Version: August 21, 2018

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: Erin Chandler at erin_chandler@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): CPRA

Contact Name: Brad Miller Phone: 225-342-4122 Email: brad.miller@la.gov

Project Name: The Barataria Basin Ridge and Marsh Creation Project -Spanish Pass Increment

DIVER ID# 81 TIG: Louisiana TIG Restoration Plan # 1

B. Project Phase and Supporting Documentation

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

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

If "Engineering & Design" was selected, please describe the level of design that has been completed and is available for review:

The 60% Design Documentation Report with Preliminary Construction Plans and Specifications were completed 6/20/2019. These are available from CPRA or Baird.

Supporting Documentation

Please attach any maps, aerial photographs, or design drawings that will support the information in this BE form. 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
- Map of project area with elements proposed (polygons showing proposed construction elements)

Map of action area with critical habitat units or sensitive habitats overlayed

C. Project Location

I. State and County/Parish of action area

Plaquemines Parish, Louisiana.

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]

Lat: 29°15'34.28"N, Long: 89°25'18.92"W NAD83

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☐

*RP is currently being drafted

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.

The RP/EID is currently being drafted and will be reviewed by the LATIG several times prior to finalization of the document. A Joint Permit Application for project impacts to jurisdictional wetlands and waters was submitted to the USACE on May 7, 2019.

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

Name of Person Completing this Form: Brad Miller and Caitlin Glymph

Name of Project Lead: Brad Miller

Date Form Completed: 01/14/2020

Date Form Updated: 03/26/2019

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 CH is not designated in the area, then describe any suitable habitat in the area

a. Waterbody

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.

b.

The proposed marsh creation areas are to the west of Venice, LA along the historic Spanish Pass in the estuarine Barataria Basin. The salinity and marsh type vary across the creation area from intermediate brackish marsh to saline marsh habitat. Vegetation is predominantly salt-tolerant grasses. Existing water depths and topography in the marsh creation areas vary between -5.0' and +3.0' NAVD88. Depending on the borrow source and placement location, constructed marsh elevations may vary between a maximum of +3.3' and a minimum of +1.6' NAVD88. Any ridge feature will be constructed to an +5.0' elevation NAVD88. .

Fill material may be sourced from three nearby borrow areas in the Mississippi River (B2, DDDD, BBBB). The final selection of borrow areas will be complete following additional geotechnical investigations to confirm sand content in each of the Mississippi River borrow source. The B2 borrow area is located in the Mississippi River between River Miles (RM) 12.2 and 17.1 and shares a boundary with the adjacent Boothville Anchorage. The width varies from 500 to 600 ft. The DDDD borrow area (also called the Quad-Delta or Venice borrow area) is an approximately 3.8-mile long section of the Mississippi River between RM 7.5 and RM 11.3. The width varies from 750 to 1450 ft. The BBBB borrow area (also called the Quad-Bravo or Pilottown borrow area) is an approximately 5.7-mile long section of the Mississippi River between RM 0.9 and RM 6.6. The BBBB borrow area varies between 750 and 1700 ft wide. Water depths in the riverine borrow areas range from approximately 5 to 60 feet.

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.

The center of the project location is approximately 30 miles from the marine environment in the southeast corner of the Barataria Basin estuary (Figure 1).

c. 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 city of Venice is adjacent to marsh and ridge creation areas. Pipelines and related infrastructure reside between borrow sources and within marsh and ridge creation areas.

d. 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.

Not Applicable. No extensive beds of seagrasses and other marine vegetation have been identified in the project areas.

e. 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

f. 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

g. Uplands

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

Less than 2 acres of ridge exist above a 3.0' NAVDD within the marsh and ridge creation areas. The lower slopes of the ridges are vegetated with emergent wetland grasses. The upper slopes of some ridges contain scattered small trees and shrubs (e.g., wax myrtle, marsh elder, saltbush, etc.) and grasses and forbs (e.g., wiregrass, jointgrass, seaside goldenrod, etc.) typical of coastal dune grassland/shrub thicket habitats.

h. 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

West Indian Manatee (*Trichechus manatus*)
Bottlenose dolphin (*Tursiops truncatus*)

i. Soils and Sediments

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

The proposed marsh creation areas consist mostly of naturally consolidated silts and clays, such as Clovelly muck, Balize and Larose soils. Slopes are generally below 1% throughout the project area. The riverine borrow area substrates are

silty sands consisting of 25% to >92% sand. The offshore borrow area substrates are silty clays with 0% to 50% sand.

j. Land Use

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

Land has historically been utilized for Oil and Gas exploration and collection. Commercial and recreational fishing activities also occur in the area.

k. Essential Fish Habitat

If applicable. Describe any designated Essential Fish Habitat within the project area

The Gulf of Mexico Fishery Management Council delineated Essential Fish Habitat (EFH) for federally managed species in coastal Louisiana. The Project Site is within Eco-Region 4, and contains a variety of estuarine habitat types designated as EFH including: open water, emergent saline and brackish marsh, submerged aquatic grass beds, oyster reef, sand/shell bottom, and mud/soft bottom. The National Marine Fishery Service (NMFS) also manages highly migratory species (e.g., sharks) for which EFH is identified by geographical area rather than habitat type.

Within the Spanish Pass project area, EFH has been designated for 19 species, including shrimp, fish, and sharks. The following table lists the federally managed species found within the Spanish Pass Project Area. No Habitat Areas of Particular Concern (HAPC) or EFH Areas Protected from Fishing (EFHA) were identified within the Project Area.

Table 1. Federally Managed Species in the Spanish Pass Project Area

Common Name	Scientific Name
FISH	
Gray (mangrove) snapper	*Lutjanus griseus*
Lane snapper	*Lutjanus synagris*
Red snapper	*Lutjanus campechanus*
Red drum	*Sciaenops ocellatus*
Cobia	*Rachycentron canadum*
King mackerel	*Scomberomorus cavalla*
Gray triggerfish	*Balistes capriscus*
Greater amberjack	*Seriola dumerili*
Almaco jack	*Seriola rivoliana*
SHRIMP	
Brown shrimp	*Farfantepenaeus aztecus*
White shrimp	*Litopenaeus setiferus*
SHARKS	
Atlantic sharpnose shark	*Rhizoprionodon terraenovae*
Blacktip shark	*Carcharhinus limbatus*
Blacknose shark	*Carcharhinus acronotus*
Bull shark	*Carcharhinus leucas*

Finetooth shark	*Carcharhinus isodon*
Scalloped hammerhead shark	*Sphyrna lewini*
Silky shark	*Carcharhinus falciformis*
Spinner shark	*Carcharhinus brevipinna*

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 is part of the restoration strategy for what is historically known as Spanish Pass and is a part of the Louisiana State Coastal Master Plan. The proposed restoration areas and borrow areas are shown in Figure 1. Specific goals of the project are:

1. Create/nourish approximately 1,551 acres of brackish marsh
2. Create 137 acres of marsh ridge

Depending on the borrow source and placement location, constructed marsh elevations may vary between a maximum of +3.3’ and a minimum of +1.6’ NAVD88. Any ridge feature will be constructed to an +5.0’ elevation. NAVD88. Construction will likely be accomplished through cutterhead and bucket dredges, accompanied by marsh buggies and bulldozers to shape containment dikes, ridges, and relocate fill. Fill material will be transported to fill areas via conveyance pipelines.

Within the project area, land bridges would be created to enable access to the MCAs. Elevation of the land bridges would be at least 2 feet above the mean high water level to allow construction access during all tidal cycles and minimize sediment runoff. The exact location and dimensions of the land bridges would be determined during construction.

Restoration of marsh and ridge habitats would result in long-term beneficial impacts to coastal substrate stability, coastal habitats, and the various fish and wildlife species that inhabit the project area, including protected species. The project would also result in beneficial impacts to visual resources, tourism and recreation, and land and marine management.

Implementation of the project would cause short-term, adverse impacts associated with dredging and fill placement. Short-term adverse impacts include construction disturbances such as minor air quality and noise impacts, and minor water quality effects such as increased localized turbidity. Aquatic and terrestrial wildlife may

be temporarily disturbed during construction activities. Short-term impacts may also include sand transport and overflow adjacent to Venice, LA. Adverse impacts would generally be minor and restricted to the period of construction. Best management practices would be adopted to mitigate construction-related impacts.

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

Construction will likely take two years. Major components of construction include mobilization, pre-construction surveys, containment dike construction, and transport of marsh and ridge fill from borrow areas. Construction is anticipated to begin in 2020. Specific duration of construction phases will be discussed later in the project.

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☒
Will fishing 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).

Not Applicable

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"?* http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/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

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.)*

Not Applicable

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.

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.*

Not Applicable.

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.*

Several types of equipment will be utilized during construction. Equipment typically used during marsh creation projects includes cutterhead dredges, marsh buggy excavators, and barge-mounted draglines. Given that the Mississippi River borrow areas contain sandy material, bulldozers and front-end loaders may also be used. This equipment will be used to dredge the material, construct containment, move and shape fill material, and move the dredge pipe. Cutterhead dredges vary in size, with the largest cutterhead dredges being upwards of 300 ft long and 70 ft wide. They may also be equipped with a spud barge, which can add an additional 250 ft to the overall dredge equipment length. Max dredge depth in the river will be approximately -65.0' NACD88.

Barge mounted drag lines used in this type of application can range from 100 to 150 ft in length and 40 to 60 ft in width. Draft of barge-mounted drag lines varies but 4-7 ft can typically be expected. The contractor may elect to transport dredge pipe to the site using a pipe barge. The contractor may also elect to bring a quarters barge to the site. Both of these barges will have similar size and draft to a barge mounted drag-line dredge. The project will require approximately 12.2 million cubic yards (MCY) of in-place material to be relocated from borrow areas to the marsh and ridge fill area via cutterhead dredges. Booster pumps will be utilized as needed. The borrow areas range from approximately 2 to 10 miles from the Spanish Pass project area.

Typical dimensions of a marsh buggy excavator include a length of 35 ft and a width of 20 ft. Marsh buggies typically draft 5 ft. Typically, D5 or D6 sized bulldozers will be used on these types of projects.

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.)*

Not Applicable.

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

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

G. NOAA Species & 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 G. and proceed to Section H.

☐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.

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.

Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

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	No Effect	Species does not occur within action area
Kemp's Ridley Sea Turtle		Marine	May Affect, Not Likely to	Choose an item.

(E)			Adversely Affect	
Loggerhead Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Hawksbill Sea Turtle (E)		Marine	No Effect	Choose an item.
Leatherback Sea Turtle (E)		Marine	No Effect	Choose an item.
Green Sea Turtle (T)		Choose an item.	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.

The Gulf sturgeon is listed as being potentially present in the project area by the USFWS Information for Planning and Consultation (IPaC) database. USFWS also maps the project area as being within the historic range of the Gulf sturgeon. However, a no effect determination was made because the project area falls outside of the known, current range of the Gulf sturgeon, which exists to the east of the Birdsfoot Mississippi River Delta from the Gulf Coast of Florida in the east to Lake Borgne and Lake Pontchartrain in the west.

Three listed sea turtles, Kemp's ridley, loggerhead and green were also identified by NOAA as being potentially present in the project area. These species are not known to nest on the existing ridges, likely due to the lack of suitable nesting habitat. However, these sea turtles may be present in the shallow open waters of the project area, particularly the marine dredge areas. Therefore, the determination is may affect, not likely to adversely affect sea turtles in these marine environments. Of the three sea turtle species, the loggerhead is the most common sea turtle in Louisiana's coastal waters, with the deep-diving, pelagic leatherback being the least likely to be present. Leatherback and hawksbill species are not present in the project area; therefore this project will have no effect on these species.

No designated critical habitat for any listed species under NOAA's jurisdiction is located within the project area.

H. USFWS Species & 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 G. and proceed to Section H.

☐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 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.

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.

Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

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		Choose an item.	May Affect, Not Likely to Adversely Affect	Select Most Appropriate
Pallid Sturgeon		Choose an item.	May Affect, Not Likely to Adversely Affect	Select Most Appropriate
Red Knot		Choose an item.	No Effect	No suitable habitat in action area
Piping Plover		Choose an item.	No Effect	No suitable habitat in action area
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.

The red knot and piping plover, while listed as being potentially present in the project area by the USFWS IPaC database, would not be affected by the proposed project because the beach/dune habitats they prefer for foraging, overwintering (red knot), and nesting (piping plover) is not present in the project area. The pallid sturgeon may occur in the proposed Mississippi River borrow areas, and West Indian manatees may occur transiently in shallow marine/estuarine waters as they move through coastal waters in the summer in search of preferred seagrass beds. While the presence of both of these species in the project area is considered unlikely, the proposed project may affect, but is not likely to adversely affect the pallid sturgeon and West Indian manatee.

I. Effects of the proposed project to the species 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 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.

West Indian Manatee:

Direct Impacts: Potential adverse direct effects to the West Indian manatee include minor noise impacts, entrapment, and collisions with watercraft and dredge equipment. The United States Fish and Wildlife Service (USFWS) Standard Manatee In-Water Conditions practices will be used throughout the duration of the project.

Impact avoidance measures for the Spanish Pass Project may include:

- All contract personnel associated with the project should be informed of the potential presence of manatees and the need to avoid collisions with manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- All construction personnel are responsible for observing water-related activities for the presence of manatee(s).
- Temporary signs should be posted prior to and during all construction/dredging activities to remind personnel to be observant for manatees during active construction/dredging operations or within vessel movement zones (i.e., work area), and at least one sign should be placed where it is visible to the vessel operator.
- Siltation barriers, if used, should be made of material in which manatees could not become entangled, and should be properly secured and monitored.
- If a manatee is sighted within 100 yards of the active work zone, special operating conditions should be implemented, including: no operation of moving equipment within 50 feet of a manatee; all vessels shall operate at no wake/idle speeds within 100 yards of the work area; and siltation barriers, if used, should be re-secured and monitored. Once the manatee has left the 100-yard buffer zone around the work area on its own accord, special operating conditions are no longer necessary, but careful observations would be resumed.
- Any manatee sighting should be immediately reported to the USFWS and the Louisiana Department of Wildlife and Fisheries (LDWF) Natural Heritage Program.
- To prevent entrapment of manatee inside of dredged material receiving areas that have dikes or other retention features that enclose an area of open water, the area would be inspected for the presence of manatee(s): 1) before complete closure of the confining features; and 2) again before material is discharged in to the receiving area. Any manatee that is sighted should be allowed to leave the area before work resumes.

Adherence to the protection measures would help ensure that any manatee that wanders into the project area would not be adversely affected. The disturbance to the manatee would only be temporary during project construction and would result in temporary displacement. The manatees would likely move to another area for foraging or resting purposes, and there would be other available areas to which the animals may relocate.

Indirect Impacts: No potential adverse indirect impacts on the West Indian manatee are anticipated. Positive impacts would be the creation of marsh/wetland habitat.

Cumulative Impacts: No potential adverse cumulative impacts on the West Indian manatee are anticipated if the avoidance measures are implemented. Positive cumulative impacts would be the creation of additional marsh/wetland habitat combined with other restoration projects in the vicinity.

Pallid Sturgeon (*Scaphirhynchus albus*):

Direct Impacts: Pallid sturgeon are unlikely to be present in the Mississippi River borrow areas but, if present, could be impacted by dredging activities. If present in the riverine borrow areas during dredging, there would be short-term, minor, adverse impacts to this species due to construction disturbances and disturbance of foraging habitat. Pallid sturgeon are highly mobile; individuals disturbed by construction activities would likely flee to undisturbed suitable habitats nearby.

Impact avoidance measures for the Spanish Pass Project may include:

- Operate dredge equipment in a manner to avoid risks to pallid sturgeon (e.g., disengage pumps when the cutter head is not in the substrate; avoid pumping water from the bottom of the water column). Implement NMFS Sea Turtle and Smalltooth Construction Conditions (revised March 23, 2006) and NMFS Measures for Reducing Entrapment Risk to Protected Species (revised May 22, 2012), as they are protective of pallid sturgeon as well.

Indirect Impacts: No potential adverse, indirect impacts on pallid Sturgeon are anticipated.

Cumulative Impacts: No potential adverse, cumulative impacts on pallid Sturgeon are anticipated if the avoidance measures are implemented.

Kemp's Ridley (*Lepidochelys kempii*), Hawksbill (*Eretmochelys imbricata*), Leatherback (*Dermochelys coriacea*), Green (*Chelonia mydas*) and Loggerhead (*Caretta caretta*) Sea Turtles:

Direct Impacts: Loggerhead sea turtles are the most common in Louisiana's coastal waters, but kemp's ridley and green sea turtle species may potentially be present. If sea turtles are present in the borrow area or tidal marsh during dredging or fill placement, there would be short-term, minor, adverse impacts on sea turtles due to construction disturbances. However, sea turtles would likely avoid or move away from construction activities. Leatherback and hawksbill are not present in the project area, therefore this project will have no effect on these species.

Impact avoidance measures for the Spanish Pass Project may include:

- Implement the following in-water work guidelines: NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions (revised March 23, 2006), NMFS's Measures for Reducing Entrapment Risk to Protected Species (revised May 22, 2012) and NMFS's Vessel Strike Avoidance Measures and Reporting for Mariners (revised February 2008).

Indirect Impacts: No potential adverse indirect impacts on sea turtles are anticipated.

Cumulative Impacts: No potential adverse cumulative impacts on sea turtles are anticipated if avoidance measures are implemented.

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 (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.*

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

☒	**USFWS Standard Manatee In Water Conditions**
☒	**NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions**[1]
☒	**NMFS Measures for Reducing the Entrapment Risk to Protected Species**[1]
☒	**NFMS Vessel Strike Avoidance Measures and Reporting for Mariners**[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)

See attached Additional BMP's or Conservation Measures

[1] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

- We recommend the following to minimize potential impacts to pallid sturgeon associated with dredging: (1) the cutterhead should remain completely buried in the bottom material during dredging operations. If pumping water through the cutterhead is necessary to dislodge material or to clean the pumps or cutterhead, etc., the pumping rate should be reduced to the lowest rate possible until the cutterhead is at mid-depth, where the pumping rate can then be increase; (2) during dredging, the pumping rates should be reduced to the slowest speed feasible while the cutterhead is descending to the channel bottom.

J. 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 are present in the Spanish Pass 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.*

See attached Additional BMPs or Conservation Measures

K. 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 and living shorelines, etc.*
☒	☐	*j) Conducting driving of sheet piles or pilings*
☒	☐	*k) Use of floating pipeline during dredging activities*

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

The Project involves the use of a cutterhead dredge to dredge material from identified borrow areas, building containment dikes, and using conveyance pipes. Please see Section F for more details on dredging 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[2]
☒	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions[3]
☒	NMFS Measures for Reducing the Entrapment Risk to Protected Species[3]
☒	NFMS Vessel Strike Avoidance Measures and Reporting for Mariners[3]
☐	Reproducing and posting outreach signs: Dolphin Friendly Fishing Tips sign, Don't Feed Wild Dolphins sign[3]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals.
See attached Additional BMPs or Conservation Measures

In addition to the frequently recommended BMPs checked above, please follow these additional BMPs to reduce any potential impacts to bottlenose dolphins related to dredging activities:

- **Monitor/observe for dolphins during dredging activities following the same protocols used for manatees under the ESA.**
- **If dolphins come within 50 yards of active dredging and are not just traveling through the area (e.g., remaining within the 50 yards to forage), dredge operations should not start; or if dredging has already begun, it should cease until the dolphins are beyond the 50-yards and are not likely to re-enter (i.e., are on a dedicated path away from the 50-yard area).**
- **Avoid trans-versing waterbodies with any floating pipelines from the dredge activities, as these could pose as a perceived barrier to dolphins.**

[2] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/outreach_and_education/index.html
[3] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

L. 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

M. 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**

N. 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.

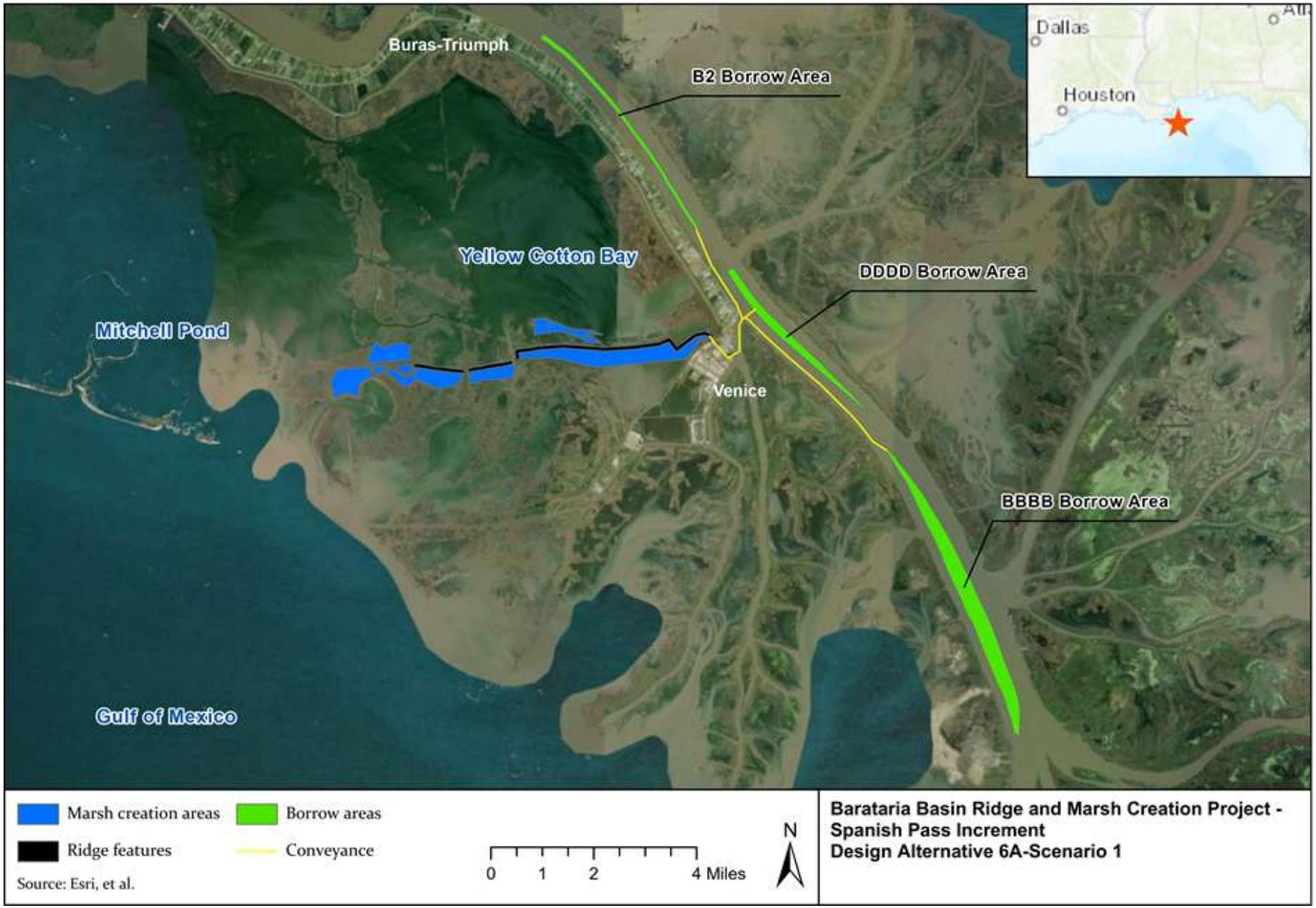
Questions may be directed to:

NMFS ESA § 7 Consultation

Christy Fellas, National Oceanic Atmospheric Administration
Email: Christina.Fellas@noaa.gov
Phone: 727-551-5714

USFWS ESA § 7 Consultation

Erin Chandler, Department of the Interior
Email: Erin_Chandler@fws.gov
Phone: 470-361-3153


Buras-Triumph
B2 Borrow Area
Dallas
Houston
Yellow Cotton Bay
DDDD Borrow Area
Mitchell Pond
Venice
BBBB Borrow Area
Gulf of Mexico
Marsh creation areas
Borrow areas
Ridge features
Conveyance
Source: Esri, et al.
0 1 2 4 Miles
N
Barataria Basin Ridge and Marsh Creation Project - Spanish Pass Increment
Design Alternative 6A-Scenario 1

Barataria Basin, Louisiana
Hydrocoast Map - Salinity
(December 31, 2018 - January 06, 2019)

91°0'0"W | 90°30'0"W | 90°0'0"W | 89°30'0"W | 89°0'0"W

30°0'0"N | 29°30'0"N | 29°0'0"N

NA cfs
446 cfs
1,049 cfs
472 cfs
NA cfs
0 cfs
3,603 cfs
80,251 cfs
46,065 cfs
290,687 cfs

0.5 ppt

12-31-2018 to 01-06-2019
Average Weekly Discharge

Rivers and Structures	cfs	Trend
Bayou Lafourche, Donaldsonville	NA	-
Bayou Lafourche, SW Donaldsonville	446	↑
Bayou Lafourche, Thibodaux	472	↓
Davis Pond Diversion, Near Boutte	1,049	↓
GIWW, West of Bayou Lafourche	3,603	↑
Naomi Diversion Canal, Siphon	NA	-
Point a la Hache, Siphon	0	-
Grand & Tiger Pass	80,251	↑
West Bay	46,065	↑
Southwest Pass	290,687	↑

Legend

Salinity Contours (ppt)

- 0.0 - 5.00
- 5.00 - 10.00
- 10.00 - 15.00
- 15.00 - 20.00
- 20.00 - 25.00
- 25.00 - 30.00
- 30.00 - >35.00

Salinity Stations (ppt)

- 0.0 - 5.00
- 5.00 - 10.00
- 10.00 - 15.00
- 15.00 - 20.00
- 20.00 - 25.00
- 25.00 - 30.00
- 30.00 - 35.00

Other Data

- Salinity Leak Points
- River Mile Markers
- Discharge Area
- Rivers
- Salinity Barriers
- Basin Boundary

MODIS Imagery: 01/06/2019

N W E S

0 4.75 9.5 19
Miles

0 12.5 25 50
Kilometers

Information on the Lake Pontchartrain Basin Foundation – Hydrocoast Program can be found at: http://saveourlake.org/lpbf-programs/coastal/hydrocoast-maps/barataria-basin/, or by calling 504-836-2215

To receive Hydrocoast map products by email, subscribe at: http://saveourlake.org/lpbf-programs/coastal/hydrocoast-maps/

Funding provided by the Restore the Mississippi River Delta Campaign

Suggested map citation:
Connor, P.F., J. Lopez, T. Henkel, E. Hillmann, K. Butcher, D. Baker, A. Songy, K. De Santiago, and E. Krolopp, Hydrocoast Salinity Map: December 31, 2018 - January 06, 2019 [map], 1:550,000, Lake Pontchartrain Basin Foundation, N.O., La., 2018. <http://saveourlake.org/lpbf-programs/coastal/hydrocoast-maps/barataria-basin/barataria-basin-hydrocoast-map-archives/>

LPBF SAVE OUR LAKE SAVE OUR COAST

Additional BMP's or Conservation Measures

Birds:

Bald Eagle

- If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, have all activities 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. Maintain this avoidance distance from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).
- If a similar activity (such as driving on a roadway) is closer than 660 feet to a nest, maintain a distance buffer as close to the nest as the existing tolerated activity. 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 maintain a distance buffer as close to the nest as the existing tolerated activity.
- In some instances activities conducted within 660 feet of a nest may result in disturbance, particularly for the eagles occupying the Mississippi barrier islands. If an activity appears to cause initial disturbance, stop the activity and move all individuals and equipment away until the eagles are no longer displaying disturbance behaviors. Contact the USFWS's Migratory Bird Permit Office to determine how to avoid impacts or if a permit may be needed.

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.
- Conservation areas may already be marked to protect bird nesting areas. Stay out of existing marked areas.

Piping Plover and Red Knot

- Provide all individuals working on a project with information in support of general awareness of piping plover and red knot presence and means to avoid birds and their critical or otherwise important habitats.

Mammals:

Bottlenose Dolphin

- For projects with any in-water construction activities, dredging, or wetland/barrier island creation and nourishment, follow the most current version of the NMFS Southeast Region's *Measures for Reducing Entrapment Risk to Protected Species.*

Manatee

- Follow the most recent version of the *Standard Manatee Conditions*.

Tortoises/Turtles:

Sea Turtle

- In Water Implement the following guidelines: NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* (revised March 23, 2006), NMFS's *Measures for Reducing Entrapment Risk to Protected Species* (revised May 22, 2012) and NMFS's *Vessel Strike Avoidance Measures and Reporting for Mariners* (revised February 2008).

Invasive Species:

- 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, clean the equipment, vehicles, or personal gear until they are free from mud, soil, seeds, and vegetation.
- Inspect the equipment, vehicles, and personal gear each time they are being prepared to go to a site or prior to transferring between sites to avoid spreading exotic, nuisance species.
- Inspect and certify propagated or transplanted vegetation as pest and disease free prior to planting in restoration project areas.

General Construction Measures:

Protected Species

- Provide all individuals working on a project with information in support of general awareness of and means to avoid impacts to protected species and their habitats present at the specific project site.

Maintenance and Conduct

- 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.

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.

- Design construction equipment corridors to avoid and minimize impacts to wetlands and other aquatic resources to the maximum extent practicable.
- 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.

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.
- 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.
- Apply herbicide in accordance with the direction and guidance provided on the appropriate U.S. Environmental Protection Agency (EPA) labels and state statutes during land-based activities.
- Evaluate methods prior to dredging to reduce the potential for impacts from turbidity or tarballs. 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.
- 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.
- Make all efforts to reduce the peak sound level and exposure levels of fish to reduce the potential impact of sound on fish present in the project areas.

Version: August 21, 2018

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: Erin Chandler at erin_chandler@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): Louisiana Trustee Implementation Group (LATIG)

Contact Name: Vida Carver Phone: (225) 342-2799 Email: Vida.Carver@LA.GOV

Project Name: Lake Borgne Marsh Creation Project – Increment One (PO-0180)

DIVER ID# 82 TIG: Louisiana TIG Restoration Plan # 1

B. Project Phase and Supporting Documentation

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

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

If "Engineering & Design" was selected, please describe the level of design that has been completed and is available for review:

30% design level has been completed and is available for review

Supporting Documentation

Please attach any maps, aerial photographs, or design drawings that will support the information in this BE form. 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
- Map of project area with elements proposed (polygons showing proposed construction elements)
- Map of action area with critical habitat units or sensitive habitats overlayed

C. Project Location

I. State and County/Parish of action area

St. Bernard Parish, Louisiana

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]

29.866389° N, 89.616944° W NAD83

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☐

* The RP/EID is currently being drafted.

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: COE Permit Number has not been issued

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.

Note: The Joint Permit Application is currently under Consistency Review by the Coastal Management Division for the PO-180 NRDA Lake Borgne Marsh Creation Project. The Consistency Number is: C20190005 and the Reviewer is Mr. Jeff Harris. The application was received on 01/10/2019. A COE number has not been issued. (See Attached).

Mississippi River Gulf Outlet (MRGO) Ecosystem Restoration Final Environmental Impact Statement. 2012. New Orleans District US Army Corps of Engineers.
https://www.mvn.usace.army.mil/Portals/56/docs/environmental/MRGO/MRGOEcosystemRestorationFinalEnvironmentalImpactStatementJune2012compressed.pdf

An ESA formal consultation was completed for the USACE on the MRGO restoration project in 2012. (NMFS File: 1514-22.F.7 and Ref: F/SERI2010/04236)

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

Name of Person Completing this Form: Matthew Daigle and Caitlin Glymph
Name of Project Lead: Vida Carver
Date Form Completed: 1/14/2020
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 CH is not designated in the area, then describe any suitable habitat in the area

a. Waterbody

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 Site is located along the southwestern shoreline of Lake Borgne. Its limits extend approximately four miles from Shell Beach on the southern rim of Lake Borgne to Lena Lagoon on the east. The Project Area is bordered on the north by Lake Borgne and on the south by the Mississippi River Gulf Outlet (MRGO). The Project Area is within brackish and salt marsh habitat and has a ground elevation of 0.52 feet to 1.5 feet (CRMS Stations 4548 and 4551 and 4557). During a site reconnaissance visit in April of 2018, water depths in the open water areas ranged from 1.2’ to 3.0’, while water depths in the linear channel features ranged from 0.9’ to 2.8’. The site is tidally flooded, and several ponded areas are located throughout the marshes. Surface water drains into Lake Borgne.

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.

Navigable waterways exist throughout the Project Site. It is approximately 60 miles from the project location to the marine environment. This estimate was based off the distance of the Chandeleur barrier islands from the project site and salinity maps provided by the Lake Pontchartrain Basin Foundation (see Figure 2).

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.

Infrastructure from a former Naval Base (Shell Beach Anti-Aircraft Training Center) exist on the northeastern side of the

Project Site. Rock Jetties also exist on both the northern and southern sides of the Project Site. The ages of these structures are not known.

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 dominant submerged aquatic vegetation (SAV) observed in the proposed fill area during a 2018 site reconnaissance included: Eurasian watermilfoil (*Myriophyllum spicatum*) (invasive), horned pondweed (*Zannechelia palustris*), and widgeon grass (*Ruppia maritima*). See attached "Lake Borgne Marsh Creation Project Increment One Site Reconnaissance Report" (May 7, 2018). Other common species of estuarine sea grasses that may be present include wild celery (*Vallisneria ammericana*), southern naiad (*Najas quadalupensis*), and clasping-leaf pondweed (*Potamogeton perfoliatus*).

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.

Mangroves were not observed during the site reconnaissance. However, black mangroves are common in the Mississippi Delta and may be present in the action area.

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 habitat within the Project Site is primarily comprised of saline and brackish marsh. Some minor upland ridges and dredged material spoil banks exist. See photographs 6, 8, and 25 of the attached Site Reconnaissance Report.

g. 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

West Indian Manatee (*Trichechus manatus*)

h. Soils and Sediments

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

Soils in the Project Area consist mainly of Aquents (AD), dredged, frequently flooded soils that typically form on marsh land, Clovelly muck (CE), Fausse clay (FA), and Timbalier muck (TM). Clovelly muck is very frequently flooded, very poorly drained, and typically forms on marsh land. Fausse clay is frequently flooded and ponded, very poorly drained, and typically forms on backswamps. Timbalier muck is very frequently flooded and ponded, very poorly drained, and typically forms on tidal marshes.

i. Land Use

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

The Project Site is largely undeveloped and unaltered by human activities. Recreational fishing and hunting commonly occur within the Project Site. A small portion of the site was previously used for dredge disposal (See Figure 1).

j. Essential Fish Habitat

If applicable. Describe any designated Essential Fish Habitat within the project area

Table 1. Federally Managed Species in the Lake Borgne Project Area

Common Name	Scientific Name
REEF FISH	
gray (mangrove) snapper	*Lutjanus griseus*
lane snapper	*Lutjanus synagris*
Spanish mackerel	*Scomberomorus maculatus*
SHRIMP	
brown shrimp	*Farfantepenaeus aztecus*
white shrimp	*Litopenaeus setiferus*
SHARKS	
Atlantic sharpnose shark	*Rhizoprionodon terraenovae*
black-tipped shark	*Carcharhinus limbatus*

The Gulf of Mexico Fishery Management Council delineated Essential Fish Habitat (EFH) for federally managed species in coastal Louisiana. The Project Site is within Eco-Region 3, and contains a variety of estuarine habitat types designated as EFH including: open water, emergent saline and brackish marsh, submerged aquatic grass beds, oyster reef, sand/shell bottom, and mud/soft bottom. The National Marine Fishery Service (NMFS) also manages highly migratory species (e.g., sharks) for which EFH is identified by geographical area rather than habitat type.

bull shark	*Carcharhinus leucas*
finetooth shark	*Carcharhinus isodon*
scalloped hammerhead shark	*Sphyrna lewini*
RED DRUM	
red drum	*Scomberomorus maculatus*

Eleven species with designated EFH are likely to be within the Lake Borgne Project Area, including shrimp (two species), fish (four species), and sharks (five species). The following table lists the federally managed species found within the Lake Borgne Project Area. No Habitat Areas of Particular Concern (HAPC) or EFH Areas Protected from Fishing (EFHA) were identified within the Project Area. See attached "Lake Borgne Marsh Creation Project Increment One Task 2.2 Technical Memorandum - Known Environmental Resources" (February 1, 2018).

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 is a large-scale restoration strategy for the southwestern shoreline of Lake Borgne that will restore approximately 2,935 acres of degraded intertidal marsh habitat through strategic placement of approximately 13.0 MCY of fill material. The minimum TME established for the Project is 1.1 feet NAVD88. A constructed marsh fill elevation of +2.5 feet NAVD88 was selected based on the comparison of the optimal inundation range and settlement of hydraulically placed fill over time (See 30% design report for details).

The goal of restoring and creating marsh will be achieved by the use of a cutterhead dredge to dredge and pump sediments from Lake Borgne into the Marsh Creation Areas. The expected duration of construction is 2-3 years. Short-term effects may include minor water quality effects such as increased turbidity in the dredge and fill areas. This project is expected to facilitate growth of healthy marsh in and around the marsh creation areas (See Figure 1)

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

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☐
Will fishing 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"?* http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/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	Barge mounted excavator
2. Material type of piles used	Steel
3. Size (width) of piles/sheets	22 inches
4. Total number of piles/sheets	900
5. Number of strikes for each single pile	Sheets vibrated in place
6. Number of strikes per hour (for a single pile)	NA
7. Expected number of piles to be driven each day	30
8. Expected amount of time needed to drive each pile (minutes of driving activities)	10 min
9. Expected number of sequential days spent pile driving	30
10. Whether pile driving occurring in-water or on land	Water
11. Depth of water where piles will be driven	Varies from -3.5 to -7.0' NAVD 88

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.)*

No marinas or boat slips are included with 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.)*

No boat ramp is associated with 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.*

No shoreline armoring is planned for this project.

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.*

A cutterhead dredge will be used to dredge approximately 13 million cubic yards of gray silty clays from Lake Borgne. The borrow area will consist of 3 different maximum depths of cut: 10, 15, and 20 feet. The dredged material will be transported via submerged pipeline from Lake Borgne to the Marsh Creation Area. Cost and impact avoidance were the driving factors for selection of the Lake Borgne access routes. The project would use three, 100-foot-wide access routes (Figure 1). Access route alignments were placed to avoid all historical, cultural, and oyster resources. Potential use of Doullut's Canal as an interior access point would bring the pipeline closer to the center of the MCAs and minimize impacts to the rock breakwater and existing marsh.

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.)*

Not applicable to the proposed project.

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 the proposed project.

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 the proposed project.

G. NOAA Species & 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 G. and proceed to Section H.

☐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.

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.

Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

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	Select Most Appropriate
Loggerhead Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect	Select Most Appropriate
Kemp's Ridley Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect	Select Most Appropriate

Green Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Hawksbill Sea Turtle (E)		Choose an item.	No Effect	Select Most Appropriate
Leatherback Sea Turtle (E)			No Effect	Choose an item.
Gulf Sturgeon CH	Lake Borgne (8)	Choose an item.	May Affect, Likely to Adversely Affect	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.

Note: Potential impacts to Gulf sturgeon (Acipenser oxyrinchus desotoi) from proposed dredging operations were discussed in the Environmental Assessment developed by the United States Fish and Wildlife Service (USFWS) for the Bayou Bonfouca Marsh Creation Project as well as CB&I's Golden Triangle Data Literature Review and Data Gap Analysis. It appears that potential impacts to Gulf sturgeon will be dependent upon the nature of the substrate targeted in project borrow areas.

Determination Definitions

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.

Critical Habitat No Destruction = When the proposed action will not diminish the value of critical habitat.

H. USFWS Species & 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 G. and proceed to Section H.

☐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 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.

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.

Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

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	Lake Borgne		May Affect, Not Likely to Adversely Affect	Select Most Appropriate
		Choose an item.	Select Most Appropriate	Select Most Appropriate
		Choose an item.	Select Most Appropriate	Select Most Appropriate
			Select Most Appropriate	Select Most Appropriate
		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.

Note: Impact avoidance measures for manatees were identified in USACE's Mississippi River Gulf Outlet (MRGO) Ecosystem Restoration Plan Final Environmental Impact Statement (2012) as well as the Bayou Bonfouca Marsh Creation Environmental Assessment (Walter and Dubois 2015). The avoidance mechanisms are included in the attached "Lake Borgne Marsh Creation Project Increment One Task 2.2 Technical Memorandum - Known Environmental Resources" (February 1, 2018)

Determination Definitions

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.

Critical Habitat No Destruction = When the proposed action will not diminish the value of critical habitat.

I. Effects of the proposed project to the species 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 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.

West Indian Manatee:

Direct Impacts: Potential adverse direct effects to the West Indian Manatee include minor noise impacts, entrapment, and collisions with watercraft and dredge equipment. USFWS Standard Manatee In-Water Conditions practices will be utilized throughout the duration of the project.

Impact avoidance measures for the LBMC Project may include:

- All contract personnel associated with the project should be informed of the potential presence of manatees and the need to avoid collisions with manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- All construction personnel are responsible for observing water-related activities for the presence of manatee(s).
- Temporary signs should be posted prior to and during all construction/dredging activities to remind personnel to be observant for manatees during active construction/dredging operations or within vessel movement zones (i.e., work area), and at least one sign should be placed where it is visible to the vessel operator.
- Siltation barriers, if used, should be made of material in which manatees could not become entangled, and should be properly secured and monitored.
- If a manatee is sighted within 100 yards of the active work zone, special operating conditions should be implemented, including: no operation of moving equipment within 50 feet of a manatee; all vessels shall operate at no wake/idle speeds within 100 yards of the work area; and siltation barriers, if used, should be re-secured and monitored. Once the manatee has left the 100-yard buffer zone around the work area on its own accord, special operating conditions are no longer necessary, but careful observations would be resumed.
- Any manatee sighting should be immediately reported to the USFWS and the Louisiana Department of Wildlife and Fisheries (LDWF) Natural Heritage Program.
- To prevent entrapment of manatee inside of dredged material receiving areas that have dikes or other retention features that enclose an area of open water, the area would be inspected for the presence of manatee(s): 1) before complete closure of the confining features; and 2) again before material is discharged in to the receiving area. Any manatee that is sighted should be allowed to leave the area before work resumes.

Adherence to the protection measures would help ensure that any manatee that wanders into the project area would not be adversely affected. The disturbance to the manatee would only be temporary during project construction and would

result in temporary displacement. The manatees would likely move to another area for foraging or resting purposes and there would be other available areas to which the animals may relocate.

Indirect Impacts: No potential adverse indirect impacts on the West Indian Manatee are anticipated. Positive impacts would be the creation of marsh habitat.
Cumulative Impacts: No potential adverse cumulative impacts on the West Indian Manatee are anticipated if the avoidance measures are implemented. Positive cumulative impacts would be the creation of additional marsh habitat combined with other restoration projects in the vicinity.

Gulf Sturgeon Critical Habitat:
Direct Impacts: The Lake Borgne project area falls within designated critical habitat for the Gulf sturgeon. Dredging may have adverse impacts on areas designated as critical habitat for Gulf sturgeon under the ESA. Dredging activities may have several impacts on Gulf sturgeon, including affecting dissolved oxygen levels, disrupting benthic prey sources, noise disturbances, resuspension of contaminants, and impacts to spawning and feeding habitats due to turbidity and siltation.

Gulf sturgeon prefer to forage in sediments with high sand content (Fox et al. 2002; Ross et al. 2009). A surface sediment evaluation of the borrow area at 241 locations was conducted to determine composition and potential suitability for Gulf sturgeon (CPRA 2018b). The substrate in the borrow area is predominantly silty clay with shell fragments, and none of the 241 borrow area substrate samples exceeded 75 percent sand, which meets the USFWS recommendation of avoiding sediment with sand content greater than 75 percent (CPRA 2018a). This indicates that the proposed borrow area does not contain preferred foraging habitat for the Gulf sturgeon (CPRA 2018b). However, Gulf sturgeon may still be present in the area and may be using parts of the action area for foraging despite the lower quality habitat due to low sand contents. Accordingly, dredging of the Lake Borgne borrow areas could potentially affect Gulf Sturgeon.

Most impacts would be associated with the period of dredging and thus represent short-term, moderate, adverse impacts. Depending on contaminants present, resuspension of contaminants may result in short- or long-term, moderate, adverse impacts to Gulf sturgeon as contaminants can cause various physical, behavioral, and physiological impacts to Gulf sturgeon.

Impacts to Gulf Sturgeon critical habitat will be addressed during formal consultation from NMFS to address adverse effects from dredging in the borrow areas due to this and other projects that might use the Lake Borgne borrow source.

Impact avoidance measures for the LBMC Project may include:

- Do not dredge in spawning areas when Gulf sturgeon are likely to be present.
- Operate dredge equipment in a manner to avoid risks to Gulf sturgeon (e.g., disengage pumps when the cutter head is not in the substrate; avoid pumping water from the bottom of the water column). Implement NMFS's Sea Turtle and Smalltooth Construction Conditions (revised March 23, 2006) and NMFS's Measures for Reducing Entrapment Risk to Protected Species (revised May 22, 2012), as they are protective of Gulf sturgeon as well.

Indirect Impacts: No potential adverse indirect impacts on Gulf Sturgeon are anticipated.
Cumulative Impacts: Impacts to Gulf Sturgeon will be addressed during formal consultation from NMFS to address adverse effects from dredging in the borrow areas due to this and other projects that might use the Lake Borgne borrow source.

Sea Turtles:

Direct Impacts: If sea turtles are present in the borrow area or tidal marsh during dredging or fill placement, there would be short-term, minor, adverse impacts on sea turtles due to construction disturbances. However, sea turtles would likely avoid or move away from construction activities.

Impact avoidance measures for the LBMC Project may include:

- In Water Implement the following guidelines: NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* (revised March 23, 2006), NMFS's *Measures for Reducing Entrapment Risk to Protected Species* (revised May 22, 2012) and NMFS's *Vessel Strike Avoidance Measures and Reporting for Mariners* (revised February 2008).

Indirect Impacts: No potential adverse indirect impacts on sea turtles are anticipated.
Cumulative Impacts: No potential adverse cumulative impacts on sea turtles are anticipated if avoidance measures are implemented.

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

☒	**USFWS Standard Manatee In Water Conditions**
☒	**NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions**[1]
☒	**NMFS Measures for Reducing the Entrapment Risk to Protected Species**[1]
☒	**NFMS Vessel Strike Avoidance Measures and Reporting for Mariners**[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)

See attached Additional BMPs or Conservation Measures.

In addition to the frequently recommended BMPs checked above, please follow these additional BMPs to reduce any potential impacts to bottlenose dolphins related to dredging activities:

- Monitor/observe for dolphins during dredging activities following the same protocols used for manatees under the ESA.
- If dolphins come within 50 yards of active dredging and are not just traveling through the area (e.g., remaining within the 50 yards to forage), dredge operations should not start; or if dredging has already begun, it should cease until the dolphins are beyond the 50-yards and are not likely to re-enter (i.e., are on a dedicated path away from the 50-yard area).
- Avoid trans-versing waterbodies with any floating pipelines from the dredge activities, as these could pose as a perceived barrier to dolphins.

J. Effects to critical habitats and actions to reduce impacts

[1] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

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.

Lake Borgne, including the borrow area, is designated as critical habitat for the Gulf sturgeon. Therefore, the dredging of the borrow area could be considered an impact to critical habitat. Impacts to Gulf Sturgeon will be addressed during formal consultation from NMFS to address adverse effects from dredging in the borrow areas due to this and other projects that might use the Lake Borgne borrow source.

There will be a net positive impact on overall marsh habitat associated with the proposed project. Some shallow water areas will be filled to create marsh but the deeper channels accessible to Gulf sturgeon will not be filled.

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.*

See attached Additional BMPs or Conservation Measures

K. 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 and living shorelines, etc.*
☒	☐	*j) Conducting driving of sheet piles or pilings*
☐	☒	*k) Use of floating pipeline during dredging activities*

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

The Project involves the use of a cutterhead dredge to dredge material from Lake Borgne. Please see Section F for more details on dredging 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[2]
☒	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions[3]
☒	NMFS Measures for Reducing the Entrapment Risk to Protected Species[3]
☒	NFMS Vessel Strike Avoidance Measures and Reporting for Mariners[3]
☐	Reproducing and posting outreach signs: Dolphin Friendly Fishing Tips sign, Don't Feed Wild Dolphins sign[3]

If not listed above, please describe any additional BMPs or conservation measures that may be be implemented for marine mammals.
See attached Additional BMPs or Conservation Measures

L. 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.

[2] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/outreach_and_education/index.html
[3] Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

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

M. 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**

N. 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
Erin Chandler, Department of the Interior
Email: Erin_Chandler@fws.gov
Phone: 470-361-3153

Literature Cited

Coastal Protection and Restoration Authority (CPRA). 2018a. *Lake Borgne Marsh Creation Project Increment One (PO-0180) Alternatives Analysis Report*. September.

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