

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): DOI

Contact Name: Todd Lanning Phone: 970-225-3523 Email: todd_lanning@nps.gov

Project Name: Shoreline Protection at Jean Lafitte National Historical Park and Preserve

DIVER ID# 79 TIG: Louisiana TIG Restoration Plan # LA Restoration Plan 1.3 (Public draft Oct 2019)

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:

[Click here to enter text.](#)

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 overlaid

- Attachment #1: Excerpt from JPA drawings attached to end of BE Form
- Attachment #2: Summer 2018 SAV sampling map

C. Project Location

I. State and County/Parish of action area
Louisiana, Jefferson Parish

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>]
Latitude: 29.829361°N Longitude: 90.174861°W

D. Existing Compliance Documentation

NEPA Documents

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

YES NO

Examples:

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

Permits

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

YES NO Permit Number and Type: See below

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: See below

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.

- Louisiana Trustee Implementation Group Final Restoration Plan #1: Restoration of Wetlands, Coastal, and Nearshore Habitats; Habitat Projects on Federally Managed Lands; and Birds, January 2017 (E&D)
- Louisiana Trustee Implementation Group Draft Restoration Plan #1.3: Rabbit Island Restoration Project and Jean Lafitte Shoreline Protection Project
- Geotechnical Borings, USACE authorized under Category I of the Programmatic General Permit
- JPA permit application No. 25411, Submitted 6/25/19 (Construction)

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

Name of Person Completing this Form: Todd Lanning and Dusty Pate

Name of Project Lead: Todd Lanning

Date Form Completed: August 21, 2019

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

Located 15 miles south of New Orleans, Louisiana, the Barataria Preserve Unit of Jean Lafitte National Historical Park and Preserve (the preserve) protects about 26,000 acres of coastal wetlands in the Mississippi River delta. These wetlands are among the most biologically productive ecosystems in North America, and they sustain some of the richest fisheries and most abundant waterfowl populations on the planet. The preserve contains a remnant bottomland hardwood ridge along a former distributary of the Mississippi River, cypress/tupelo swamps, and large expanses of fresh and intermediate marshes. The preserve area was most recently shaped by the St. Bernard delta formation, and the natural levee ridges deposited by that delta lobe's major western distributary are its highest terrain. This narrow "upland" zone lies 4 to 5 feet above sea level, yet most of the preserve landscape is at less than 2 feet of elevation. The estuarine Lakes Salvador and Cataouatche are located along much of the preserve's western boundary, and wave action and tides erode the edges of the predominantly freshwater wetlands there. Tropical storms often push salty water across this landscape, which causes biogeochemical weakening and erosion of freshwater terrestrial substrates. The massive physical force of storm surges erode edges and sometimes roll up vegetation, exposing delicate marsh soils and washing them away. Because the river stopped building this part of its delta 1,500 years ago, compaction of the underlying alluvial sediments now drives a high subsidence rate, and this area experiences some of the most rapid rates of relative sea level rise worldwide, almost 1 centimeter per year at the Grand Isle tide gauge. The closer to sea level the topography of a deltaic landscape, the more vulnerable it is to oceanic erosive forces.

While Lake Cataouatche and Lake Salvador are distinct lakes separated by the land mass of Couba Island, their waters intermingle through connections via Bayou Bardeaux to the east of Couba Island and Bayou Couba to the west. Lake Cataouatche is a 9,280-acre lake located in St. Charles and Jefferson Parishes with an average depth of 6 feet. Lake Salvador is a 44,800-acre lake in Jefferson, Lafourche, and St. Charles Parishes. Lake Salvador is also a shallow lake, with an average depth of about 6 feet. The lake is fed by Bayou Des Allemands, Bayou Couba, and Bayou Bardeaux, and that water then flows into the lower part of the Barataria Basin and mixes with water from the Gulf of Mexico, which also influences water in the lakes.

The preserve and surrounding estuarine lakes contain important submerged aquatic vegetation (SAV) habitat. Healthy SAV serves critical ecological functions, including providing habitat and forage for fish and wildlife, decreasing wave energy, protecting soils, and increasing sediment accretion. An SAV survey of the preserve found seven native species: *Cabomba caroliniana*, *Ceratophyllum demersum*, *Heteranthera dubia*, *Najas guadalupensis*, *Potamogeton pusillus*, *Vallisneria Americana*, and *Zannichellia palustris*. Three exotic species also were present: *Egeria densa*, *Hydrilla verticillate*, and *Myriophyllum spicatum*.

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.

See response to "Description of Action Area," above for additional detail.

Waters within the preserve generally range from fresh to slightly brackish. Sources of freshwater include local rainfall; drainage from wetlands, agricultural land, and urban areas; and a coastal restoration diversion. Since 2002, Mississippi River water has entered northern Lake Cataouatche during openings of the Davis Pond Diversion. The diversion can transfer 10,650 cubic feet/second of water from the Mississippi River into waterways adjacent to the preserve (USACE). Flow from the diversion occurs during high-water periods in the river during the first half of the year, and a minimum flow of about 1,000 cubic feet/second is maintained year-round. Nutrients are generally present in these freshwater sources, causing a north-south gradient of decreasing nutrient levels along the Bayou Segnette Waterway and shorelines of Lakes Cataouatche and Salvador (Submersed Aquatic Vegetation of the Jean Lafitte National Historical Park and Preserve, Poirrier et. al., *Southeastern Naturalist*, 2010).

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 breakwater will be constructed in the water body.

b. Existing Structures

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

A breakwater exists in Lake Salvador along the northern shoreline of Lake Salvador along the preserve boundary. The breakwater was constructed in phases from 1997 to 2012.

c. Seagrasses & Other Marine Vegetation

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

A baseline study of SAV was conducted at the preserve in 2006, and the results were reported by Poirrier et. al. in *An Inventory and Assessment of the Distribution of Submersed Aquatic Vegetation at Jean Lafitte National Historical Park and Preserve*, April 2009. SAV habitats throughout the preserve were surveyed. Seven native species were found: *Cabomba caroliniana*, *Ceratophyllum demersum*, *Heteranthera dubia*, *Najas guadalupensis*, *Potamogeton pusillus*, *Vallisneria Americana*, and *Zannichellia palustris*. Three exotic species were also present: *Egeria densa*, *Hydrilla verticillate*, and *Myriophyllum spicatum*. These ten species are regarded as true SAV because they are rooted and have leaves that are always submersed. Three species that are similar to true SAV and exhibit many of the same forms and functions were also present: *Myriophyllum aquaticum* (an exotic species with emergent leaves); *Potamogeton epihydrus* (a

native species with floating leaves); and *Utricularia cf. radiata* (a native, floating species). The presence of the highly invasive, exotic, floating fern *Salvinia molesta* was also documented. Salinities characteristic of freshwater prevailed throughout the interior waters of the preserve, and SAV did not conform to the general estuarine management paradigm of decline and loss. Instead, as commonly occurs in nutrient-rich freshwater habitats, many species were abundant at the nuisance level. Sufficient light was present to support robust SAV growth in preserve ponds, canals, and Lake Cataouatche. The native species *Ceratophyllum demersum* and *Najas guadalupensis* and the exotics *Hydrilla verticillata* and *Myriophyllum spicatum* formed large surface mats that clogged waterways. *Vallisneria americana* may be decreasing because of the increase in nuisance SAV and floating plants.

d. **Mangroves**

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

N/A

e. **Corals**

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

N/A

f. **Uplands**

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

N/A

g. **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>

The West Indian manatee (*Trichechus manatus*) may pass through the action area, though manatees are not frequently encountered here.

h. **Soils and Sediments**

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

The preserve is positioned along Bayou des Familles-Bayou Baratavia, which are remnant waterways formed by a former distributary of the Mississippi River along with the rest of the preserve landscape.

The Bayou des Familles-Bayou Barataria deltaic lobe was built and abandoned by the Mississippi River roughly 3,500 to 1,500 years ago. This distributary arm of the river slowly filled with sediments as the river changed course, creating a narrow tidal stream (bayou) of water. The bayou is flanked by natural levees that reach a height of about 5 feet above mean sea level. These levees were formed from annual spring flooding and depositional processes. Beyond the flank of the natural levee is an inter-levee basin with soil surfaces at or below sea level. The land is actively subsiding because the current delta sits above thousands of feet of unconsolidated sediments deposited during previous delta-building episodes. Four major soil types are found in the area: Sharkey-Commerce, Barbary, Lafitte-Clovelly, and Kenner-Allemands.

The marshes of the preserve are composed of organic peat soils that were created during decomposition of generations of marsh plants and bound together in a “mat” by the roots of the living plants at the surface. Over several centuries, floating mats have formed from the subsidence of deltaic alluvial clays and silts. These peat marshes can be attached, semi-detached (tremblant), or completely detached (flotant) to the clay substrate. Such marshes can only form in protected basins flanked by ridges of higher ground such as natural levees or beaches. Because these marshes are composed of organic peat soils, they are exceptionally prone to erosion when exposed to wave energy. The marshes on the shore of Lake Salvador in the preserve are currently eroding at rate of 10 meters per year (based on aerial photo comparisons by the U.S. Geological Survey [2006] and personal observations made by staff from the park using shoreline markers).

i. Land Use

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

The resources and surrounding natural landscapes of the preserve provide significant opportunities for public recreational use. More than 10 miles of walking trails provide park visitors with an avenue to explore the forests, swamps, and marshes of the preserve. Nine miles of non-motorized (canoe) trails plus an additional 40 miles of natural bayous, canals, and waterways are available for recreational boating and fishing.

The only access to Lake Cataouatche and Lake Salvador is by boat. The only significant recreational use of the lake is for fishing from small boats. The lakeshore project area is shallow and turbid. Recreational fishing boats typically do not approach any nearer than casting distance to the shore. The shoreline does not have a dock, and there is nowhere to walk on the shoreline. Approximately 170 recreational camps (cabins) are located on canal spoilbanks on two in-holdings within the preserve boundary near Bayou Bardeaux and Whiskey Canal.

j. Essential Fish Habitat

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

The preserve landscape, including Lakes Cataouatche and Salvador, is a feature of an estuary with free connections to the Gulf of Mexico and tidal influence. This habitat provides for nursery environment that supports plankton (phytoplankton and zooplankton), invertebrate (shrimp and crabs), and a variety of fish species (red drum, spotted sea trout, southern flounder, channel catfish, bay anchovies, croaker, shad, and gulf menhaden). Invertebrate consumers, including crawfish, crabs, and shrimp form the basis of a complex food web that supports more visible wildlife species. At least 60 species of freshwater and saltwater-estuarine fish have been recorded, including gar, catfish, bass, and redfish

(<https://irma.nps.gov/NPSpecies/Search/SpeciesList/JELA>).

The project is located in an area identified by the Magnuson-Stevens Fishery Conservation and Management Act as essential fish habitat for ~~juvenile and sub-adult~~ various life stages of brown shrimp, white shrimp, ~~and red drum, and bull shark~~. These vegetated wetlands also provide nursery and foraging habitats for many economically important ~~marine~~ fishery species (gulf menhaden, Atlantic croaker, striped mullet, blue crab), prey species (~~mackerels, snappers, groupers~~), and ~~migratory species (billfishes and sharks)~~ shellfish. Areas of shallow water and ~~deteriorating marsh~~ submerged aquatic vegetation also provide nursery habitat and ~~a~~ food sources for many commercial and/or recreational species of fish and shellfish.

F. Project Description

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

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

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

The primary objective of this project is to restore 50 acres of SAV as described in the Final PDARP/PEIS. DWH settlement funds from the Federally Managed Lands category will fully fund the Proposed Alternative (Alternative 4C), construction of the southern breakwater, selected to achieve this objective. However, erosion from wave energy is an ongoing issue along the entire shoreline of the preserve. The National Park Service (NPS) has long-term plans to construct additional shoreline protection along the entire shoreline of the preserve in both Lake Cataouatche and Lake Salvador as funds are made available. Thus, this BE form includes analysis of potential environmental impacts resulting from construction of both the northern and southern sections of breakwater.

As a result, NPS intends to complete all compliance and permit actions to construct a wave attenuation structure along the entire shoreline of the lakes at the preserve. This approach allows NPS to evaluate cumulative effects and provides greater flexibility should issues arise with the proposed alternative for restoring the 50 acres of SAV lost during the DWH oil spill. The project could be adjusted to an alternate area should such issues arise.

The principal project features include a nearly continuous rock breakwater, with rock elbows protecting fish gaps (see sheet 25 of 27) along the eastern shorelines of Lake Cataouatche, Lake Salvador, and Bayou Bardeaux in the preserve in Jefferson Parish, Louisiana. The northern portion of the rock breakwater would extend from Bayou Verret to tie into an existing riprap shoreline protection project at Lake Salvador near Couba Island with canal openings and pipeline right-of-way access where needed. The southern portion of the proposed rock breakwater would tie into the southernmost end of the preexisting riprap shoreline protection and extend to the area near Isle Bonne with pipeline right-of-way access where needed. The northern portion of work would extend approximately 5.3 miles from Bayou Verret to Lake Salvador. The southern portion within Lake Salvador would extend approximately 2.2 miles from the existing riprap shoreline protection to the area near Isle Bonne. To ensure the project is sustainable for 20 years, the rock breakwater design incorporates sea level rise based on a local tide gauge (Grand Isle,

Louisiana) and accepted sea level rise scenarios, including 9.48 additional inches to the height of rock breakwater to account for sea level rise.

Mobilization to the working area would include travelling through the Harvey Lock via the Mississippi River. Typical equipment that may be required for project construction, in this area of the state, would include tug and crew boats, spud barge(s) for installation and mobile quarters, draglines, and tracked excavators. A pre-construction survey along the centerline of the access channels, floatation channels, and breakwater would be completed to layout the designed alignment prior to beginning construction. The proposed breakwater alignment would be staked in the field.

Access to the construction area is not feasible from land. Heavy equipment such as draglines and tracked excavators would construct the rock breakwater from barges. All construction materials (e.g., geotextile fabric, geogrid, bedding material, riprap) would be transported via barge and floated next to the equipment barge(s).

A "floatation channel" (see sheet 25 of 27) would need to be dredged parallel to the proposed breakwater alignment to accommodate the draft of necessary equipment and material barges. The proposed floatation channel would be 80-feet wide and 4-feet below the existing surface bottom to accommodate typical equipment and material barges. The floatation channel must be close enough to the designed breakwater alignment to allow the equipment to reach the entire project footprint; however, it cannot be so close that it undermines the breakwaters' soil foundation.

The material excavated to create the floatation channel would be stockpiled on the western side of the breakwater. The channel would be backfilled with stockpiled material as construction progresses and the channel is no longer needed. The breakwater would also require the installation of settlement plates spaced at 1,000 feet on center.

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

Construction of the project would be an entirely water-based operation and is estimated to take 18 months for the southern section and 24 months for the northern section. Construction for the southern section may start as early as summer 2020. There is no schedule for the northern section.

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

See Section F. Project Description

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 <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Does this project include terrestrial construction?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Does this project include construction of an overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will fishing be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will wildlife observation be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will boat docking be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will fishing be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

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)?

See Section F. Project Description

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

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

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

N/A

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

N/A

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

See Section F. Project Description

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 “floatation channel” (see sheet 25 of 27) would need to be dredged parallel to the proposed breakwater alignment to accommodate the draft of necessary equipment and material barges. The proposed floatation channel would be 80-feet wide and 4-feet below the existing surface bottom to accommodate typical equipment and material barges. The floatation channel must be close enough to the designed breakwater alignment to allow the equipment to reach the entire project footprint; however, it cannot be so close that it undermines the breakwaters’ soil foundation. The material excavated to create the floatation channel would be stockpiled on the western side of the breakwater. The channel would be backfilled with stockpiled material as construction progresses and the channel is no longer needed.

Rock Breakwater Excavation Volumes and Areas			
Northern Section	Excavation Channel Area	Acres	83
	Spoil Area	Acres	80
	Excavation Channel Volume	Cu Yd	315,065
	Spoil Volume	Cu Yd	315,065
Southern Section	Excavation Channel Area	Acres	25
	Spoil Area	Acres	25
	Excavation Channel Volume	Cu Yd	71,990
	Spoil Volume	Cu Yd	71,990

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

N/A

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

N/A

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

N/A

G. NOAA 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.
Loggerhead Sea Turtle		Marine	No Effect	No suitable habitat in action area
Green Sea Turtle (T)		Marine	No Effect	No suitable habitat in action area
Kemp's Ridley Sea Turtle (E)		Marine	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.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.

Determination Definitions

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		Choose an item.	May Affect, Not Likely to Adversely Affect	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.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.

Determination Definitions

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.

The project area is not located in an area identified as critical habitat for the West Indian Manatee. The potential a manatee swimming into the area is highly unlikely. Standard manatee avoidance protocol will be strictly adhered to by all contract personnel working in the project area. Crews will be briefed on the body shape and characteristics of the West Indian Manatee and will be instructed to cease operations in the event of a manatee sighting. Operations will continue only after the manatee leaves the immediate area of the project site. Park resource staff will be contacted in the event of a manatee sighting.

The project area is located in freshwater marsh areas where turtles are not present, therefore we do not expect any effects to sea turtles in the aquatic environment.

Commented [CF1]: Per Mike Tucker 9/27/19

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.

The project will employ USFWS Standard for Manatee with all work crews receiving a general environmental sensitivity training on the potential for dolphin, manatee, and other wildlife as well as site specific regulations for working in a National Park.

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

<input checked="" type="checkbox"/>	USFWS Standard Manatee In Water Conditions
<input checked="" type="checkbox"/>	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions ¹
<input type="checkbox"/>	NMFS Measures for Reducing the Entrapment Risk to Protected Species ¹
<input checked="" type="checkbox"/>	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 "Frequently Recommended BMPs" above. We will be implementing the BMPs that are checked.

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 designated critical habitats are located within the project area.

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

No designated critical habitats are located within the project area.

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.

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

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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Use of active acoustic equipment (e.g., echosounder) producing sound below 200 kHz
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b) In-water construction or demolition
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c) Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d) In-water Explosive detonation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	e) Aquaculture
<input checked="" type="checkbox"/>	<input type="checkbox"/>	f) Restoration of barrier islands, levee construction or similar projects
<input checked="" type="checkbox"/>	<input type="checkbox"/>	g) Fresh-water river diversions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	h) Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	i) Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	j) Conducting driving of sheet piles or pilings
<input checked="" type="checkbox"/>	<input type="checkbox"/>	k) Use of floating pipeline during dredging activities

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

See Section F. Project Description [for details on the project activities](#). [Due to the location of this project, the likelihood of dolphins being present is very low. Therefore, NMFS is not suggesting any additional BMPs to protect marine mammals in the project area.](#)

Commented [CF2]: Per Stacey, our MM expert dolphins are not likely to be here.

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:

<input type="checkbox"/>	NMFS Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines ²
<input checked="" type="checkbox"/>	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions ³
<input type="checkbox"/>	NMFS Measures for Reducing the Entrapment Risk to Protected Species ³
<input checked="" type="checkbox"/>	NFMS Vessel Strike Avoidance Measures and Reporting for Mariners ³
<input type="checkbox"/>	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 implemented for marine mammals. [Click here to enter text.](#)

L. Bald Eagles

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

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
<input type="checkbox"/>	<input type="checkbox"/>	Oyster Reef Creation and Enhancement
<input type="checkbox"/>	<input type="checkbox"/>	Marine Debris Removal
<input type="checkbox"/>	<input type="checkbox"/>	Construction of Living Shorelines
<input type="checkbox"/>	<input type="checkbox"/>	Marsh Creation and Enhancement
<input type="checkbox"/>	<input type="checkbox"/>	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

Version: August 21, 2018

USFWS ESA § 7 Consultation

Erin Chandler, Department of the Interior

Email: Erin_Chandler@fws.gov

Phone: 470-361-3153

Attachments:

1. JELA Shoreline Protection Permit Dwgs Excerpt
2. JELA SAV Map, Summer 6/20/18

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: James McMenis Phone: 225-342-4662 Email: james.mcmenis@la.gov

Project Name: Rabbit Island Restoration Project (CS-0080)

DIVER ID# [Click to enter text](#) TIG: Louisiana TIG Restoration Plan # RP 1.3

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 project is currently at 95% design. Design reports are available upon request.

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 overlaid

C. Project Location

I. State and County/Parish of action area
Cameron 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>]
29.853562,-93.383506

D. Existing Compliance Documentation

NEPA Documents

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

YES NO

Examples:

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

Permits

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

YES NO Permit Number and Type: MVN-2018-01009-WLL Section 10 and 404

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.

NEPA analysis will be covered in the LA TIG RP/EA #1.3 Jean Lafitte and Rabbit Island Restoration Projects. See attached for signed permit.

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

Name of Person Completing this Form: Caitlin Glymph

Name of Project Lead: James McMenis

Date Form Completed: 9/11/2019

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

Rabbit Island is a coastal island located in Calcasieu Lake in Cameron Parish, Louisiana. Coastal islands act as a buffer to reduce the effects of wave action, saltwater intrusion, storm surge, and tidal currents on associated estuaries and wetlands. The geography of coastal islands, such as Rabbit Island, is highly dynamic and greatly affected by weather conditions. Rabbit Island is not currently inhabited or used for recreational activities and has no roads, buildings, or other permanent infrastructure.

Rabbit Island geology is characterized by Holocene-era complexly interfingering and interbedded, dark-colored marine muds, sandy and shelly beach deposits, organic marsh clays, and lacustrine and bay muds (Louisiana Geological Survey 1984). Surface soils on Rabbit Island have been classified by U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as primarily Creole mucky clay with 0 to 1 percent slopes (USDA NRCS 2018). These soils are very poorly drained, slowly permeable, and classified as having negligible runoff, which is typical of continuously flooded marine tidal areas and coastal marshes. Recent geotechnical investigations (GeoEngineers, Inc. 2018) down to 40 feet below ground surface primarily encountered soft lean clays and fat clays with organic materials, with alternating layers of loose silty or clayey sands, which is consistent with the USDA NRCS data.

Rabbit Island is in Calcasieu/Sabine Basin, Cameron Parish, and Louisiana. The entire basin is approximately 312,500 acres (Coastal Wetlands Planning, Protection and Restoration Act [CWPPRA] 2018). Freshwater inputs to the basin occur primarily through the Calcasieu and Sabine Lakes via the respective rivers (CWPPRA 2018). Previous water quality inventory reports by Louisiana Department of Environmental Quality (LDEQ) in 2004 listed suspected sources of water quality problems as home sewage systems, agriculture, silviculture, urban storm water runoff, and dredging in the Calcasieu Basin. In the Sabine basin agriculture/aquaculture, energy productions, natural system modification, and pollution have been identified as significant ecosystem threats (Louisiana Wildlife Action Plan, 2015). Based on the Final 2016 Louisiana Water Quality Integrated Report (LDEQ 2016), Calcasieu Lake (subsegment LA030402_00), which includes Rabbit Island, is listed as fully supporting the designated use for primary contact recreation, secondary contact recreation, fish and wildlife propagation, and oyster propagation. Therefore, there are no current water quality impairments at Rabbit Island and the adjacent waters.

Rabbit Island is primarily characterized by low-elevation emergent salt marshes and tidal pond habitats, which provide habitat for a diversity of plant and animal species. The emergent marshes are of importance to colonial nesting birds such as pelicans, gulls, egrets, and herons. Due to erosion via wave action, high winds and severe weather, sea level rise, tidal influence, and influence from the nearby Calcasieu Ship Channel, much of the island's current footprint is open water. A primary goal of the Proposed Alternative is to create and restore colonial waterbird nesting and brooding habitats. The island contains no infrastructure, and habitats have not been disturbed by human development.

The habitat types currently present on Rabbit Island include:

- Emergent marsh – This habitat type is characterized by low-elevation saltwater wetlands, which are regularly tidally flooded, flat, brackish areas dominated by herbaceous, salt-tolerant grasses and few other species. Dominant vegetation species on the island interior include smooth cordgrass (*Spartina alterniflora*), saltgrass (*Distichlis spicata*), and saltmeadow cordgrass (*Spartina patens*). Dominant vegetation around the island’s exterior include smooth cordgrass, saltgrass, black needlerush (*Juncus roemerianus*), big cordgrass (*Spartina cynosuroides*), and Jesuit’s bark (*Iva frutescens*). Microscopic algae on the surface of vascular plants and benthic algae on or in the marsh sediment are also present in these salt marshes.

- Emergent marshes provide nesting and foraging habitat for a variety of birds such as brown pelican, reddish egret, American oystercatcher, snowy egret (*Egretta thula*) and a variety of shorebirds. This habitat type is also considered an important nursery area for shrimp, crabs, and other invertebrates and a variety of fish species.
- Inland tidal ponds: This habitat type includes shallow saltwater ponds that are subject to tidal influence. Large tidal ponds, which fluctuate in size based on water levels, are present across the island. These tidal ponds average 1.5 to 2 feet deep. The shallow ponds provide habitat for various fish species and aquatic invertebrates. These areas are also important foraging habitat for shorebirds.
- Intertidal shell beaches: Some of the intertidal areas around the island’s outer rim contain short stretches of beach that are comprised mainly of shell fragments. The intertidal areas provide foraging habitat for shorebirds and habitat for aquatic invertebrates.
- Open waters: Calcasieu Lake, which includes the Calcasieu Ship Channel borrow area and the access route, is a moderate to high salinity estuary that provides habitat for various estuarine fish and invertebrate species. The lake, including the Calcasieu Ship Channel borrow area and access corridor, is also a public oyster seed ground. Substrates around Rabbit Island and the access corridor are suitable mollusk habitat and are known to support populations of eastern oyster (*Crassostrea virginica*) and other mollusks such as Rangia clam (*Rangia cuneata*). Depths in West Cove of Calcasieu Lake are typically under 6 feet, and depths in the ship channel can be up to around 50 feet deep.

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.

Calcasieu Lake

Within the project footprint, approximately 36 acres are existing open water, approximately 142 acres are intertidal habitat (-0.22 to +1 elevation), and approximately 27 acres have an elevation greater than +1.

Does the project area include a river or estuary?

YES NO

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

b. Existing Structures

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

NA

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.

NA

d. Mangroves

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

NA

e. Corals

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

NA

f. Uplands

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

NA

g. 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>

Bottlenose dolphins and West Indian manatees have potential to occur near the project area.

h. Soils and Sediments

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

Rabbit Island geology is characterized by Holocene-era complexly interfingering and interbedded, dark-colored marine muds, sandy and shelly beach deposits, organic marsh clays, and lacustrine and bay muds (Louisiana Geological Survey 1984). Surface soils on Rabbit Island have been classified by U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as primarily Creole mucky clay with 0 to 1 percent slopes (USDA NRCS 2018). These soils are very poorly drained, slowly permeable, and classified as having negligible runoff, which is typical of continuously flooded marine tidal areas and coastal marshes. Recent geotechnical investigations (GeoEngineers, Inc. 2018) down to 40 feet below ground surface primarily encountered soft lean clays and fat clays with organic materials, with alternating layers of loose silty or clayey sands, which is consistent with the USDA NRCS data.

i. Land Use

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

NA

j. Essential Fish Habitat

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

The Gulf of Mexico Fishery Management Council (GMFMC) has delineated essential fish habitat (EFH) for federally managed species in coastal Louisiana (GMFMC 2005). The Rabbit Island project is located in Eco-Region 4, and within the project area EFH has been designated in the estuarine water bottoms and emergent marsh habitats for brown shrimp, white shrimp, red drum, gray snapper, lane snapper, and bull sharks (**Table 4-2**).

Table 4-2. Federally Managed Species in the Rabbit Island Project Area – EFH Eco-Region 4

Common Name	Scientific Name
brown shrimp	<i>Penaeus aztecus</i>
white shrimp	<i>Penaeus setiferus</i>
red drum	<i>Sciaenops ocellatus</i>
gray snapper	<i>Lutjanus griseus</i>
lane snapper	<i>Lutjanus synagris</i>
bull shark	<i>Carcharhinus leucas</i>

F. Project Description

*1. 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.*

See attachment (and below).

The goal of the Rabbit Island Restoration Project (CS-0080) is to restore and conserve bird resources impacted in the State of Louisiana as a result of the Deepwater Horizon (DWH) oil spill. Specifically, the project objective is to restore and enhance suitable colonial waterbird nesting and brood-rearing habitat on Rabbit Island, which is located approximately 5 miles from Cameron, Louisiana, the parish seat of Cameron Parish. The island is within

the southwestern portion of Calcasieu Lake (Figure 1). The island represents the state's westernmost colony for a host of colonial waterbird species, including brown pelicans (*Pelecanus occidentalis*), reddish egrets (*Egretta rufescens*), and American oystercatchers (*Haematopus palliatus*) (Selman and Davis 2015). Additionally, extensive numbers of birds and other wildlife species have been documented on or adjacent to the island and the broader Calcasieu Basin. Since 1955, Rabbit Island has lost 89 acres of landmass, which is approximately 35 percent of its former area (Figure 2). Land loss is primarily associated with effects from wind-generated waves and periodic high tides that are amplified by the nearby ship channel. Today, the island's total area is 205 acres.

On-island construction equipment will consist of marsh buggies. These will be transported to Rabbit Island via deck barges maneuvered by tug boats or shallower-drafting crew boats. Small work boats will also be used to access the site. Borrow material will be excavated in the Calcasieu Ship Channel using a hydraulic cutterhead dredge. Material will be pumped via pipeline through Joe's Cut and across West Cove to Rabbit Island within a delineated 140 ft wide access route (Figure 3). This access corridor will be bordered by Type II turbidity curtains as a measure to keep sediment plumes from impacting nearby oyster seed grounds. On-island activities will include construction of containment dikes along the perimeter of Rabbit Island using marsh buggy excavators (Figure 4). Material will be sourced from borrow channels adjacent to the dikes, with an offset to avoid slope stability issues. Marsh buggies will likely also be used on the island to move the dredge pipe outfall.

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

Construction activities are anticipated between September 2020 and February 2021.

September 2020

- o Mobilization of on-island construction equipment
- o Installation of turbidity control measures
- o Construction of containment dikes
- o Mobilization of hydraulic dredge

October 2020

- o Construction of containment dikes
- o Hydraulic dredging and placement of fill on island

November 2020

- o Construction of containment dikes
- o Hydraulic dredging and placement of fill on island

December 2020

- o Hydraulic dredging and placement of fill on island

January 2021

- o Hydraulic dredging and placement of fill on island
- o Demobilization of hydraulic dredge
- o Gapping of containment dikes

February 2021

- o Gapping of containment dikes

- o Demobilization of on-island construction equipment
- o Turbidity control measure removal

** Complete containment dike construction is expected to take approximately 36 days. Based on typical dredging industry capacities, it is expected that the complete dredging duration could last as few as 33 days, rather than the 4 months shown above. The above schedule depicts a conservative duration estimate which utilizes the full available working window. **

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 <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Does this project include terrestrial construction?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Does this project include construction of an overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will fishing be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will wildlife observation be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will boat docking be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Will fishing be allowed from this overwater structure?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

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

NA

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

iii. Use of "Dock Construction Guidelines"? 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)?

NA

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

1. Method of pile installation	
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.)

NA

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

NA

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

NA

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

See attachment

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

NA

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

NA

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

No fishing activities proposed.

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

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		Marine	May Affect, Not Likely to Adversely Affect	Select Most Appropriate

Piping Plover		Terrestrial	No Effect	Choose an item.
Pallid Sturgeon		Riverine/Freshwater	No Effect	Choose an item.
Red Knot		Terrestrial	No Effect	Choose an item.
Loggerhead Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Hawksbill Sea Turtle		Terrestrial	No Effect	No suitable habitat in action area
Kemp's Ridley		Terrestrial	No Effect	No suitable habitat in action area
Green Sea Turtle		Terrestrial	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.

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.

Rabbit Island is outside the range of the Gulf sturgeon. Therefore, the Proposed Alternative is anticipated to have no effect on this species. Suitable open water habitat and suitable nesting habitat do not occur for sea turtles on Rabbit Island. However, these species could be present in the waters adjacent to Rabbit Island and within the access and borrow areas. Therefore, the Proposed Alternative could result in potential impacts to sea turtles or West Indian manatees. Potential indirect effects to protected aquatic species, such as sea turtles and the West Indian manatee, include temporary, localized impacts to water quality due to construction activities, which could affect the adjacent waters. Pollution prevention plans including silt curtains would be prepared in conjunction with the NPDES permitting process prior to construction of the Proposed Alternative. These plans would include all specifications and BMPs necessary for control of erosion and sedimentation during construction. The construction BMPs, in addition to other avoidance and mitigation measures as required by state and federal regulatory agencies, would minimize water quality impacts that could affect aquatic habitat.

Direct effects to piping plover and red knot under the Proposed Alternative are unlikely due to the minimal suitable habitat for these species on Rabbit Island. The Proposed Alternative consists of placing fill materials within open water and inter-tidal areas. Use of these habitats by the piping plover is unlikely under existing conditions. It is not anticipated that the Proposed Alternative would impact suitable foraging habitat for the piping plover or Red Knot because there is little to no foraging habitat in this area.

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 reinstate this consultation.

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

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | USFWS Standard Manatee In Water Conditions |
| <input checked="" type="checkbox"/> | NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions¹ |
| <input checked="" type="checkbox"/> | NMFS Measures for Reducing the Entrapment Risk to Protected Species¹ |
| <input checked="" type="checkbox"/> | NFMS Vessel Strike Avoidance Measures and Reporting for Mariners¹ |

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)

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

BMPs necessary for control of erosion and sedimentation during construction would occur. The construction BMPs, in addition to other avoidance and mitigation measures as required by state and federal regulatory agencies, would minimize water quality impacts that could affect aquatic habitat.

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.

Designated critical habitat is not present.

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.

Click here to enter text.

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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a) Use of active acoustic equipment (e.g., echosounder) producing sound below 200 kHz
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b) In-water construction or demolition
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c) Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d) In-water Explosive detonation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	e) Aquaculture

<input checked="" type="checkbox"/>	<input type="checkbox"/>	f) Restoration of barrier islands, levee construction or similar projects
<input checked="" type="checkbox"/>	<input type="checkbox"/>	g) Fresh-water river diversions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	h) Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	i) Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	j) Conducting driving of sheet piles or pilings
<input checked="" type="checkbox"/>	<input type="checkbox"/>	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>

Marine mammals may be temporarily disturbed by the noise and vibrations of the proposed work, but these impacts are of short duration. . Potential indirect effects include temporary, localized impacts to water quality due to construction activities, which could affect the adjacent waters. In addition, there is a risk of entrapment during in-water construction activities, including dredging. There is also a risk of vessel strikes due to construction related activities. To mitigate these effects, BMP's will be implemented (see below section).

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:*

<input type="checkbox"/>	NMFS Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines ²
<input checked="" type="checkbox"/>	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions ³
<input checked="" type="checkbox"/>	NMFS Measures for Reducing the Entrapment Risk to Protected Species ³
<input checked="" type="checkbox"/>	NFMS Vessel Strike Avoidance Measures and Reporting for Mariners ³
<input type="checkbox"/>	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 implemented for marine mammals. The implementing trustee will implement and enforce the Standard Manatee Conditions BMPs, as listed in the attachment to avoid and minimize impacts to manatees. If marine mammals are observed in the project area, work would temporarily stop until they have left the area. Marine mammals may be temporarily disturbed by the noise and vibrations of the proposed work, but these impacts are of short duration, and BMP's will be implemented to mitigate these effects. The noise and vibrations would likely cause marine mammals to temporarily leave the area until construction activities have been completed. Therefore, adverse impacts to marine mammals are not anticipated under the Proposed Alternative. The construction BMPs, in addition to other avoidance and mitigation measures as required by state and federal regulatory agencies, would minimize water quality impacts that could affect aquatic habitat. For any in-water work, NMFS's Measures for Reducing Entrapment Risk to Protected Species (2012), NMFS's Vessel Strike Avoidance Measures and Reporting for Mariners (2008), and USACE's Standard Manatee Conditions for In-water Work (2011). Additionally, construction

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

BMPs and other avoidance and mitigation measures as required by state and federal regulatory agencies would minimize water quality impacts that could affect the aquatic habitat.

During dredging, monitoring for marine mammals will be conducted on either side of the barge. Specifically: (a) If dolphins come within 50 ft of active dredging and are not just traveling through the area (e.g. remaining within 50 ft to forage), dredge operations should not start, or, if dredging has already begun, they should cease until the dolphins are beyond and are not likely to re-enter (i.e., are on a dedicated path away from the 50 ft area). This is to avoid physical harm from dredge equipment. (b) To avoid perceived physical barriers to dolphins, avoid trans-versing waterbodies with any floating pipelines from the dredge activities.

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
<input type="checkbox"/>	<input type="checkbox"/>	Oyster Reef Creation and Enhancement
<input type="checkbox"/>	<input type="checkbox"/>	Marine Debris Removal

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Construction of Living Shorelines |
| <input type="checkbox"/> | <input type="checkbox"/> | Marsh Creation and Enhancement |
| <input type="checkbox"/> | <input type="checkbox"/> | 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