



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

April 12, 2022

To: Memorandum To File

From: Michael Barron, Deepwater Horizon Gulf Restoration Office

Subject: No Effect Determination for One Restoration Project proposed in Mississippi Trustee Implementation Group's Restoration Plan #3

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

We have reviewed the revised project materials provided for the proposed project Reduction of Marine Mammal Fishery Interactions through Trawl Technique and Component Improvements which is part of Mississippi Trustee Implementation Group Restoration Plan #3 and Environmental Assessment. The revision includes the addition of a new gear testing location off the coast of Florida near Shell Island in Bay County and the launching of boats from the National Marine Fisheries Service facility in Panama City, Florida. The USFWS Gulf Restoration Office has made the determination that the revised project will have no effect to listed species under the jurisdiction of USFWS. This is due to the nature of the activities being proposed (see attached Biological Evaluation form for details). This project will not require further ESA evaluation. Should any project be modified in a way that could adversely impact ESA-listed species or habitats, this determination will be reevaluated as appropriate.

We have also reviewed the proposed project revision 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) and impacts to migratory birds in accordance with the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. 703-712 and determined that take would be avoided, and best management practices will be followed. In accordance with the Marine Mammal Protection Act of 1972 as amended (16 U.S.C. 1361-1383b, 1401-1406, 1411-1421h), no marine mammals will be impacted.

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

Attachment (1)

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

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

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

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

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

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

A. Project Identification

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

Implementing Trustee(s): Mississippi Department of Environmental Quality (MDEQ)

Contact Name: Valerie Alley, MDEQ Program Management Division Chief

Phone: 601 961-5182 Email: valley@mdeq.ms.gov

Project Name: Reduction of Marine Mammal Fishery Interactions through Trawl Technique and Component Improvements

DIVER ID# [Click to enter text](#) TIG: Mississippi TIG Restoration Plan # 3

B. Project Phase and Supporting Documentation

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

Planning/Conceptual Construction/Implementation Engineering & Design

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

[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

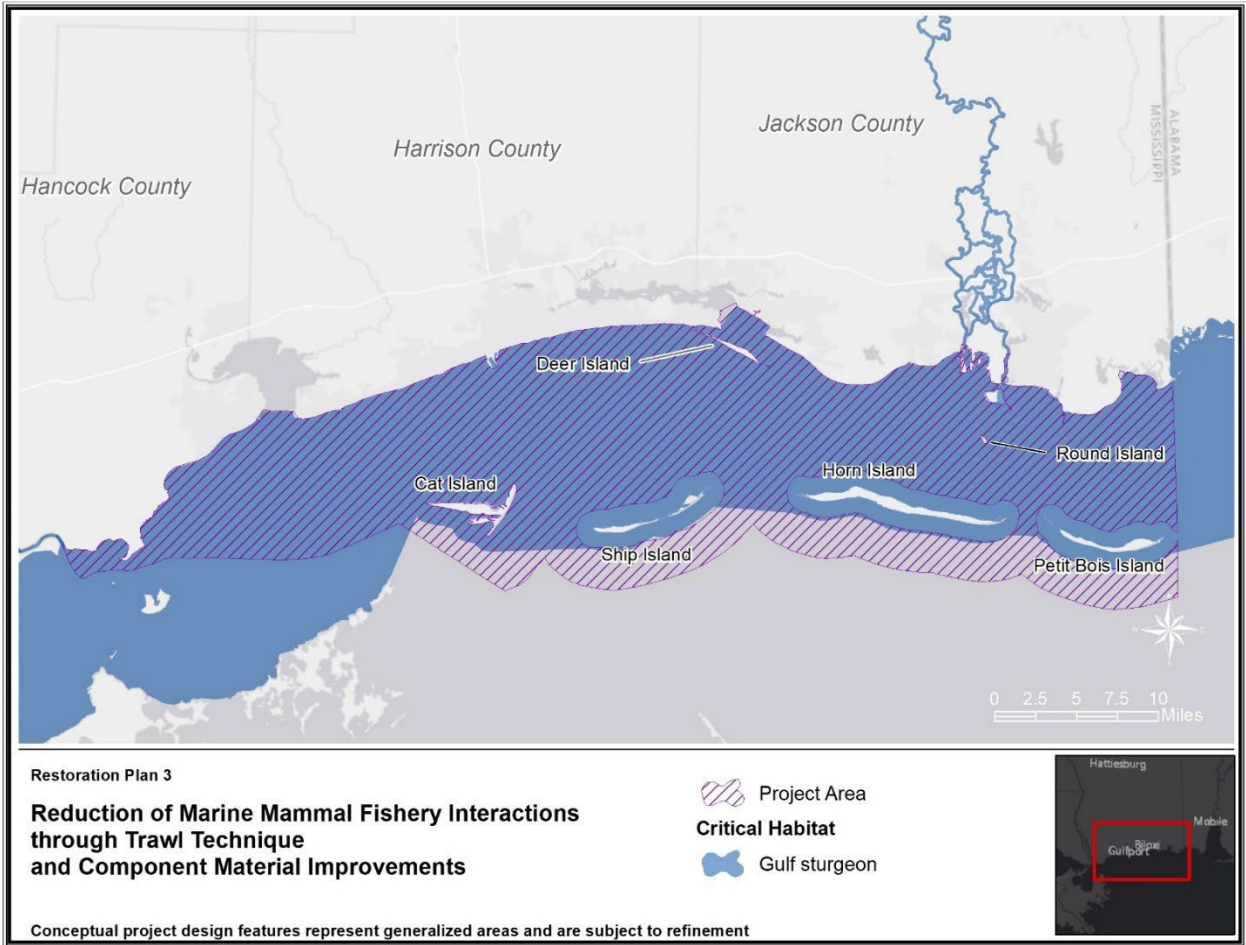


Figure 1: Project Area for implementation of Phase 2. Initial testing of equipment will take place in Florida (see Figure 2).

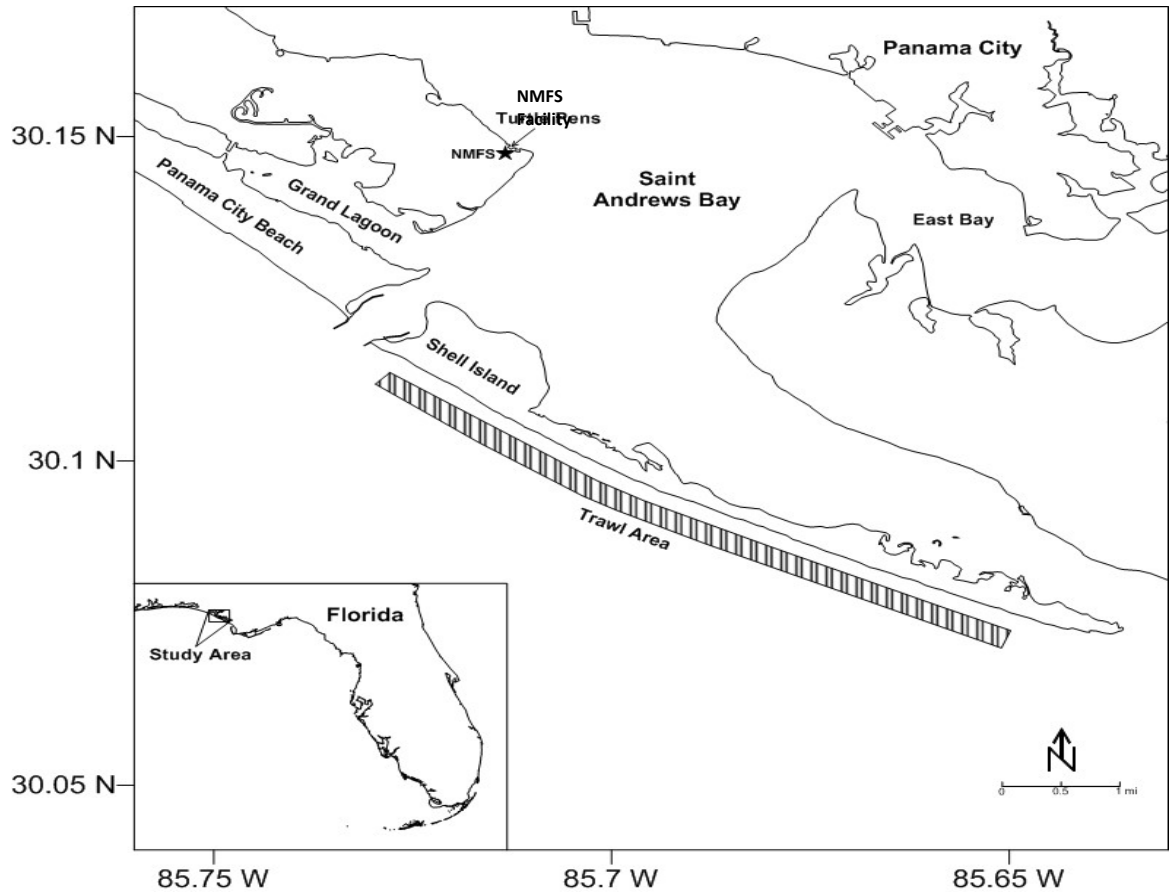


Figure 2. Testing area (shown as “trawl area”) near Shell Island in Bay County, Florida, in close vicinity of the NMFS facility in Panama City Beach, FL.

C. Project Location

I. State and County/Parish of action area

Mississippi, Hancock, Harrison and Jackson counties, Mississippi and Bay County, Florida.

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>]

Mississippi Centroid: lat 30.254797, long -89.020475

Florida Centroid: lat 30.058540, long -85.639687

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 MS TIG Restoration Plan # 3 that is expected to be released by the MS TIG in December 2021.

The Gulf of Mexico shrimp fishery is listed as a Category II in the 2020 List of Fisheries under the Marine Mammal Protection Act (MMPA) (see link below). Through its Marine Mammal Authorization Program, the MMPA requires that all Category I and II fisheries be registered with the National Marine Fisheries Service (NMFS) to receive authorization to incidentally kill or injure a marine mammals during the course of their fishing operation. Therefore, participants in the Gulf of Mexico shrimp

fishery are authorized to incidentally take marine mammals during their fishery operations but must report to the National Oceanic and Atmospheric Administration (NOAA) within 48 hours of any marine mammal deaths or injuries, among other things. Any take occurring during gear testing as part of this project would be reported by the fisher on that boat.

<https://www.federalregister.gov/documents/2020/04/16/2020-06908/list-of-fisheries-for-2020>

For NMFS jurisdiction, the effects of ongoing shrimp fishery operations was evaluated under section 7 of the ESA in this biop:

Reinitiation of Endangered Species Act (ESA) Section 7 Consultation on the Continued Implementation of the Sea Turtle

Conservation Regulations under the ESA and the Continued Authorization of the Southeast U.S. Shrimp Fisheries in Federal

Waters under the Magnuson-Stevens Fishery Management and Conservation Act (MSFMCA); Consultation No. SER-201 3-12255. Available at:

https://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/fisheries_bo/shrimp_biop_2014.pdf

Research and gear testing conducted by the NMFS Southeast Fisheries Science Center as part of this project will follow conditions outlines in their ESA permit (No. 20339).

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

Name of Person Completing this Form: Alane Young

Name of Project Lead: Tina Nations

Date Form

Completed: 6-1-21

Date Form

Updated: 4/4/22

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

During Phase 1 (approximately three years), in-water testing of net designs will be conducted aboard NOAA research vessel R/V Caretta in Florida coastal waters. Phase 1 also includes in-

water testing aboard R/V *Caretta* in Mississippi coastal waters based on proximity to known commercial shrimp trawl activity and the occurrence of a representative sample of various bottlenose dolphin stocks.

The Florida project area includes coastal waters of the Gulf of Mexico off Shell Island in Bay County, Florida. Water depths in the project area vary, but are generally 5 to 30 feet. The substrate in the project area is generally sandy and free of obstructions, artificial reefs, or habitat features that increase the likelihood of gear snagging.

The Mississippi Sound, which encompasses approximately 213,000 hectares or 758 square miles, is a marine system composed of an array of habitat types that support a large number of species and many different life stages. The Mississippi Sound and adjacent waters of the north Gulf of Mexico provide vital habitat for several endangered and threatened species including Kemp's ridley (*Lepidochelys kempii*), loggerhead (*Caretta caretta*), and green (*Chelonia mydas*), sea turtles and the largest population of Atlantic bottlenose dolphins (*Tursiops truncatus*) in the United States. The Mississippi Sound is a vital foraging area and a nursery ground for young dolphins during birthing in the spring and summer season. In addition, these are habitats to larval and juvenile stages of fish, invertebrates, and several federally threatened and endangered species, such as the Gulf sturgeon.

Depths within the Mississippi Sound are highly variable, but generally shallow. The northern and western parts of the Sound can be described as shallow, with depths ranging from 3 to 9 feet. Greater depths are found in the east, central, and southern portions of the Sound, with a mean depth of about 13 feet. In the vicinity of Pascagoula, natural depths in the Sound are generally less than 13 feet, whereas the Sound deepens toward the Gulf to approximately 20 feet. Waters in the Mississippi Sound are influenced by saline gulf waters flowing into the Sound between the barrier islands, as well as freshwater drainage from 20,000 square miles of mainland watersheds. Larger rivers draining into the Mississippi Sound include the Pearl, Pascagoula River, and Mobile Rivers. The mix of freshwater and saline conditions has created a dynamic estuarine environment. Hydrologic characteristics of the Mississippi Sound are strongly influenced by wind-driven currents in combination with tidal influences of the Gulf of Mexico. Tides within the Sound are diurnal, with an average range of up to 2 feet. The tides are strongly influenced by local bathymetry, local river discharges, and winds.

Deposited sediments of the Mississippi Sound are attributed to a combination of sediment deliveries to the Sound through river discharges associated with the Mississippi and Mobile Rivers, and the smaller river systems located between these two major systems. Those include the Pascagoula, Biloxi, Tchoutacabouffa, Jourdan, Wolf, and Pearl Rivers. Tidal flows also result in sediment transport into as well as out of the Sound through the inter-island passes. Central portions of the Sound were exhibit primarily silt and clay, in the Pascagoula area, medium-grained sands are more prevalent; and coarse-grained sands occur in the vicinity of the barrier islands. The Mississippi Sound and surrounding waters also contain oyster reef habitat. The reefs are found in small and large patches on the Mississippi Sound bottom and in the bays along the coast of the mainland. Oyster reef acreage is estimated to be approximately 10,000 to 12,000 acres.

The action area also includes one large, estuarine embayments Biloxi Bay. The bay ranges in depth from one to ten feet, except in minor channel segments where the depth reaches 30 feet. The textures of bottom substrates range from muddy sand to sandy mud. Bays are partially-mixed to well-mixed systems, depending on the season and experience tidal surges of one to one and one-half feet on average, but occasionally reach four feet. Salinity levels are in a constant state of flux depending on the ebb and flow of the tides and weather systems impacting the region and season. The muddy bottoms support a diverse group of benthic life forms, mainly polychaetes, mollusks, insects and crustaceans, many of which prefer the bays over other estuarine areas. Numerous species inhabit the coastal bay waters, and the most economically important are menhaden, sea trout, redfish, flounder, shrimp, and blue crabs.

a. Waterbody

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

The project area includes the Mississippi Sound, Biloxi Bay and the portions of the Gulf of Mexico within Mississippi and Florida waters.

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. Adjacent

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.

No existing structures are located in the action area.

c. Seagrasses & Other Marine Vegetation

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

Mississippi coastal waters contain three submergent bed types: barrier island seagrass,

widgeon grass and American wildcelery (tapegrass) beds. The types can be distinguished by differences in species composition, habitat requirements and location within the estuary.

Barrier island seagrass beds originally contained three species of seagrasses:

shoalweed, turtle, and manatee grasses. Several of these have become very rare or have disappeared altogether. The beds, now composed almost entirely of shoalweed, occur in less turbid, moderately saline habitats of the nearshore zone north of the barrier islands with a couple of nearshore mainland exceptions, including Grand Bay National Estuarine Research Reserve. The barrier island pond/lagoon areas are often dominated by widgeon grass and contain trapped fresh or brackish water. Widgeon grass beds occur in shallow and moderately turbid waters that are lower in salinity. The beds are found in bays, along bayous, on submerged mudflats and occasionally in barrier island ponds.

The coastal waters of the Florida project area do not contain seagrasses or submerged aquatic vegetation.

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 no mangroves in the action area.

e. Corals

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

There are no corals in the action area.

f. Uplands

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

N/A

g. Marine Mammals

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

Dolphins YES NO

Whales YES NO

Manatees YES NO

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

Atlantic bottlenose dolphin (*Tursiops truncatus*) and West Indian manatee (*Trichechus manatus manatus*)

h. Soils and Sediments

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

N/A

i. Land Use

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

N/A

j. Essential Fish Habitat

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

Testing of experimental shrimping gear will occur in nearshore and offshore waters designated as Essential Fish Habitat (EFH) for a large number of fishery species managed by the Gulf of Mexico Fishery Management Council and Highly Migratory Species managed by NOAA. Given the as-yet undefined specific location of the testing areas, identification of Federally managed species having EFH in the project area is difficult. It is unlikely that the project implementation would have an adverse impact on any category of EFH in the project area. The table below lists EFH species, substrates, and life stages within the study area.

EFH Species Table

Species	Habitats Utilized	Life stages within the Aquatic areas of the Study Area
Red Drum (<i>Scianops ocellatus</i>)	SAVs, soft bottom, hard bottom, sand/shell, emergent marsh	Larvae, post larvae, juvenile, adult, spawning adults

Mutton Snapper (<i>Lutjanus analis</i>)	SAVs	Juvenile, adult
Cubera Snapper (<i>Lutjanus cyanopterus</i>)	SAVs, emergent marsh	juvenile
Gray Snapper (<i>Lutjanus griseus</i>)	SAVs, soft bottom, sand/shell, emergent marsh	Post larvae, juvenile, adult,
Lane Snapper (<i>Lutjanus synagris</i>)	SAVs, soft bottom, sand/shell	Post larvae, juvenile
Yellowtail Snapper (<i>Ocyurus chrysurus</i>)	SAVs, soft bottom	juvenile
Goliath Grouper (<i>Epinephelus itajara</i>)	SAVs, hard bottom	juvenile
Red Grouper (<i>Epinephelus morio</i>)	SAVs, hard bottom	juvenile
Black Grouper (<i>Mycteroperca bonaci</i>)	SAVs	juvenile
Spanish Mackerel (<i>Scomberomorus maculatus</i>)	pelagic	Juvenile, adult
Brown Shrimp (<i>Penaeus aztecus</i>)	SAVs, soft bottom, sand/shell, emergent marsh, oyster reef	Post larvae, juvenile
White Shrimp (<i>Penaeus setiferus</i>)	emergent marsh, soft bottom	Post larvae, juvenile

F. Project Description

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

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

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

This project will seek to determine both the optimal trawl material type(s) and covering configuration(s) (i.e., experimental treatments) to reduce interactions with dolphins when compared to the standard polyethylene webbing (i.e., control). The project will also compare shrimp catch rates and operational aspects between each of the experimental treatments compared to the control (i.e., protective coverings vs control, stronger net materials vs control). Net maintenance for each treatment type will also be compared. Additionally, fishing techniques that may decrease dolphin interactions will be noted and passed along to industry. Drones, optical cameras, and acoustic cameras (ARIS/DIDSON) would also be explored for use in observing dolphin behavior during trawling operations in an effort to identify behavior modifications that directly caused by changes in trawl configuration.

The project will be conducted collaboratively with researchers and the fishing community cooperatively evaluating the performance and usability of both trawl covers and trawls constructed of alternative materials. Testing will occur aboard chartered commercial shrimp trawl vessels and

NOAA research vessels. After testing is complete, the project team will evaluate data and identify the preferred trawl configuration(s) that minimize dolphin interactions while maintaining catch and operations (performance and usability). Commercial fishing practices and level of effort will not be altered during this project. Various aspects of net components will be modified and existing best management practices for commercial shrimp trawl vessels and NOAA research vessels will be followed during operations. NOAA research vessels operations will follow the conditions in their existing ESA permit, issued to the NMFS Southeast Fisheries Science Center.

Specific project objectives include:

Phase 1-Initial Equipment Development and Testing:

- Conducting in-water evaluations of net/net covering designs with fishermen and researchers using SCUBA divers.
- Construct initial prototype design and conduct comparative testing on chartered commercial shrimp vessels.

Phase 2 (Comparative Equipment Testing):

- Installation of gear/conduct comparative volunteer or incentivized testing on commercial shrimp vessels to compare control and experimental net/net covering designs.

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

The preliminary project schedule is:

Phase 1 (Years 1 - 3) in Florida and Mississippi:

- 1) Planning activities including forming an industry stakeholder working group to promote project participation and solicit ideas for net covering designs and stronger net webbing materials. Acquiring equipment, establishing vessel contracts, developing a study design and standardized protocols, identifying and training personnel, and developing timelines.
- 2) Construction of initial prototype designs.
- 3) Conduct in-water evaluations of net designs made with high strength materials and trawls equipped with trawl coverings using SCUBA divers from NMFS Harvesting Systems Dive Team. On-site modifications will be performed to develop optimal gear designs.
- 4) Proof of concept testing aboard NOAA research vessel RV Caretta to evaluate the operational feasibility, and shrimp catch rates of the both the trawl coverings and trawls constructed with alternative materials.
- 5) Conduct comparative testing on chartered commercial shrimp vessels comparing control and experimental net designs for the following:
 - Polyethylene net vs net constructed of alternative material

- Polyethylene net vs Polyethylene net with trawl covering
Comparisons will include shrimp catch rates and trawl damage from dolphin interactions. Damage may be assessed by comparing the number of holes in each net. Additionally, dolphin behaviors observed with drones, optical cameras, and/or acoustic cameras may be used to compare between trawl configurations.

Phase 2 (Years 4 – 5):

- 1) Develop a plan for voluntary gear modifications in the MS skimmer trawl fleet based on comparative testing results, which may include but not be limited to incentivized use of alternate gear. This may include installing gear on vessels voluntarily using the gear and/or compensating vessels for gear use. NOAA gear specialist would be utilized to install gear on shrimp vessels.
- 2) Implement an outreach plan cooperatively with partners and stakeholders to educate Mississippi shrimp fishermen regarding the benefits of alternate fishing gear use and methods to minimize dolphin interactions. Outreach would be conducted through training, workshops, and gear distribution.

II. *Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)* [Click here to enter text.](#)

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).

Click or tap here to enter text.

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)?

Click or tap here to enter text.

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

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

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

h. Artificial Reefs (Provide a detailed account of the artificial reef site selection and reef establishment decisions [i.e.,

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

N/A

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

N/A

G. NOAA 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 CH	Unit 8	Marine	No Effect	Choose an item
Gulf Sturgeon (T)		Marine	No Effect	Choose an item
Green Sea Turtle (T)		Marine	No Effect	Choose an item
Leatherback Sea Turtle (E)		Marine	No Effect	Select Most Appropriate
Hawksbill Sea Turtle (E)		Marine	No Effect	Select Most Appropriate
Loggerhead Sea Turtle		Marine	No Effect	Choose an item
Kemp's Ridley Sea Turtle (E)		Marine	No Effect	Choose an item
Giant Manta Ray			No Effect	

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	No Effect	Select Most Appropriate
Loggerhead Sea Turtle CH	LOGG-N-35 LOGG-N-36	Terrestrial	No Effect	No suitable habitat action area
Loggerhead Sea Turtle		Terrestrial	No Effect	No suitable habitat action area

Leatherback Sea Turtle		Terrestrial	No Effect	No suitable habitat action area
Kemp's Ridley		Terrestrial	No Effect	No suitable habitat action area
Hawksbill Sea Turtle		Terrestrial	No Effect	No suitable habitat action area
Green Sea Turtle		Terrestrial	No Effect	No suitable habitat action area
Gulf Sturgeon		Riverine/Freshwater	No Effect	Species does not occur within action area
Gulf Sturgeon CH	Unit 2	Riverine/Freshwater	No Effect	Species does not occur within action area
Pearl Darter		Riverine/Freshwater	No Effect	Species does not occur within action area
Piping Plover		Terrestrial	No Effect	Species does not occur within action area
Piping Plover CH	MS-1 through MS-13	Terrestrial	No Effect	Species does not occur within action area
Red Knot		Terrestrial	No Effect	Species does not occur within action area
Inflated Heelsplitter		Riverine/Freshwater	No Effect	Species does not occur within action area
Eastern Black Rail		Terrestrial	No Effect	No suitable habitat action area
Mississippi Sandhill Crane		Terrestrial	No Effect	No suitable habitat action area
Mississippi Sandhill Crane CH		Terrestrial	No Effect	No suitable habitat action area
Wood Stork		Terrestrial	No Effect	No suitable habitat action area
Alabama Red-bellied Turtle		Riverine/Freshwater	No Effect	No suitable habitat action area
Gopher Tortoise		Terrestrial	No Effect	No suitable habitat action area
Dusky Gopher Frog		Terrestrial	No Effect	No suitable habitat action area

Dusky Gopher Frog CH	Units 2, 3, 4, 5, 6, and 7	Terrestrial	No Effect	No suitable habitat action area
Louisiana Quillwort		Terrestrial	No Effect	No suitable habitat action area
Red-cockaded Woodpecker		Terrestrial	No Effect	No suitable habitat action area
Black Pine Snake		Terrestrial	No Effect	No suitable habitat action area
Black Pine Snake CH	Unit 5	Terrestrial	No Effect	No suitable habitat action area
Eastern Indigo Snake		Terrestrial	No Effect	No suitable habitat action area
Yellow-blotched Map Turtle		Riverine/Freshwater	No Effect	No suitable habitat action area
Ringed Map Turtle		Riverine/Freshwater	No Effect	No suitable habitat action area

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.

Ongoing fisheries operations may effect ESA-listed species as described in existing biological opinions for the shrimp fishery. Implementing this project will not alter existing fishing operations and will not affect ESA-listed species.

Any incidental take that may occur from work done by the NMFS Southeast Fisheries Science Center to test gear is covered by NMFS ESA permit 20339, which includes conservation measures for manatees.

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

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

<input checked="" type="checkbox"/> USFWS Standard Manatee In Water Conditions

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> | NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions¹ |
| <input type="checkbox"/> | NMFS Measures for Reducing the Entrapment Risk to Protected Species¹ |
| <input checked="" type="checkbox"/> | NMFS 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)

Click here to enter text.

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.

Gulf Sturgeon CH: There are no anticipated impacts to critical habitat as a result of this project beyond the existing fishing operations.

II. *Explain the actions to reduce adverse effects to critical habitat listed above. For critical habitat for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review.*

Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.

Click here to enter text.

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

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

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

See Section F for project details. Bottlenose dolphin incidental capture/entanglements have been documented in both research and commercial shrimp fishery trawls. Incidental takes of marine mammals are authorized aboard commercial fishing vessels under the MMPA’s Marine Mammal Authorization Program, with reporting requirements (see Section D).

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 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.

Incidental take(s) of marine mammals aboard a contracted commercial shrimp trawl vessel is already authorized. However, the following reporting must occur:

1. Immediately report any capture/entanglement (live or dead) to the Southeast Region Marine Mammal Stranding Hotline at 1-877-433-8299. If the animal is dead, retain the carcass aboard the vessel, if feasible. Also report the take to Stacey Horstman, NMFS SERO Bottlenose Dolphin Conservation Coordinator (Stacey.Horstman@noaa.gov; 727-551-5780) and Christy Fellas, NOAA Restoration Center, Deepwater Horizon Environmental Compliance (Christina.Fellas@noaa.gov; 727-551-5714).

2. Within 48 hours, report the death or injury per MMPA requirements at:
<https://docs.google.com/a/noaa.gov/forms/d/e/1FAIpQLSfKe0moEVK24x1Jbly33A0MRAa2ljZgmAcCVO1hEXghtB3S>

YA/viewform

² Documents can be found here: http://sero.nmfs.noaa.gov/protected_resources/outreach_and_education/index.html

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

L. Bald Eagles

Are bald eagles present in the action area? NO YES

If YES, the following conservation measures should be implemented:

1. If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, all activities (e.g., walking, camping, clean-up, use of a UTV, ATV, or boat) should avoid the nest by a minimum of 660 feet. If the nest is protected by a vegetated buffer where there is *no* line of sight to the nest, then the minimum avoidance distance is 330 feet. This avoidance distance shall be maintained from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).
2. If a similar activity (e.g., driving on a roadway) is closer than 660 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.
3. If a vegetated buffer is present and there is no line of sight to the nest and a similar activity is closer than 330 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.
4. In some instances, activities conducted at a distance greater than 660 feet of a nest may result in disturbance. If an activity appears to cause initial disturbance, the activity shall stop and all individuals and equipment will be moved away until the eagles are no longer displaying disturbance behaviors.

Will you implement the above measures? NO YES

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

M. Request approval for use of NMFS PDCs for this project

Complete this section only if your project qualifies for streamlined ESA consultation under the ESA Framework Programmatic Biological Opinion completed by NMFS on February 10, 2016. To be eligible for streamlined ESA consultation with NMFS, you must implement all Project Design Criteria (PDCs) applicable to your project. Check “yes” for PDC categories that apply to the proposed project, and request PDC checklist from NMFS.

NO	YES	ACTIVITY
<input type="checkbox"/>	<input type="checkbox"/>	Oyster Reef Creation and Enhancement
<input type="checkbox"/>	<input type="checkbox"/>	Marine Debris Removal
<input type="checkbox"/>	<input type="checkbox"/>	Construction of Living Shorelines
<input type="checkbox"/>	<input type="checkbox"/>	Marsh Creation and Enhancement
<input type="checkbox"/>	<input type="checkbox"/>	Construction of Non-Fishing Piers

N. Submitting the BE Form

We request that all BE forms and consultation materials be placed on Sharepoint for review. Upon receipt, we will conduct a preliminary review and provide any comments and feedback, including any requests for modifications or additional information. If modifications or additional information is necessary, we will work with you until the Biological Evaluation form is considered complete. Once complete, we will use the Biological Evaluation form to initiate appropriate consultations.

Questions may be directed to:

NMFS ESA § 7 Consultation

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

USFWS ESA § 7 Consultation

Michael Barron, Department of the Interior
 Email: michael_barron@fws.gov
 Phone: 251-421-7030

ATTACHMENT 1

**USFWS Standard Conditions for Vessel Surveys and Netting in Manatee
 Habitat During Scientific Research**
 (last revision: December 2019)

Permittees engaged in vessel surveys and netting activities in manatee habitat shall comply with the following conditions to protect manatees during project-related activities:

1. All project personnel shall be informed that manatees may be found in the project area and that there are civil and criminal penalties for harming, harassing, and/or killing manatees, which are protected under the Federal Marine Mammal Protection Act, the Endangered Species Act, and other Federal, State, and Commonwealth laws and regulations.
2. Boat operators must avoid collisions with manatees through prudent seamanship and by adhering to Federal, State, and Commonwealth measures to prevent collisions with manatees, including Permit Conditions 3.(c) and 4.(a) below. In Florida, information about Federal and State manatee speed zones can be found at:
<https://myfwc.com/wildlifehabitats/wildlife/manatee/protection-zones/>
3. Project personnel shall take steps to avoid the accidental vessel strike or capture of manatees in nets and associated gear. These steps shall include:
 - a. Restricting netting activities to between one-half hour after sunrise and one-half hour before sunset.
 - b. Monitoring netting sites for at least 15 minutes before deploying gear to ensure that manatees are not in the action area. Manatees must be allowed to leave or pass through the area safely before setting any nets. Animals must not be herded away or harassed into leaving.
 - c. Having at least one experienced, dedicated observer watching for manatees during project-related activities and ensuring that all personnel are alert to the presence of manatees. An observer must be on each vessel that is operated at high speed (i.e., plowing or planing speeds). Personnel should be encouraged to use sunglasses with polarized lenses to improve the likelihood of seeing manatees on and below the water's surface.
 - d. Monitoring nets and float lines constantly. Stopping all active netting, including vessel movements, when a manatee(s) comes within 100 feet of the action area. Activities may resume when the manatee(s) has moved 100 feet from the area or when it has been 30 minutes since the animal(s) was last seen.
 - e. Maintaining gear to minimize the likelihood of entangling manatees. Gear-related lines and ropes must be kept taut and free of kinks and knots. Stiff line or cable should be strung across the mouths of hoop and funnel nets at a perpendicular angle (to form an "X") to prevent manatees from entering these nets.
4. If a manatee is accidentally captured or struck by a research vessel:

- a. Immediately discontinue research and netting operations and turn off or idle boat motors.
- b. Verify that the animal has been struck or is entangled in your gear. Manatees occasionally appear in netting operations but are not entangled; they may also test or push against nets without entanglement. For a manatee struck by a vessel, maintain visual contact and assess any visible external injuries and note if blood is exuding from the mouth or nostrils or if the manatee is listing to one side or exhibiting any buoyancy problems.
- c. For manatees entangled in gear, these animals are under duress and are known to injure people and damage nets and other gear. Project personnel should exercise extreme caution when in the presence of captured animals.
- d. Monitor the manatee's breathing and behavior to assess its condition. Healthy animals surface to breathe about once every four minutes. Entangling nets, float lines, and other gear should be kept loose enough to allow animals to surface and breathe.
- e. If a manatee's breathing pattern or behavior suggests that the animal is unduly stressed, stop any activities causing or contributing to the animal's distress.
- f. All options for safely and expeditiously removing an animal from entangling gear shall be identified and considered. If it is determined that the animal can be released from the gear without significant risk to human safety, detailed plans, including safety measures, shall be described to project personnel prior to attempting to release the animal.
- g. When handling an entangled manatee, the animal's powerful tail should be avoided. Personnel handling entangling gear should avoid getting fingers, arms, legs, etc., caught in gear. Personal belongings that could entangle in gear (loose clothing, wrist watches, jewelry, etc.) should be removed prior to handling entangled animals and gear.
- h. In the case of animals that are not seriously entangled, plans should consider releasing tension on entangling gear to enable an animal to free itself. For more seriously entangled manatees, plans will likely include pulling, unwrapping, cutting, etc., entangling gear from the animal's head, trunk, tail, and/or flippers.
- i. If a manatee is entangled in a seine net, the best course of action is to stop and open the net, creating as large a window as possible for the manatee to swim out of. If the net set has been completed, one end of the net should be released and a window in the net circumference should be opened to allow the manatee to swim out.

- j. If in the opinion of project personnel the manatee cannot be released without significant risk to human safety, authorized stranding responders shall be contacted for assistance. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher shall be called for assistance. See No. 7 below "To Report Accidental Manatee Captures or Vessel Strike," for contact information.
 - k. Upon release or after a vessel strike, researchers must make efforts to monitor animals for at least 30 minutes at a safe distance. In addition, if sub-adult animals (and especially dependent calves) are involved, researchers should make extra efforts to determine if the calf rejoins its mother.
 - l. In the event that stranding responders assist with a rescue, project personnel shall aid and support responders as directed to safely and expeditiously rescue the animal.
 - m. All accidental manatee captures or vessel strikes shall be reported immediately to State or Commonwealth wildlife officials and to USFWS's North Florida Ecological Services Office. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher must be notified. Within 24 hours of an accidental manatee capture or vessel strike, the incident must also be reported to the local USFWS ecological services office, and to the Chief of Permits, NMFS, Permits and Conservation Division. See No. 7 below "To Report Accidental Manatee Captures or Vessel Strike" for contact information.
 - n. Within 30-days of an accidental capture or vessel strike, the permittee shall submit a written report to manatee staff at the USFWS's North Florida Ecological Services Office, the local USFWS ecological services office (if different), and to the Chief of Permits, NMFS, Permits and Conservation Division describing the circumstances and gear that led to the capture or strike of the manatee, the condition of the animal, steps taken to free or monitor the animal, and any recommendations to prevent and minimize any future events.
5. In the event an accidental capture or vessel strike results in injury to or the death of a manatee:
- a. Project activities must stop and accidental manatee captures or vessel strikes shall be reported immediately to State or Commonwealth wildlife officials and to the USFWS's North Florida Ecological Services Office. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher must be notified. Within 24 hours of a manatee injury or death, the event must be reported to the local USFWS ecological services office (if not already notified), and to the Chief of Permits, NMFS, Permits and Conservation Division. See No. 7 below "To Report Accidental Manatee Captures or Vessel Strike" for contact information).

- b. Authorized stranding responders shall be asked to provide aid to injured animals and, in the event of a death, to salvage the carcass. Researchers must make all reasonable efforts to maintain visual contact with the manatee until responders arrive, or until given other directions by responders, USFWS, or NMFS.
 - c. Injured animals shall be treated by a licensed and experienced veterinarian or by experienced animal care staff working in consultation with a licensed and experienced veterinarian.
 - d. In the event of a death, a necropsy should be performed by a qualified veterinarian or by persons experienced in marine mammal necropsies to evaluate the cause of death. In Florida, manatee necropsies are conducted by the State's Marine Mammal Pathobiology Laboratory.
 - e. Within 30-days of an injury or death, the permittee shall submit a written report to the USFWS's North Florida Ecological Services Office, the local USFWS ecological services office (if different), and NMFS describing the circumstances and gear that led to the injury or death of the manatee and the steps taken to free, monitor, and/or rescue the animal. The report shall include information from attending responders, veterinarian(s) and/or staff and shall include descriptions of injuries and trauma, likely causes of injuries, trauma, or death, and any recommendations to minimize future injuries or death.
6. USFWS, in consultation with NMFS and other appropriate authorities (including State or Commonwealth officials) and individuals, will review all event-related information and will recommend to NMFS if, in USFWS' opinion, the project should be authorized to continue as permitted, continue with modifications necessary to prevent additional injuries or deaths from occurring, or if permit revocation procedures should be initiated.
 7. To Report Accidental Manatee Captures or Vessel Strikes, Including Injured and Dead Manatees:
 - a. NMFS, Permits and Conservation Division
Phone: 301-427-8401;
 - b. USFWS, North Florida Ecological Services Office
Phone: 904-731-3286 or 904-731-3336; and FAX: 904-731-3045
Email: jaxregs@fws.gov; and
 - c. Local USFWS ecological services office; and

d. State/Commonwealth contact.

To Report Accidental Manatee Captures or Vessel Strikes, Including Injured and Dead Manatees

Florida Manatees

Florida Fish and Wildlife Conservation Commission, Wildlife Alert

PHONE: 888 404-3922

U.S Fish and Wildlife Service (USFWS), North Florida Ecological Services Office
PHONE: 904 731-3286 (or 3336) and FAX: 904 731-3045. Email:
jaxregs@fws.gov.

U.S Fish and Wildlife Service (USFWS), Alabama Ecological Services Office PHONE: 251 441-5181

U.S Fish and Wildlife Service (USFWS), Georgia Ecological Services Office PHONE: 912 832-8739

U.S Fish and Wildlife Service (USFWS), Louisiana Ecological Services Office PHONE: 337 291-3100

U.S Fish and Wildlife Service (USFWS), Mississippi Ecological Services Office PHONE: 601 965-4900

U.S Fish and Wildlife Service (USFWS), North Carolina Ecological Services Office PHONE: 919 856-4520

U.S Fish and Wildlife Service (USFWS), South Carolina Ecological Services Office PHONE: 843 727-4707

U.S Fish and Wildlife Service (USFWS), Clear Lake Ecological Services Office (Houston area)
PHONE: 281 286-8282

U.S Fish and Wildlife Service (USFWS), Corpus Cristi Ecological Services Office PHONE: 361

994-9005

U.S Fish and Wildlife Service (USFWS), Virginia Ecological Services Office PHONE: 804 693-6694

Florida (Florida Fish and Wildlife Conservation Commission, Wildlife Alert) PHONE: 888 404-3922

For Florida manatees outside of Florida, contact respective state wildlife officials:

Alabama (Dauphin Island Sea Lab's Manatee Sightings Network) PHONE: 866 493-5803

Georgia (Georgia Department of Natural Resources) PHONE: 800 TO SAVE ME (272-8363)

Louisiana (Louisiana Department of Wildlife and Fisheries) PHONE: 800 256-2749

Mississippi (Mississippi Department of Wildlife, Fisheries, and Parks) PHONE: 800 BE SMART (237-6278)

North Carolina (North Carolina Wildlife Resources Commission) PHONE: 800 662-7137

South Carolina (South Carolina Department of Natural Resources) PHONE: 800 922-5431

Texas (Texas Marine Mammal Stranding Network) PHONE: 800 9 MAMMAL (962-6625)

Virginia (Virginia Department of Game and Inland Fisheries, Wildlife Alert) PHONE: 855 571-9003

Antillean Manatees in Puerto Rico

U.S Fish and Wildlife Service (USFWS), Caribbean Ecological Services Field Office PHONE: 787 851-7297 and FAX: 787 851-7440

Puerto Rico (Centro de Mando del Cuerpo de Vigilantes) PHONE: 787 724-5700