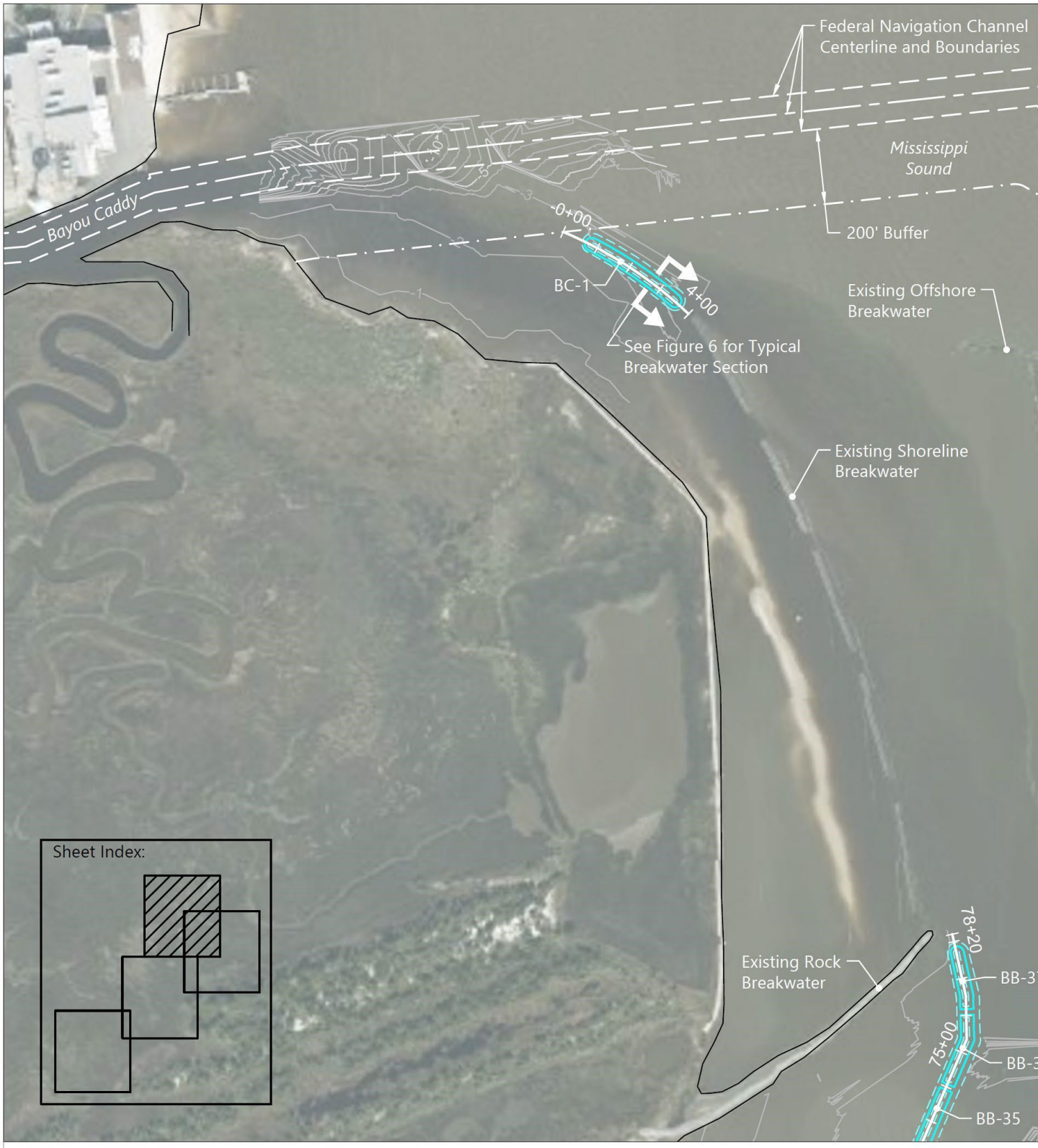


SOURCE: ©2021 Microsoft Corporation ©2021 Maxar ©CNES (2021) Distribution Airbus DS
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

- Bathymetric Contours (1' Interval)
- 14+00 Project Alignment and Station
- Proposed Breakwater Contours
- BB-1 Breakwater Segment Designation

0 400
Feet



SOURCE: ©2021 Microsoft Corporation ©2021 Maxar ©CNES (2021) Distribution Airbus DS
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:

- 5 — Bathymetric Contours (1' Interval)
- 14+00 — Project Alignment and Station
- Proposed Breakwater Contours
- BB-1 — Breakwater Segment Designation

0 400
Feet

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: SAM-2022-00174-MJF (Individual Permit)

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.

Environmental Compliance Info

National Environmental Policy Act (NEPA) analysis for this project will be included in the draft and final Mississippi Trustee Implementation Group (MS TIG) Restoration Plan # 4 that is expected to be released by the MS TIG in August 2023.

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

Name of Person Completing this Form: Rachel Kistler
Name of Project Lead:
Tina Nations Date Form
Completed: 6/1/2023

Date Form Updated: Click here to enter text.

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 project area includes the nearshore subtidal area of the Hancock County marsh between Bayou Caddy and Heron Bay. On the seaward side, the project area extends approximately 1,000 feet offshore parallel to the proposed breakwater alignment to incorporate potential impacts from a construction fleeting area (8,600 ft x 800 ft) that will be utilized by work barges during construction. Two anchorage areas will be utilized as follows: One 500 ft wide offset approximately 1,000 feet from the length of the alignment totaling approximately 278 acres; One 1800 ft x 5,250 ft area off the southern end of the alignment near Heron Bay totaling 215 acres. Lastly, one light loading and anchorage area (1700 ft x 340 ft, totaling 13 acres) will be utilized in the Pearl River.

The Hancock County Marsh Coastal Preserve is a 13,570-acre preserve managed by the Mississippi
Department of Marine Resources (MDMR) and is the second largest continuous marsh area in the state. The preserve includes adjoining marshlands bordering the Mississippi Sound from the Pearl River to St. Joseph's Point.

The Hancock County marsh area is composed largely of estuarine emergent marsh and estuarine shallow water intertwined by a network of tidal creeks. Bathymetry in the project area ranges from approximately -3.0 feet to -6.0 feet NAVD88.

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.

Project construction and anchorage areas are located in the nearshore marine environment of the Mississippi Sound from Bayou Caddy to Heron Bay. A light loading area and anchorage area is located in the mouth of the Pearl River.

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.

This project is Phase 6 of the existing Hancock County Marsh Living Shoreline Project, an ongoing Early Restoration Deepwater Horizon Natural Resources Damage Assessment Project, which includes 5.9 miles of breakwater (construction complete, monitoring ongoing), a 46-acre subtidal reef (construction complete, monitoring ongoing), and a 46-acre created marsh (under construction). The federal permit and compliance documentation for the existing Hancock County Marsh Living Shoreline components can be found here Previous HCMLS environmental compliance information.

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.

A submerged aquatic vegetation (SAV) and oyster survey was conducted on December 9, 2020. No SAV or oysters were observed or collected within the project area. The survey report is included here

20220204_HCMLS Phase 6 Permit App

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.

Not applicable to this project.

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.

Not applicable to this project.

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.).

Not applicable to this project.

g. Soils and Sediments

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

The nearshore subtidal benthic habitat is composed mostly of unconsolidated bottom types including sand, muddy sand, and mud bottom.

h. Land Use

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

Not applicable to this project.

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

According to the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (2021), Common bottlenose dolphins are distributed throughout the bays, sounds, and estuaries of the northern Gulf of Mexico (Mullin 1988). This stock area includes the Mississippi Sound, Lake Borgne, and Bay Boudreau. Per the report, “The best available abundance estimate for the Mississippi Sound, Lake Borgne, Bay Boudreau Stock of common bottlenose dolphins is 1,265 (CV=0.35; Table 1; Garrison et al. 2021). This estimate is from an aerial survey conducted during winter 2018.”

According to the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (2020), various species of large and small whales are dispersed in the Northern Gulf or Mexico, but not throughout the bays, sounds, and estuaries of the northern Gulf of Mexico, where the project is located.

According to the West Indian Manatee (Florida) Stock Assessment Report (2014), Florida manatees are found throughout the southeastern US. Florida manatees are generally restricted to the inland and coastal waters of peninsular Florida during the winter, when they shelter in and/or near warm-water springs, heated industrial effluents, and other warm water sites (Hartman 1979, Lefebvre et al. 2001, Laist and Reynolds 2005, Stith et al. 2006, Laist et al. 2013). In warmer months, manatees leave these sites and can disperse great distances including coastal Mississippi. While the Florida manatee population has been separated into management units, the Service identifies the Florida manatee population as a single stock. There is currently no statistically robust estimate of total population size for the Florida manatee stock. However, the State of Florida, pursuant to a

State legislative mandate, conducts winter counts of manatees at warm water sites throughout peninsular Florida each year.

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 Proposed Action is the construction of 1.7 miles of a breakwater structure in two separate segments in the Mississippi Sound near the Hancock County Marsh. The first being 1.5 miles in length from Bayou Bolan to an existing United States Army Corps of Engineers (USACE) Breakwater structure just south of Bayou Caddy. The second segment is an additional 0.2 miles in length and extends from the USACE Breakwater structure to Bayou Caddy. The proposed work is considered Phase 6 of the existing Hancock County Marsh Living Shoreline breakwater structure. A permit application has been submitted to the USACE: SAM-2022-000174-MJF. A USACE
public notice has been issued and the permit application is under review. SAM-2022-00174-MJF Public Notice.pdf.

The proposed breakwater design would have a 15-foot crest width with heights varying from 3.5 to 8.5 feet based on existing contours. Base widths would range from 55 feet to 95 feet. The maximum design crest elevation would be +2.5 feet NAVD88. The total footprint of both breakwater segments would be approximately 17 acres in size and would be placed on a geocomposite fabric base. The volume of material placed would be approximately 175,000 cubic yards of clean riprap. The breakwaters would be installed in segments with each segment being approximately 75 feet in length with 25-foot gaps between each segment. The side slopes of the seaward-facing side would be 5H:1V to 6H:1V while the marsh-facing side slopes would be 3H:1V.

Aids to Navigation signage would be coordinated with the United States Coast Guard to determine the type of signage required and the locations of the signage.

Based on preliminary data from geotechnical sampling and experience from previous phases of the project, longterm settlement of the breakwater is expected to be 0.5 to 1.25 feet. The higher crest heights are expected to settle to design height within a 1- to 2-year period.

Best Management Practices would be utilized throughout the construction process. Construction would include placement of linear structures that would utilize traditional stone materials. The geocomposite fabric and riprap would be transported to the work area on barges. The loose riprap would be underlain by geocomposite fabric, and placement of the material would be monitored to ensure the breakwater dimensions, slopes, and crest elevations are achieved.

The project is expected to result in minor, short-term adverse impacts in several resource categories, including air quality and greenhouse gases, noise, and aesthetics and visual resources, due to construction, but overall the project is expected to result in a net long-term benefit due to shoreline protection. Construction of the breakwaters will depend on weather conditions but is expected to take 10 to 12 months.

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

Construction of the breakwaters will depend on weather conditions but is expected to take 10 to 12 months.

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).

Project is not a fishing pier.

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)?*

Not applicable to this project.

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

Not applicable to this project.

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.)*

Not applicable to this project.

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.)*

Not applicable to this project.

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.*

Construction Process - Construction of breakwater structures will be in very shallow water. The

minimum depth of water at mean lower low water (MLLW) is approximately 2 feet. Construction will require various types of shallow draft vessels and equipment to access work areas. A work barge will be set up closest to the breakwater alignment to place the material from a rock barge. A third transfer barge brings approximately one-quarter of a load of material to the work site per trip from the light loading area and transfers the material onto the work barge.

The alignment and limits of the breakwaters will be surveyed, with the outer limits of the breakwaters being marked with poles driven into the bottom and extended approximately 3 feet above the water surface. Elevation controls along the alignment were established during Engineering & Design, and existing bottom elevations along the alignment were recorded from the bathymetric survey completed on December 9-10, 2020. Height of breakwater structures along the alignment will be constructed based on bottom elevations (targeting -3.5' to -4.0' NAVD88 depths) and the breakwater crest elevation (2.5 feet NAVD88). Bathymetric surveys will be conducted during construction at increments approximately 3,000' ahead of the construction area to determine if additional erosion has occurred. The design will be updated as needed to maintain construction of the breakwater between the -3.0' and -6.0' NAVD88 contours. Project refinement is anticipated as part of the design and construction process.

Temporary flotation channels will not be utilized for the proposed construction, but temporary loading, anchoring, and construction fleeting areas will be required, as described in Section E, Subsection A. Barriers, navigation warning signs (lighted and unlighted), etc. will be established along the work area, fleeting areas, and anchorage areas to protect boaters. These will be maintained throughout the project until permanent markers along the completed breakwaters are established.

The project area has shallow water and a soft bottom. It is anticipated that a tracked backhoe with a long reach or mounted on a marsh buggy will be positioned along the alignment of the breakwater. A material barge will be positioned seaward of the breakwater in sufficient depth of water, but within reach of the backhoe. The material barge will be loaded so as not to exceed the draft requirements in the work area. Barges will be placed and maintained in sufficient draft to the extent practical.

Initial settlement is anticipated to be 0.25 to 0.75 feet. Based on preliminary data from geotechnical sampling and experience from previous phases of the project, long-term settlement of the breakwater is expected to be 0.5 to 1.25 feet. Prior to placement of rip rap materials, two settlement plates per breakwater section will be positioned at designated centerline locations to monitor settlement.

Material barges will be anchored in deeper water, and all construction materials will be placed on transfer barges and delivered to the work area. First, a geocomposite fabric would be placed to underlay rip rap materials. Then, a work barge with backhoe or tracked backhoe will place

loose 2.5” diameter underlayer stone for the construction of the rip rap core of the breakwater. Placement of the loose rip rap will be monitored to ensure the breakwater dimensions, slopes, and crest elevation are achieved. After the rip rap core of the submerged reef has been confirmed to be complete, 12” diameter armor stone rip rap will be placed over the rip rap core by the same methods described for the underlayer stone. Placement of the loose rip rap will be monitored to ensure the breakwater dimensions, slopes, and crest elevation are achieved.

The dimensions for the breakwaters would be approximately 55 to 95 feet wide at the base and approximately
15 feet wide at the crest. The breakwaters would be installed in segments with each segment being approximately 75 feet with 25-foot gaps between the segments. The volume of material placed would be approximately 175,000 cubic yards over an approximate 17-acre footprint.

The side slopes of the front (seaward-facing) are 5 to 6 feet horizontal to 1 foot vertical (5H:1V to 6H:1V) and the back (marsh-facing) sides are 3H:1V, respectively. The breakwater includes an additional volume of riprap along the front of the structure to provide additional volume intended to fill in areas that may scour near the toe of the structure. The use of a flatter slope instead of a launchable toe was considered a cost-effective and more constructible alternative compared to digging and embedding toe scour protection or widening the structure. Gaps are included to increase habitat surface area and fish passage, as well as to enhance tidal flow.

Final construction of the breakwaters will be surveyed (alignment, elevation, representative cross-sections, settlement plates, etc.). Permanent navigation signage will be installed in accordance with safety requirements. The signage pilings will consist of 30-foot long, Class 4 timber pilings to be located 10 - 15 feet from the seaward toe of the breakwater within 6 feet of the location of the breakwater. Pilings will penetrate at least 8 feet of sand and/or shell, or at least 10 feet of mud, as appropriate to support the marker. Temporary signage during construction will consist of 3 US Coast Guard (USCG)-approved marine lanterns buoys with solar powered, flashing white lights.

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.*

Not applicable to this project.

G. 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)).*

Not applicable to this project.

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

EFH is present within the project area for gray snapper, red drum, Spanish mackerel, shrimp, and multiple species categorized as Highly Migratory (Finetooth shark, Bull shark, Spinner shark, Blacktip shark, and Atlantic Sharpnose shark). A consultation with NOAA NMFS was initiated by USACE as part of the federal permitting process. EFH Consultation Info: NMFS HCD Approval on June 28, 2022; NMFS PRD in progress as of March 20, 2023.
USACE Permit number: SAM-2022-000174-MJF

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
NOAA

Fisheries has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. The habitat in the project area includes the Mississippi Sound and Gulf of Mexico waters and consists primarily of soft bottom and sandy substrate consistent with sediment along the northern 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:	

Intermediate and long-term benefits to the Red Drum and Reef Fish and Coastal Migratory Species are anticipated as a result of habitat creation, preservation, and increased biological productivity. Restoration would produce short term to long term benefits to shrimp because the breakwater would retard marsh edge erosion substantially, preserving this vital microhabitat for juvenile shrimp.

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:	

Placement of the breakwater would result in short-term, minor 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 and construction of the breakwater. The suspended sediment may be transported into surrounding wetlands, waterways, and the Mississippi Sound. However, the area is currently exposed to elevated turbidity levels as a result of resuspension of sediment from river transport, erosion of existing shoreline and frequent storms, tides, and other typical weather events. Best management practices, along with other avoidance and mitigation measures required by state and federal regulatory agencies, would be employed to minimize potential water quality and sedimentation impacts. Impacts from turbidity would be minor, short term, and limited in spatial extent.

In addition to turbidity, the water quality could be impacted by leaks or spills of fuel and lubricants used by vessels and other equipment during the construction of the breakwater. Appropriate best management practices, such as routine maintenance, inspection, and proper refueling of construction equipment, would be used to prevent, control, and mitigate impacts.

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.

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.**
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.**

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.

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)[25]**
☒	**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)

USFWS Jackson, Mississippi Field Office "Guidelines for Activities in Proximity to Manatees and Their Habitat"

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.

ESA effects have been accounted for under an existing consultation.

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.

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

ESA effects have been accounted for under an existing consultation.

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

Please see Section F. III. (e) for description of activities.

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[26]
☒	NMFS Protected Species Construction Conditions (2021)[27]
☒	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[28]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals. None additional.

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.
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

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

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