

In Reply Refer To:

GRO Regionwide Restoration Plan 1

01/11/2022

Memorandum

To: Chief, Planning and Consultation Branch, Gulf Restoration Office, Fairhope, AL
From: Acting Field Supervisor, Louisiana Ecological Services Field Office *Brigette D. Firmin*

Subject: Informal Consultation for the Proposed GRO Region Wide Restoration Plan 1, for projects in Louisiana (FWS/R4/DH NRDAR)

This memorandum acknowledges our receipt of your memorandum on November 03, 2021. This response is in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA). We have reviewed your proposed project(s) and concur with your September 14, 2021 determinations for endangered and threatened species, their critical habitat, and at-risk species (should they become listed). We based our concurrence on the justification below. Where more than one justification was applicable, multiple boxes are checked and additional comments are added.

Species-specific surveys were conducted and there are no endangered, threatened, or at-risk species or designated critical habitat on site. Comments:

Endangered, threatened, and at-risk species are not known from and are not expected to occur within the vicinity of the proposed project. Comments:

Appropriate avoidance and minimization measures have been included within the project description to ensure that any effects to listed species (or at-risk species should they become listed) are insignificant or discountable. Comments:

Critical habitat is not present on site and does not occur within the vicinity of the proposed project. Comments:

Appropriate avoidance and minimization measures have been included within the project description to ensure PCEs and/or critical habitat will not be adversely modified or

destroyed. Comments:

The proposed project is completely beneficial to the listed or at-risk species and/or critical habitat considered. Comments:

Unless the project description changes, or new information reveals that the effects of the proposed action may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the ESA is necessary.

If you have questions, please contact Joe Hodges at 337-291-3109 or email joe_hodges@fws.gov.

Support for our response is enclosed below.



United States Department of the Interior

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



In Reply Refer To:
FWS/R4/DH NRDAR

Memorandum

September 14, 2021

To: Field Supervisor, Ecological Services Office, Lafayette, LA

From: Chief, Planning and Compliance Branch, Deepwater Horizon Gulf Restoration Office

Subject: Informal Consultation Request for Implementation of Two Restoration Projects proposed in the Region Wide Trustee Implementation Group's Restoration Plan #1

After the Deep Water Horizon (DWH) oil spill, federal and state natural resource trustee agencies (Trustees) came together to assess the effects of the spill and plan for the restoration of injured natural resources. As part of the legal settlement reached with BP in 2016, the Trustees prepared a Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement (Final PDARP/PEIS), to provide the framework for DWH oil spill restoration across the Gulf. The Final PDARP/PEIS established Trustee Implementation Groups (TIGs) that develop specific plans for, developing, selecting, and implementing specific restoration actions under the Final PDARP/PEIS.

The Region Wide TIG, consisting of all Federal and State Gulf Restoration Trustees, has developed the *Region Wide Trustee Implementation Group Draft Restoration Plan and Environmental Assessment #1: Birds, Marine Mammals, Oysters, and Sea Turtles*, which closed for public comment on May 6, 2021. Numerous projects in this plan are being evaluated as potential restoration projects to restore natural resources along the Gulf Coast that were injured as a result of the spill. We have reviewed these projects in accordance with Section 7 of the Endangered Species Act (ESA) of 1973 as amended (16 U.S.S 1531-1544) and have made a May Affect, Not Likely to Adversely Affect determination for eight of the projects. A brief description of all projects and species determinations are provided in Tables 1 and 2 below for your information. However, we request that you review only the projects for Louisiana. Project specific descriptions are contained in the attached Biological Evaluations (BE).

This memo requests your concurrence with our determinations for the two proposed projects that occur in Louisiana.

Within the BE form, we have also reviewed the proposed projects for impacts to bald eagles (*Haliaeetus leucocephalus*) in accordance with the Bald and Golden Eagle Protection Act of

1940 as amended (16 U.S.C. 668-668c), impacts to migratory birds in accordance with the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. 703-712), and impacts to West Indian manatee (*Trichechus manatus*) in accordance with the Marine Mammal Protection Act of 1972 as amended (16 U.S.C. 1361-1383b, 1401-1406, 1411-1421h) and we determined that take would be avoided.

To facilitate your response, should you concur with our determination, we have attached a template response letter. If you have questions or concerns regarding this request, please contact Michael Barron, Fish and Wildlife Biologist, at 251-421-7030 or michael_barron@fws.gov.

Attachments (3)

- BE form including project maps (2)
- Template response letter

Table 1. Brief descriptions of the projects in RW TIG RP/EA #1.

Proposed Project	Brief Description
<p>Conservation and Enhancement of Nesting and Foraging Birds, Component 1: Chandeleur Islands, LA</p>	<p>This is an engineering and design project. No construction would occur as part of this proposed project. Activities in the project area may include: Bathymetric and topographic surveys of access channels, dredging areas, and fill areas; Magnetometer surveys; Geotechnical data collection, including borings and/or cone penetrometer tests, possibly in both dredging and fill areas; Other geophysical surveys; Possible probing to confirm pipeline locations/depth of cover; Possible cultural resources surveys; Oyster surveys, assessments, and appraisals; Nesting surveys (birds and sea turtles).</p>
<p>Conservation and Enhancement of Nesting and Foraging Birds, Component 3: San Antonio Bay Island, TX</p>	<p>This project would complete the engineering and build a rookery island in San Antonio Bay, Texas near the town of Seadrift. The proposed island would measure approximately 920-feet long by 450-feet wide, and would have a total footprint of approximately 8.0 acres, including 4.0 acres of habitat above the shoreline and 1.0 acre of submerged reef habitat. The island would be oriented NW-SE based on predominant wind direction from the southeast. In order to stabilize the perimeter of the rookery island, the proposed island would include shoreline protection to protect it from wave erosion. The island would be constructed using a containment berm and rock revetment. Once the containment berm is constructed, the outside of the berms would be armored with revetment type shoreline protection. A 5-foot wide toe would be constructed at the base of the revetment. The containment berm and revetment shoreline protection will not encapsulate the island entirely. An approximately 120-foot wide shallow water beach opening would be included at the northwestern side of the island. A reef would be constructed on the northwestern side of the island at the beach opening. The reef would reduce wave energy into the beach, provide oyster reef habitat, and provide foraging habitat for several bird species. Fill material for placement within the containment berm would be provided from an outside source. The project will take approximately two years to complete.</p>

<p>Conservation and Enhancement of Nesting and Foraging Birds, Component 4: Matagorda Bay Bird Island (Chester Island), TX</p>	<p>This project would slow the erosion of Chester Island by constructing sediment control and shoreline protection measures such as groins and breakwaters along the channel side of the island to protect the island from wave action and to contain future U.S. Army Corps of Engineers dredge material placement events. A restoration plan for Chester Island was finalized in 2017 that includes design templates to rebuild the island with material dredged from the Matagorda Ship Channel and Gulf Intracoastal Water Way during channel maintenance and recommendations for erosion response structures. No vegetative plantings are contemplated as part of this project. The project is expected to take approximately two years to complete.</p>
<p>Conservation and Enhancement of Nesting and Foraging Birds, Component: 5 Round Island, MS</p>	<p>This proposed project would include the following habitat restoration activities: materials management to create additional habitat on the island, vegetation management to enhance colonial water bird nesting habitat, scrub/shrub habitat creation, predator control, and debris removal.</p>
<p>Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 1: Texas</p>	<p>The objective of this project is to increase abundance and long-term resiliency of oysters through the creation of a network of subtidal and nearshore reefs linked by larval transport. This project will increase oyster abundance, spawning stock and improve habitat by restoring a network of oyster reefs at multiple sites across habitat and salinity gradients using a variety of substrates and/or reef configurations. This project will also create a network of high-vertical relief brood reefs which will be linked to commercially harvestable reefs through larval transport, allowing for increased oyster population sustainability and oyster reef resilience. Brood reefs will be built with large, high-relief material that will still permit harvesting based on limited harvest technique(s). Based on the best available science, the reefs will be sited in such a way that larvae produced on the brood reefs will drift toward the commercially harvestable reefs. Restored reef sites will be constructed with the use of marine barges to transport cultch material and construction equipment such as excavators to place the material into reef configurations. To increase resilience, reefs will be placed along a salinity gradient based on site conditions. Furthermore, where possible, constructing reefs along an intertidal-subtidal gradient will increase the likelihood of success by restoring the population linkage between nearshore and subtidal reefs that was disrupted by the spill. Reefs will be constructed at a height to keep oysters out of hypoxic bottom waters and where possible, reefs will be</p>

	constructed on suitable hard substrate that currently does not support oysters. The project is anticipated to last 6 years, including planning, implementation, and monitoring.
<p>Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 2: Louisiana</p>	<p>The objective of this project is to increase abundance and long-term resiliency of oysters through the creation of a network of subtidal and nearshore reefs linked by larval transport. This project will increase oyster abundance, spawning stock and improve habitat by restoring a network of oyster reefs at multiple sites across habitat and salinity gradients using a variety of substrates and/or reef configurations. This project will also create a network of high-vertical relief brood reefs which will be linked to commercially harvestable reefs through larval transport, allowing for increased oyster population sustainability and oyster reef resilience. Brood reefs will be built with large, high-relief material interspersed with smaller cultch material. Based on the best available science, the reefs will be sited in such a way that larvae produced on the brood reefs will drift toward the commercially harvestable reefs. Restored reef sites will be constructed with the use of marine barges to transport cultch material and construction equipment such as excavators to place the material into reef configurations. To increase resilience, reefs will be placed along a salinity gradient based on site conditions. Reefs will be constructed to a height of between 6” – 1.5’ to keep oysters out of hypoxic bottom waters and where possible, reefs will be constructed on suitable hard substrate that currently do not support oysters. The project is anticipated to last 7 years, including planning, implementation, and monitoring.</p>
<p>Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 4: Alabama</p>	<p>The objective of this project is to increase abundance and long-term resiliency of oysters through the creation of a network of subtidal and nearshore reefs linked by larval transport. This project will increase oyster abundance, spawning stock and improve habitat by restoring a network of oyster reefs at multiple sites across habitat and salinity gradients using a variety of substrates and/or reef configurations. This project will also create a network of high-vertical relief brood reefs which will be linked to commercially harvestable reefs through larval transport, allowing for increased oyster population sustainability and oyster reef resilience. Brood reefs will be built with large, high-relief material that will still permit harvesting based on limited harvest technique(s). Based on the best available science, the reefs will be sited in such a way that larvae produced on the brood reefs will drift toward the</p>

	<p>commercially harvestable reefs. The project will construct up to 30 acres of new oyster reefs. It is anticipated that contractor(s) selected to construct the new reefs will transport cultch by push boat and barge to the site and deploy the material off the deck, placing it into reef configurations using skid steers, excavator shovels, or high pressure water hoses. To increase resilience, reefs will be placed along a salinity gradient based on site conditions. Furthermore, where possible, constructing reefs along an intertidal-subtidal gradient will increase the likelihood of restoring the population linkage between reefs that were disrupted by the spill. Reefs will be constructed at a height to keep oysters out of hypoxic bottom waters and where possible, reefs will be constructed on suitable hard substrate that currently do not support oysters. Water depth in the action area generally ranges from approximately 7 – 12 feet. The project is anticipated to last 7 years, including planning, implementation, and monitoring.</p>
<p>Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 5: Florida</p>	<p>This project will create a network of high-vertical relief brood (protected) reefs which will be linked to sink (harvest or protected) reefs through larval transport, allowing for increased oyster population sustainability and oyster reef resilience. Brood reefs will be built with large, high-relief material; sink reefs will be constructed of cultch that will either permit or discourage harvesting based on the state’s management goals. Based on the best available science, the reefs will be sited in such a way that larvae produced on the brood reefs be transported to the sink reefs. To increase resilience, reefs will be placed along a salinity gradient based on local conditions. Constructing reefs over a range of salinities will increase the likelihood that at least some reefs should be successful in each year. Furthermore, where possible, constructing reefs along an intertidal-subtidal gradient may restore the population linkage between these habitats. Reefs will be constructed at a height to keep oysters out of hypoxic bottom waters. Where possible, reefs will be constructed on suitable hard substrate that does not currently support oysters. The project involves the construction of approximately 30 to 40 acres of oyster reef by planting oyster cultch material by barge or small shallow draft vessel. Reef size acreage will be based on the final height of built reefs. The project is anticipated to last 7 years, including planning, implementation, and monitoring.</p>

Table 2. Summary of ESA determinations for proposed projects in RW TIG RP/EA #1.
(NE = No Effect, NLAA = May Affect, Not Likely to Adversely Affect)

ESA Species Under USFWS Jurisdiction	Status	Conservation and Enhancement of Nesting and Foraging Habitat for Birds, Component 1: Chandeleur Islands, LA	Conservation and Enhancement of Nesting and Foraging Habitat for Birds, Component 3: San Antonio Bay Island, TX	Conservation and Enhancement of Nesting and Foraging Habitat for Birds, Component 4: Matagorda Bay Bird Island (Chester Island), TX	Conservation and Enhancement of Nesting and Foraging Habitat for Birds, Component 5: Round Island, MS
Piping Plover (<i>Charadrius melodus</i>)	Threatened	NLAA	NE	NLAA	NLAA
Piping Plover (CH)	-	NLAA	--	--	NLAA
Red Knot (<i>Calidris cantutus rufa</i>)	Threatened	NLAA	NE	NLAA	NLAA
Eastern Black Rail (<i>Laterallus jamaicensis jamaicensis</i>)	Threatened	--	--	NLAA	NLAA
Aplomado Falcon (<i>Falco femoralis septentrionalis</i>)	Endangered	--	--	NLAA	--
Whooping Crane (<i>Grus americana</i>)	Endangered	--	NLAA	NLAA	--
West Indian Manatee (<i>Trichechus manatus</i>)	Threatened	NLAA	NLAA	NLAA	NE
West India Manatee (CH)	-	--	--	--	--
Green Sea Turtle (<i>Chelonia mydas</i>)	Endangered	--	NE	NLAA	NE
Hawksbill Sea Turtle (<i>Eretmochelys imbricata</i>)	Endangered	NLAA	NE	NLAA	NE
Kemp's Ridley Sea Turtle (<i>Lepidochelys kempii</i>)	Endangered	NLAA	NE	NLAA	NE
Loggerhead Sea Turtle (<i>Caretta caretta</i>)	Threatened	NLAA	NE	NLAA	NE
Loggerhead Sea Turtle (CH)	-	NLAA	--	--	--
Leatherback Sea Turtle (<i>Dermochelys coriacea</i>)	Endangered	NLAA	NE	NLAA	NE

Table 2. (Continued)

ESA Species Under USFWS Jurisdiction	Status	Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 1: Texas	Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 2: Louisiana	Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 4: Alabama	Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs, Component 5: Florida
Piping Plover (<i>Charadrius melodus</i>)	Threatened	--	--	--	--
Piping Plover (CH)	-	--	--	--	--
Red Knot (<i>Calidris cantutus rufa</i>)	Threatened	--	--	--	--
Eastern Black Rail (<i>Laterallus jamaicensis jamaicensis</i>)	Threatened	--	--	--	--
Aplomado Falcon (<i>Falco femoralis septentrionalis</i>)	Endangered	--	--	--	--
Whooping Crane (<i>Grus americana</i>)	Endangered	--	--	--	--
West Indian Manatee (<i>Trichechus manatus</i>)	Threatened	NLAA	NLAA	NLAA	NLAA
West India Manatee (CH)	-	--	--	--	--
Green Sea Turtle (<i>Chelonia mydas</i>)	Endangered	NE	--	--	--
Hawksbill Sea Turtle (<i>Eretmochelys imbricata</i>)	Endangered	NE	--	--	--
Kemp's Ridley Sea Turtle (<i>Lepidochelys kempii</i>)	Endangered	NE	--	--	--
Loggerhead Sea Turtle (<i>Caretta caretta</i>)	Threatened	NE	--	--	--
Loggerhead Sea Turtle (CH)	-	--	--	--	--
Leatherback Sea Turtle (<i>Dermochelys coriacea</i>)	Endangered	NE	--	--	--

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

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

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

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

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

For assistance, please contact the compliance liaisons
USFWS: Erin Chandler at erin_chandler@fws.gov
NMFS: Christy Fellas at christina.fellas@noaa.gov

A. Project Identification

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

Implementing Trustee(s): Louisiana

Contact Name: Maury Chatellier Phone: 2245-342-6504 Email: maury.chatellier@la.gov

Project Name: Conservation and Enhancement of Nesting and Foraging Birds, Component 1:
Chandeleur Islands, LA

DIVER ID# NA TIG: Regionwide TIG Restoration Plan # 1

B. Project Phase and Supporting Documentation

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

Planning/Conceptual Construction/Implementation Engineering & Design

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

Please see embedded PDF for additional project details.



Chandeleur Islands
ED Exemplar_202006

C. Project Location

I. State and County/Parish of action area
St Bernard Parish and Plaquemines Parish, Louisiana

II. Latitude/Longitude for action area (Decimal degrees and datum [e.g., 27.71622°N, 80.25174°W NAD83]
[online conversion: <https://www.fcc.gov/encyclopedia/degrees-minutes-seconds-tofrom-decimal-degrees>]
29.792614°, -88.877708°

D. Existing Compliance Documentation

NEPA Documents

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

YES NO

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

Permits

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

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

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

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

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

restoration plan.

NEPA analysis for this project will be included in the draft restoration plan that is expected to be released by the RW TIG in March 2021

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

Name of Person Completing this Form: Annie Howard

Name of Project Lead: Maury Chatellier

Date Form Completed: 10/1/2020

Date Form Updated: Click here to enter text.

E. Description of Action Area

Provide a description of the existing environment (e.g., topography, vegetation type, soil type, substrate type, water quality, water depth, tidal/riverine/estuarine, hydrology and drainage patterns, current flow and direction), and land uses (e.g., public, residential, commercial, industrial, agricultural). Describe all areas that may be directly or indirectly affected by the action.

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

a. Waterbody

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

The Chandeleur Islands are located between the Gulf of Mexico and Chandeleur Sound in southeast Louisiana.

Does the project area include a river or estuary?

YES NO

If yes, please approximate the navigable distance from the project location to the marine environment.

0 miles

b. Existing Structures

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

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.

There are seagrasses and other marine vegetation located behind the island chain.

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.

There are black mangroves on the Chandeleur Islands.



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- Additional information regarding the existing environment will be collected during E&D.

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- Additional information regarding the existing environment will be collected during E&D.

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>

Click here to enter text.

h. Soils and Sediments

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

According to the websoil survey, the soil type on the Chandeleur Islands is Felicity loamy fine sand, 0 to 3 percent slopes, very frequently flooded.

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

Fifteen species with designated EFH are likely to be within Project Area, including shrimp (three species), fish (four species), and sharks (eight species). The following table lists the federally managed species found within the Chandeleur Island Project Area. No Habitat Areas of Particular Concern (HAPC) or EFH Areas Protected from Fishing (EFHA) were identified within the Project Area.

Table 1. Federally Managed Species

Common Name	Scientific Name
REEF FISH	
Gray (mangrove) snapper	<i>Lutjanus griseus</i>
Lane snapper	<i>Lutjanus synagris</i>
MACKERELS	
Spanish mackerel	<i>Scomberomorus maculatus</i>
SHRIMP	
Brown shrimp	<i>Farfantepenaeus aztecus</i>
Pink shrimp	<i>Farfantepenaeus duorarum</i>
White shrimp	<i>Litopenaeus setiferus</i>
SHARKS	
Atlantic sharpnose shark	<i>Rhizoprionodon terraenovae</i>
Blacktip shark	<i>Carcharhinus limbatus</i>
Bull shark	<i>Carcharhinus leucas</i>
Finetooth shark	<i>Carcharhinus isodon</i>
Scalloped hammerhead shark	<i>Sphyrna lewini</i>
Hammerhead shark	<i>Sphyrna mokarran</i>
Spinner shark	<i>Carcharhinus brevipinna</i>
Blacknose shark	<i>Carcharhinus acronotus</i>
RED DRUM	
Red drum	<i>Sciaenops ocellatus</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.

No construction would occur as part of this proposed project. This is an engineering and design project. Activities in the project area may include:

- Bathymetric and topographic surveys of access channels, dredging areas, and fill areas
- Magnetometer surveys
- Geotechnical data collection, including borings and/or cone penetrometer tests, possibly in both dredging and fill areas
- Other geophysical surveys
- Possible probing to confirm pipeline locations/depth of cover

- Possible cultural resources surveys
- Oyster surveys, assessments, and appraisals
- Nesting surveys (birds and sea turtles)
- Please see additional PDF embedded above for more examples.

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

E+D is estimated to take 2-3 years.

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

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

<i>1. Method of pile installation</i>	NA
<i>2. Material type of piles used</i>	NA
<i>3. Size (width) of piles/sheets</i>	NA
<i>4. Total number of piles/sheets</i>	NA
<i>5. Number of strikes for each single pile</i>	NA

6. <i>Number of strikes per hour (for a single pile)</i>	NA
7. <i>Expected number of piles to be driven each day</i>	NA
8. <i>Expected amount of time needed to drive each pile (minutes of driving activities)</i>	NA
9. <i>Expected number of sequential days spent pile driving</i>	NA
10. <i>Whether pile driving occurring in-water or on land</i>	NA
11. <i>Depth of water where piles will be driven</i>	NA

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

NA

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

NA

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

NA

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

NA

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

NA

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

NA

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

NA

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 CH		Marine	No Effect	
Green Sea Turtle (T)		Marine	No Effect	
Kemp's Ridley Sea Turtle (E)		Marine	No Effect	
Hawksbill Sea Turtle (E)		Marine	No Effect	
Leatherback Sea Turtle (E)		Marine	No Effect	
Giant Manta Ray		Choose an item.	No Effect	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
Choose an item.		Choose an item.	Choose an item.	Choose an item.
		Choose an item.	Choose an item.	Choose an item.

		Choose an item.	Choose an item.	Choose an item.
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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
Piping Plover		Choose an item.	May Affect, Not Likely to Adversely Affect	Choose an item.
Hawksbill Sea Turtle		Terrestrial	May Affect, Not Likely to Adversely Affect	Choose an item.
Kemp's Ridley		Terrestrial	May Affect, Not Likely to Adversely Affect	Choose an item.
Leatherback Sea Turtle		Terrestrial	May Affect, Not Likely to Adversely Affect	Choose an item.
Loggerhead Sea Turtle CH		Terrestrial	May Affect, Not Likely to Adversely Affect	Choose an item.
Red Knot		Terrestrial	May Affect, Likely to Adversely Affect	Choose an item.
Piping Plover CH		Terrestrial	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.

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.

This project would not include any construction activities and would be limited to data collection and monitoring needed for the engineering and design of the proposed project. Project planning, feasibility studies, design engineering studies, and permitting activities are intended to support the development of projects to propose in more detail in subsequent restoration plans. Some preliminary phases of project planning may cause direct, short-term, minor impacts through associated fieldwork (e.g., including drilling into soil or sediment with an augur, drill rig, or other tools to remove surface, subsurface, or core samples). These impacts would be very minor and localized to the project site given how small such areas are in relation to an overall project area.

Temporary impacts to the biological and physical environment also could include short-term, temporary disturbance of habitats and species; minor emissions from vehicles; and minor disturbance to terrestrial, estuarine, and marine environments. Permits for E&D activities will be secured when necessary. In cases where the appropriate permit or other environmental review has been secured (e.g., for photographing, handling, or disturbing listed species) or determined to be unnecessary (e.g., certain minor, temporary disturbance of marine mammals that does not constitute harassment), minor impacts to certain protected and managed resources also could occur and be considered minor.

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.

Project-planning actions for this project fall within the scope of the analysis in the PDARP/PEIS. The use of airboats, marsh buggies, augers and other equipment for bathymetric surveys, gathering elevation data, soil strength and compaction data may cause short-term, temporary impacts. Adherence to permit conditions and other requirements would minimize any adverse impacts.

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)

NA

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.

Adherence to permit conditions and other requirements would minimize any adverse impacts.

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.

Adherence to permit conditions and other requirements would minimize any adverse impacts..

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<i>i) Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>j) Conducting driving of sheet piles or pilings</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>k) Use of floating pipeline during dredging activities</i>

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 above.

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

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

Bald eagles are not in project area according to IPAC database

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

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

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

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

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

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

For assistance, please contact the compliance liaisons
USFWS: Erin Chandler at erin_chandler@fws.gov
NMFS: Christy Fellas at christina.fellas@noaa.gov

A. Project Identification

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

Implementing Trustee(s): Louisiana Department of Wildlife and Fisheries

Contact Name: Brady Carter Phone: 985-594-4130 Email: bcarter@wlf.la.gov

Project Name: Improving Resilience for Oysters by Linking Brood Reefs and Sink Reefs,

Component 2: Louisiana

DIVER ID# [Click to enter text](#) TIG: Regionwide TIG Restoration Plan # RP #1

B. Project Phase and Supporting Documentation

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

Planning/Conceptual Construction/Implementation Engineering & Design

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

[Click here to enter text.](#)

Supporting Documentation

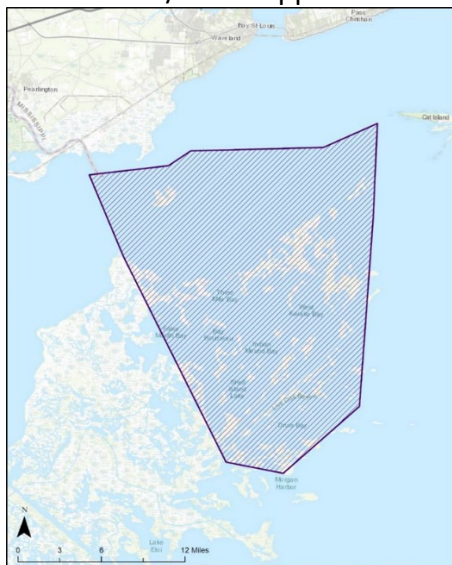
Please attach any maps, aerial photographs, or design drawings that will support the information in this BE form. Examples of such supporting documentation include, but are not limited to:

- 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

C. Project Location

I. State and County/Parish of action area

Biloxi Marsh/Mississippi Sound Area of St. Bernard Parish, LA



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>]

Specific locations for project elements TBD when planning steps included in Regionwide RP#1 Oyster project are completed and/or timeline for funding established.

D. Existing Compliance Documentation

NEPA Documents

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

YES

NO

Examples:

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

Permits

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

YES

NO

Permit Number and Type: Click or tap here to enter

text

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

YES

NO

Permit Number and Type: Click or tap here to enter

text.

If yes to any question above, please provide details in the text box (i.e. link to the NEPA document, or name of the document, year, lead federal agency, Point of Contact, 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 for this project will be included in the draft restoration plan that is expected to be released by the RW TIG in March 2021.

LATIG RP/EA#5 LCMR: Oysters and Marine Mammals contains [Enhancing Oyster Recovery Using Brood Reefs](#) project, which this project will be a continuation of.

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

Name of Person Completing this Form: Brady Carter

Name of Project Lead: Brady Carter

Date Form Completed: 09/30/20

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

k. Waterbody

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

The project would be located in open water areas of Mississippi Sound and within Biloxi

Marsh on Louisiana's Public Oyster Seed Grounds. The Biloxi emergent marsh is mostly saline habitat with some interior brackish marsh area. The saline marsh is dominated by needlegrass rush (*Juncus roemerianus*) and smooth cordgrass (*Spartina alterniflora*). Salinity ranges seasonally from oligohaline to polyhaline, with the average salinity categorized as mesohaline. The project area may extend from intertidal/nearshore depths to subtidal depths of -5 feet mean sea level (msl).

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. Depending on sites selected, Gulf of Mexico would be closest marine environment and would be between 20-30nm away.

i. Existing Structures

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

There are no existing structures in the project area.

m. 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.

There is no known seagrass or marine vegetation within the identified project areas

n. 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.

No mangroves within project areas, although black mangroves may be found on shorelines in close proximity.

o. 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.

There are no corals within the project areas.

p. Uplands

If applicable. Describe the current terrestrial habitat in which the project is located (e.g. pasture, forest,

meadows, beach and dune habitats, etc.).

There are no uplands within the project area.

q. 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 (*Tursiops truncatus*)

West Indian manatee (*Trichechus manatus*)

r. Soils and Sediments

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

In coastal Louisiana, the surficial sediments are predominantly silty clays, clayey silts, and silty sand. However, selected project locations would be situated on relic reefs and areas of firm substrate capable of supporting reef material. Surveys and groundtruthing would be conducted in the project areas to identify the sediment type and confirm suitability for the reef material, once planning phase of project is initiated by the Regionwide TIG.

s. Land Use

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

The project areas are located in open water.

t. Essential Fish Habitat

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

Projects occurring in Louisiana's estuarine waters in eco-region 3 (i.e., east of the Mississippi River) may potentially impact EFH for various life stages of the following federally-managed species: shrimp (brown (*Farfantepenaeus aztecus*), white (*Penaeus setiferus*) and pink shrimp (*Penaeus duorarum*)), red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), lane snapper (*Lutjanus synagris*), Spanish mackerel (*Scomberomorus maculatus*), Hammerhead shark (*Sphyrna mokarran*), Scalloped hammerhead shark (*Sphyrna lewin*), Blacktip shark (*Carcharhinus limbatus*), Bull shark (*Carcharhinus leucas*), spinner shark (*Carcharhinus brevipinna*), Atlantic sharpnose

shark (*Rhizoprionodon terraenovae*), Blacknose shark (*Carcharhinus acronotus*), and Finetooth shark (*Carcharhinus isodon*).

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 objective of this project is to increase abundance and long-term resiliency of oysters through the creation of a network of subtidal and nearshore reefs linked by larval transport. This project will increase oyster abundance, spawning stock and improve habitat by restoring a network of oyster reefs at multiple sites across habitat and salinity gradients using a variety of substrates and/or reef configurations.

This project will also create a network of high-vertical relief brood reefs which will be linked to commercially harvestable reefs through larval transport, allowing for increased oyster population sustainability and oyster reef resilience. Brood reefs will be built with large, high-relief material interspersed with smaller cultch material. Based on the best available science, the reefs will be sited in such a way that larvae produced on the brood reefs will drift toward the commercially harvestable reefs. Restored reef sites will be constructed with the use of marine barges to transport cultch material and construction equipment such as excavators to place the material into reef configurations.

Brood reefs are composed of both cultch material (e.g., limestone rock, oyster shell, or fossilized oyster shell) that is clean and free of contaminants, and non-harvestable vertical artificial reef material (e.g., reef balls, boulders), which provide substrate to support dense populations of oysters. To prohibit sea turtles from tunneling into open void of reef balls, if used; Reef balls fabricated with open-bottoms would have floors constructed of solid concrete, or cage/gate material having mesh length of 5" or less (measured across flat sides) and secured using stainless steel fasteners, attached prior to deployment. If pyramid type structures are used, design would follow appropriate guidelines. Areas suitable for brood reef restoration typically have good spat production and appropriate bottom composition (i.e., hard substrate) to allow for expansion but are limited in vertical relief. The goal of this alternative is

to develop a network of brood reefs that will serve as spawning stock to improve and maintain oyster production on Louisiana's POSG and POSR.

To increase resilience, reefs will be placed along a salinity gradient based on site conditions. Given the annual variation in salinity, spawning success should vary among years within a site. Furthermore, where possible, constructing reefs along an intertidal-subtidal gradient increase the likelihood of restoring the population linkage between nearshore and subtidal reefs that was disrupted by the spill. Reefs will be constructed to a height of between 6" – 1.5' to keep oysters out of hypoxic bottom waters and where possible, reefs will be constructed on suitable hard substrate that currently do not support oysters. If the restoration site is not naturally colonized by spat, other methods will be used such as remote spat setting or the transfer of adult oysters to the site. The project is anticipated to last 7 years, including planning, implementation, and monitoring.

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

NA

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

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

N/A

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

12. <i>Method of pile installation</i>	
13. <i>Material type of piles used</i>	
14. <i>Size (width) of piles/sheets</i>	
15. <i>Total number of piles/sheets</i>	
16. <i>Number of strikes for each single pile</i>	
17. <i>Number of strikes per hour (for a single pile)</i>	
18. <i>Expected number of piles to be driven each day</i>	
19. <i>Expected amount of time needed to drive each pile (minutes of driving activities)</i>	
20. <i>Expected number of sequential days spent pile driving</i>	
21. <i>Whether pile driving occurring in-water or on land</i>	
22. <i>Depth of water where piles will be driven</i>	

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

G. NOAA Species & Critical Habitat and Effects Determination Requested

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

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

ESA effects have been accounted for under an existing consultation.

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

2. Attach a separate map identifying species/critical habitat locations within the action area. For information on species and critical habitat under NMFS jurisdiction, visit:

http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/Documents/gulf_of_mexico.pdf.

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

Species and/or Critical Habitat	CH Unit (if applicable)	Location (Sea turtles and Gulf Sturgeon only)	Determinations (see definitions below)	For “No Effect”, please select justification.
Gulf Sturgeon (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Green Sea Turtle (T)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Loggerhead Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.

Kemp's Ridley Sea Turtle (E)		Marine	May Affect, Not Likely to Adversely Affect	Choose an item.
Giant Manta Ray		Choose an item.	May Affect, Not Likely to Adversely Affect	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
Choose an item.		Choose an item.	Select Most Appropriate	Choose an item.
Choose an item.		Choose an item.	Select Most Appropriate	Choose an item.
Choose an item.		Choose an item.	Select Most Appropriate	Choose an item.
Choose an item.		Choose an item.	Select Most Appropriate	Choose an item.
Choose an item.		Choose an item.	Select Most Appropriate	Choose an item.
Choose an item.		Choose an item.	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.

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 construction of the brood reefs would result in short-term, minor, adverse impacts on protected species, Critical Habitat, and Essential Fish Habitat. Temporary disturbances would result from an increase in water turbidity, increased underwater noise, and human activity during brood reef construction and monitoring, which could contribute to temporary disturbance or displacement of marine and estuarine fauna. Potential impacts could include injury or mortality of less mobile benthic species during brood reef deployment. However, the affected protected species are mobile and would likely avoid the area for the duration of in-water work, avoiding injury or mortality. Following brood reef placement, turbidity and noise would return to baseline levels. The project would result in long-term, beneficial impacts for protected species because oyster reefs provide habitat for epibenthic fauna, mobile invertebrates, and fish. Increased oyster production and connectivity would also benefit higher trophic species.

II. Explain the actions to reduce adverse effects to each species listed above. For each species for which impacts were identified, describe any conservation measures (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.

The proposed project sites may be located in an area where the West Indian manatee may occur and one site (Petit Pass) is within critical habitat for Gulf sturgeon. West Indian manatees are primarily found in calm waters where seagrass is present, and brood reef sites were selected to avoid seagrass beds. Thus, this species is unlikely to be adversely affected by the project. Water

quality best management practices (BMPs) would be employed to avoid and minimize impacts to water quality and benthic environments. While it is unlikely for Gulf sturgeon to inhabit the brood reef sites, time-of-year restrictions would be put in place within the documented range of the species to prevent work when the species is most likely to be present in estuarine waters (September to February). Any Gulf sturgeon within the vicinity would likely move to nearby suitable habitat.

The project sites may be located where foraging sea turtles could occur. Sea turtles also are commonly found where seagrass is present, and brood reef sites were selected to avoid seagrass beds. Overall, it is not expected that brood reef construction would appreciably increase risks to sea turtles. Given the minor potential effects on sea turtles, only work window for Gulf sturgeon would be followed, where appropriate.

All materials used to construct, and monitor, the reef would be chosen to avoid entanglement or entrapment risk to ESA-listed species. Additionally, heavy working equipment will be placed on mats and floating turbidity curtains will be used to mitigate increases in water turbidity. Potential short-term impacts will be limited with the implementation of the BMPs referenced below.

If a spill occurs onsite, response efforts and outcome will be reported to NMFS along with as built drawings and photos at the completion of the project. Additionally, any interactions with, or sightings of stranded, entangled, dead or injured sea turtles, Gulf sturgeon, sawfish, or marine mammals will be immediately reported to NMFS.

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 Conditions⁴ |
| <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)

In order to avoid or minimize adverse effects to listed species, other protected species, common wildlife, and their habitats, areas identified as biologically sensitive such as natural reefs, seagrass beds, bivalve beds, or live bottoms were not considered for brood reef sites. A buffer would be established between biologically sensitive areas and brood reefs to protect the sensitive areas from potential adverse impacts.

⁴ Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

For the in-water work, the project would implement measures from NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions (2006), NMFS's Measures for Reducing Entrapment Risk to Protected Species (2012), NMFS's Vessel Strike Avoidance Measures and Reporting for Mariners (2008), and USFWS and USACE's Standard Manatee Conditions for In-water Work (2011). These measures would minimize the potential for impacts to the West Indian manatee, Gulf sturgeon, and sea turtles. 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.

Any applicable conservation measures to minimize or avoid adverse effects on manatees and sturgeon would be incorporated into the project plans during the Engineering and Design phase. Ongoing technical coordination with NMFS and USFWS would continue to occur for the project related to potential impacts to protected species in accordance with Section 7 of the ESA.

BMPs cited for oysters in the Final Programmatic Damage Assessment and Restoration Plan (PDARP) and Final Programmatic Environmental Impact Statement (PEIS) would be incorporated into the proposed project (*DWH* NRDA Trustees, 2016; Leonard & Macfarlane, 2011).

Continued coordination with USFWS will occur during final design to establish necessary avoidance and mitigation measures.

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.

The proposed brood reef sites are located in areas of existing reef, which would reduce habitat conversion; however, the proposed brood reefs could convert small areas of soft bottom habitat (<10% per project description above), which could be potentially suitable habitat for Gulf sturgeon, into oyster reef habitat. The relatively small footprint of these projects would minimize adverse modification to Critical Habitat, and protected species populations would occupy suitable habitats nearby. While BMPs, including certain equipment and installation methods that maximize accurate material placement, shall be implemented, any local Gulf sturgeon are likely to move to nearby, undisturbed suitable habitats. Sturgeon forage in soft substrates and the reefs will be located on relic reefs and areas of firm substrate capable of supporting reef material.

The 4 essential features present in Unit 8 include:

1. Abundant prey items, such as amphipods, lancelets, polychaetes, gastropods, ghost shrimp, isopods, mollusks and/or crustaceans, within estuarine and marine habitats and substrates for subadult and adult life stages;
2. Water quality, including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;
3. Sediment quality, including texture and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;
4. Safe and unobstructed migratory pathways necessary for passage within and between riverine, estuarine, and marine habitats (e.g., an unobstructed river or a dammed river that still allows for passage).

This project may have minor effects on water quality and prey items during construction, but no long term effects are expected. The other essential features would not be affected by the propose project.

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.

BMPs from the PDARP would be incorporated into the proposed project (*DWH* NRDA Trustees, 2016; Leonard & Macfarlane, 2011) and the BMPs indicated above in checkboxes. Any applicable measures will be incorporated into the project plans during the Engineering and Design phase. Continued coordination with NOAA and USFWS will occur during final design to establish necessary avoidance and mitigation measures.

K. Marine Mammals

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

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

If yes, is your activity likely to cause large-scale, ecosystem level impacts to the quality (e.g. salinity, temperature) of marine or estuarine waters? NO YES

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

NO	YES	ACTIVITY
<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"/>	<i>c) Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls)</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>d) In-water Explosive detonation</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>e) Aquaculture</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>f) Restoration of barrier islands, levee construction or similar projects</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>g) Fresh-water river diversions</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>h) Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas)</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>i) Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>j) Conducting driving of sheet piles or pilings</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>k) Use of floating pipeline during dredging activities</i>

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>

Project construction includes the placement of clean brood reef materials on areas of existing shell substrate or relic reef locations. Noise and the presence of vessels and equipment, could cause temporary changes in water quality and temporarily disturb dolphins that are using habitat in the vicinity of the project area. However, these highly mobile species would likely be able utilize other habitat during project construction. Boat operators associated with the projects would also follow NOAA NMFS Southeast Region's 'Vessel Strike Avoidance Measures and Reporting for Mariners', which also would minimize potential harm. The combination of the mobility of dolphins, the implementation of BMPs, and the short duration of construction activities suggest that the projects are unlikely to have adverse effects to dolphins.

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 ⁵
<input checked="" type="checkbox"/>	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions ⁶
<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.

Click

BMPs to help prevent dolphin entanglements in any ropes/lines that are used to hang the tiles/cages:

- Any in-water lines be stiff, taut, and non-looping. Examples are heavy metal chains or cables that do not readily loop and tangle;

⁵ Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/outreach_and_education/index.html

⁶ Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/index.html

- Enclose flexible in-water lines, such as nylon rope, in PVC pipe or a plastic or rubber sleeve to add rigidity and prevent the line from looping or tangling;
- avoid excess line in the water.

L. Bald Eagles

Are bald eagles present in the action area? NO YES

If YES, the following conservation measures should be implemented:

5. 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).
6. 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.
7. 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.
8. 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 checked="" type="checkbox"/>	Oyster Reef Creation and Enhancement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Marine Debris Removal
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Construction of Living Shorelines
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Marsh Creation and Enhancement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Construction of Non-Fishing Piers

FINAL PDC checklist is attached to this BE form

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

AVOIDANCE AND MINIMIZATION MEASURES FOR PIPING PLOVERS AND RED KNOTS FOR SHORELINE ACTIVITIES IN LOUISIANA

- Do not disturb foraging or roosting piping plovers or red knots. Survey (conducted by a qualified biologist) the project area (i.e., operational site, access points, travel corridors, staging areas, etc.) for the presence of piping plovers/red knots or optimal habitat features (i.e., inlets, bayside sand and mud flats, tidal pools, and wrack lines). Educate personnel on avoiding those areas being utilized by the birds.
- When piping plovers or red knots are identified, keep vehicle and foot traffic 150 feet from the birds or 10 feet from optimal habitat features (even when birds are not present). Maintain the recommended buffers for the duration of the work activities even if the birds depart or relocate. Follow existing/established travel and access corridors and maintain slow speeds to avoid disturbing birds.
- Stay at least 500 feet or more away from high tide roosting areas, including large flocks of shorebirds when possible, as piping plovers and red knots may occur in mixed flocks. If birds in the area are repeatedly being flushed (i.e., flying away), then you are too close and need to back away.
- Designate access points, staging areas, waste collections areas, and travel corridors away from known foraging and roosting areas and keep all personnel, vehicles, and equipment within those designated corridors to minimize disturbance to birds and beach topographic alterations.
- Limit driving up and down the shoreline to the minimum number of passes needed to accomplish the work in order to minimize disturbance to birds and beach topographic alterations. Keep all personnel, vehicles, and equipment within the designated work area/project footprint and access corridors.
- Use low-pressure tire (10 psi) or tracked vehicles (e.g., ATVs, dozers, etc.) to avoid and minimize beach topographic alterations.
- Do not block major egress points in channels, rivers, passes, and bays to avoid disturbance to natural coastal processes.
- Staging areas and waste collection areas should be located to avoid beaches, dunes, inlets, and ephemeral tidal pools.
- Maintain a clean worksite. Remove all trash and work-related debris on a daily basis.
- Avoid disturbing the wrack line during project work or while traveling to and from the project site. If the wrack line must be crossed by equipment or vehicles to access the project area, then minimize disturbance by gently raking the wrack out of the way to establish a designated travel corridor for crossing the wrack line. Restore the wrack to its original configuration once access across it is no longer needed.
- Avoid disturbing bay side sand and mud flats.
- Avoid impacts to dune systems, both vegetated and non-vegetated, including trampling any dune vegetation. Use existing designated travel and access corridors at all times. If necessary, establish a buffer with flagging from the toe of the slope of the dune to a distance of 10 feet. Where vegetation extends off the dune onto the beach, the buffer should extend 10 from the vegetation.
- Restore beach topography and the wrack line to their natural pre-project conditions.