



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

May 10, 2022

To: Memorandum to File

From: Michael Barron, Deepwater Horizon Gulf Restoration Office

Subject: Regulatory Compliance Determinations for One Restoration Project Proposed in the Open Ocean Trustee Implementation Group's Restoration Plan #1: Birds and Sturgeon

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. Determinations for Marine Mammal Protection Act (MMPA), Bald and Golden Eagle Protection Act (BGEPA), and Migratory Bird Treaty Act (MBTA) are also indicated below. This memo does not include any information or effects determinations for protected species under the jurisdiction of the National Marine Fisheries Service.

We reviewed the Biological Evaluation (BE) provided for one project proposed for implementation in the Restoration Plan and Environmental Assessment #1: Birds and Sturgeon, Characterizing Gulf Sturgeon Spawning Habitat, Habitat Use, Origins of Juvenile Sturgeon in Pearl and Pascagoula River Systems (Attachment 1). The original BE concluded that the project would have a Not Likely to Adversely Affect for Gulf sturgeon (*Acipenser oxyrinchus (=oxyrhynchus) desotoi*), West Indian manatee (*Trichechus manatus*), and Ringed map turtle (*Graptemys oculifera*). During informal intra-Service consultation for this project, it was determined that MMPA was Not Applicable as West Indian manatee would not occur in the actual project locations as the locations are too far upstream. It was also determined that the proponent had an existing permit (TE-697819-5) allowing for any incidental take should it occur

and therefore, ESA was considered as covered by existing consultation. All compliance determinations are indicated below.

Project Title	ESA (USFWS)	MMPA (USFWS)	BGEPA (USFWS)	MBTA (USFWS)
Characterizing Gulf Sturgeon Spawning Habitat, Habitat Use, Origins of Juvenile Sturgeon in Pearl and Pascagoula River Systems	C	NA	NT	NT

NA – Not Applicable; NT – No Take; C- Covered by Existing Consultation

Should any project be modified in a way that could adversely impact species or habitats, this determination will be reevaluated as appropriate.

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

Attachments (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 Protect 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.

A. Project Identification

<i>Federal Action Agency</i>	U.S. Fish and Wildlife Service	<i>Additional Federal</i>	Select Most Appropriate
<i>Agency Contact(s)</i>			
USFWS: Ashley Mills at 812-756-2712 and Ashley_Mills@fws.gov			
NMFS: Christy Fellas at 727-551-5714 and Christina.Fellas@noaa.gov			
<i>I. Implementing Trustee(s)</i>	DOI		
<i>II. Contact Person</i>	Adam Kaeser	<i>III. Phone</i>	(850) 769-0552
		<i>Email</i>	adam_kaeser@fws.gov
<i>IV. Project Name and ID# (Official name of project and ID number assigned by Trustees in</i>	Characterizing Gulf Sturgeon Spawning Habitat, Habitat Use, Origins of Juvenile Sturgeon in Pearl, Pascagoula River Systems		
<i>V. NMFS Office (Choose appropriate office based on project location)</i>	Not Applicable	<i>USFWS Office (Choose or write in appropriate office based on project location)</i>	Louisiana Ecological Services Field Office (Lafayette) and M
<i>VI. Project Type #1</i>	Restore Sturgeon Spawning Habitat	<i>Project Type #2, if helpful</i>	Select Most Appropriate
<i>VII. TI</i>	Open Ocean TIG	<i>Restoration Plan</i>	1

B. Project Location

I. Physical Address of action area (If applicable)

Pascagoula and Pearl River systems (including all major tributaries)

II. State & County/Parish of action area

Mississippi and Louisiana

III. 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>])

Within basin boundaries of both major river systems (Pascagoula and Pearl)

IV. Township, range and section of the action area

Within basin boundaries of both major river systems (Pascagoula and Pearl)

C. 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:

- 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

[Empty text box for permit details]

Have any federal permits been applied for but not yet obtained, if so which ones and what is the permit number(s)? Yes No

[Empty text box for permit details]

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.

Restoration plan: Open Ocean Trustee Implementation Group Draft Restoration Plan I/Environmental Assessment (Draft RP I/EA).

This project will involve the scientific collection (capture, handling, and release) of live Gulf sturgeon from the Pascagoula and Pearl River systems (freshwater only). Federal permits are not required. State permits (MS and LA) are required to conduct such activities, and will be obtained and provided to USFWS prior to the capture of any sturgeon.

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

Name of Person Completing this Form:	<u>Adam Kaeser</u>
Name of Project Lead:	<u></u>
Date Form Completed:	<u>04/24/2018</u>
Date Form Updated:	<u>5/11/18</u>

D. Description of Action Area

Attach a separate map delineating where the action will occur and where critical habitat, if any, is located. Map or describe all areas that may be directly or indirectly affected by the action. 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). If CH is not designated in the area, then map or describe any suitable habitat in the area.

The Pearl and Pascagoula River systems in Mississippi and Louisiana. See the map figure below. Gulf sturgeon are co-managed by NMFS and FWS, but all proposed project activities will take place wholly within the geographical jurisdiction of FWS.

Figure 1. Map of project area highlighting reaches targeted for spawning habitat mapping (yellow) that encompass roughly 1,500 stream kilometers in both the Pearl and Pascagoula River systems.



Figure 1. Map of project area highlighting reaches targeted for spawning habitat mapping (yellow) that encompass roughly 1,500 stream kilometers in both the Pearl and Pascagoula River systems.

a. **Waterbody**
If applicable. Name the body of water, including wetlands (freshwater or estuarine), on which the project is located. If the location is in a river or estuary, please approximate the navigable distance from the project location to the marine environment.

This project is located within the Pearl and Pascagoula River systems in Mississippi and Louisiana. Project activities will be conducted within all navigable (by motorboat) portions of these riverine systems.

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

NA

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

NA

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

NA

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

NA

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

NA

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

The West Indian manatee may occur within the project area, though infrequently.

E. Project Description

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

No construction planned. The objectives of this project are (1) to identify and characterize potential spawning habitat in Pearl and Pascagoula River systems, (2) to describe habitat accessibility and patterns of habitat use during spawning periods, (3) to determine where in each system juvenile sturgeon are being spawned (i.e., river(s) of origin), and (4) to synthesize data needed to evaluate and prioritize spawning habitat restoration projects such as in-stream barrier removal

II. Describe the Proposed Action: 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. 3. 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.

Objective 1 (Years 1 and 2) Mapping Potential Spawning Habitat

Gulf Sturgeon spawn exclusively over hard, rocky substrates such as cobble, boulder, and bedrock outcrops. These substrates are easily distinguished in side scan sonar imagery from the soft, sandy bottoms that predominate in Coastal Plain river systems. We propose to map and characterize potential sturgeon spawning habitat throughout the Pearl and Pascagoula River systems using side scan sonar habitat mapping. This approach involves sonar surveys, sonar data processing, habitat classification and mapping, and field groundtruthing. The end-products are full-channel, complete-census maps of benthic substrates throughout both river systems that identify and quantify all potential areas of spawning habitat for Gulf Sturgeon. Beyond providing the template for investigating patterns of habitat use, these maps will document the baseline, pre-restoration condition of potential spawning habitat needed to monitor change over time related to activities such as channel stabilization or erosion mitigation.

Objective 2 (Years 2-4) Telemetry Monitoring of Adult Habitat Access and Use

Upon mapping potential spawning habitat, passive telemetry and temperature arrays will be strategically deployed to bracket areas of spawning habitat to investigate patterns of adult fish access and utilization of these habitats. The arrays will include 30 receivers and 10 temperature monitoring devices per river system. A pair of telemetry receivers will be deployed above and below each sill in the Pearl system to describe passage and relate this behavior to conditions at each site. A total of 30 adult sturgeon will be fitted with internal, acoustic transmitters in each system. During handling, the sex of each adult fish will be determined and tissue samples (i.e., fin clip and fin spine samples) will be obtained for genetic and isotopic microchemistry analyses (described under the River Origins section). The results of genetic and isotopic analyses will provide additional insights into parentage and adult spawning site fidelity. [Complementary genetics work on juvenile fish in these systems is described and funded under the "Juvenile Gulf Sturgeon - Gulf-wide Population Dynamics and Habitat Use" project.] In the Pearl system, telemetry data will be analyzed to develop a model relating passage to discharge, and conduct a comparative analysis of passability at both sills over the historical flow record that exists for both streams. Telemetry analysis in both systems will yield map layers identifying reaches of river that are frequented by adult sturgeon during the spawning season. This information will critically inform future assessments that identify and rank potential restoration projects such as riparian reforestation, channel stabilization, and/or spawning reef creation.

Objective 3 (Years 2-4) River Origins

Mapping spawning habitat and monitoring use of this habitat by adults is, however, insufficient to determine the importance of a given spawning area to the production of juvenile sturgeon. To do so, we propose to examine trace element and strontium isotope microchemistry of juvenile sturgeon fin spines. Recent research on the Choctawhatchee River system has established these techniques are viable for Gulf Sturgeon and that strontium isotopes are useful for examining regions of occupancy within a river. Research will compare water samples from the Pearl and Bogue Chitto River drainages, and from the Pascagoula River drainage to create water chemistry maps for each watershed, and supplement preliminary research conducted by the Mississippi State University. This work has revealed differences in both trace elements (e.g., strontium, barium, zinc) and strontium isotopes between the Upper Pearl and Bogue Chitto Rivers, indicating an ability to separate fish from natal rivers and reaches of rivers. Fin spines collected from juvenile sturgeon in each river will be analyzed, and chemical signatures evaluated relative to water chemistry patterns to estimate river and region of river (i.e., reach) of natal origin. Research will compare relationships between diet, water chemistry, and elemental signatures in Atlantic Sturgeon, a closely related subspecies of Gulf Sturgeon, to improve our understanding of patterns observed in wild fish. This information, in concert with telemetry and habitat data will help to elucidate where the successful recruitment of juvenile sturgeon is occurring within the 2 study systems.

Objective 4 (Years 3-4) Synthesis

Differences in habitat accessibility, availability of spawning habitat, and production of juvenile sturgeon will be evaluated to provide management recommendations regarding anticipated outcomes of removal of one or both sills in the Pearl River system. Furthermore, this knowledge will help to refine the prioritization of barrier removal projects relative to alternative approaches that aim to protect, restore, or enhance spawning habitats in this system. This information will likewise inform restoration strategies in the Pascagoula River system that aim to employ habitat protection, restoration, or enhancement techniques.

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

a. *If applicable, Overwater Structures (Place your answers to the following questions in the box below.)*

- i. *Is the proposed use of this structure for a docking facility or an observation platform?*
- ii. *If no, is this a fishing pier? Public or Private? How many people are expected to fish per day? How do you plan to address hook and line captures?*
- 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 (sqft)?*

NA

b. *Pilings & Sheetpiles (What type of material is the piling or sheetpiles? What size and how many will be used? Method used to install: impact hammer, vibratory hammer, jetting, etc.?)*

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), 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)).*

Permitted netting procedures will be used to collect Gulf sturgeon in both river systems for telemetry and microchemistry samples. Standard protocols for sturgeon capture involve anchored gill nets soaked for <1 hr per set in areas known to attract sturgeon. This work will be conducted by a team that is both trained and experienced in proper sturgeon capture and handling.

F. NOAA Species & Critical Habitat and Effects Determination Requested

1. List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.
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	CH UNIT	LOCATION (sea turtles and Gulf sturgeon only)	DETERMINATI ON
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
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Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate

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 = 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 = 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.

Critical Habitat Destruction or Adverse Modification = Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

G. USFWS Species & Critical Habitat and Effects Determination Requested

1. List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.
2. Attach a separate map identifying species/critical habitat locations within the action area.

For information on species and critical habitat under USFWS jurisdiction, visit <http://www.fws.gov/endangered/species/>.

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	CH UNIT	LOCATION (sea turtles and Gulf sturgeon only)	DETERMINATION
Gulf sturgeon CH	Pearl, Pascagoula	Select One	CH - No Destruction
Gulf sturgeon		Riverine/freshwater	May Affect, Not Likely to Adversely Affect
Ringed map turtle		Select One	May Affect, Not Likely to Adversely Affect
West Indian manatee		Select One	May Affect, Not Likely to Adversely Affect
Yellow-blotched map turtle		Select One	No Effect
Inflated (or Alabama) heelsplitter		Select One	No Effect
Pearl darter		Select One	No Effect
Alabama red-belly turtle		Select One	No Effect
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
Select One		Select One	Select Most Appropriate
		Select One	Select Most Appropriate
		Select One	Select Most Appropriate

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 = 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 = 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.

Critical Habitat Destruction or Adverse Modification = Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

H. Effects of the proposed project to the species and habitats

I. *Explain the potential beneficial and adverse effects to each species listed above (Describe what, when, and how the species will be impacted and the likely response to the impact. Be sure to include direct, indirect, and cumulative impacts and where possible, quantify effects. If species are present (or potentially present) and will not be adversely affected describe your rationale. If species are unlikely to be present in the general area or action area, explain why. This justification provides documentation for your administrative record, avoids the need for additional correspondence regarding the species, and helps expedite review.)*

Gulf Sturgeon

Permitted netting procedures will be used to collect Gulf sturgeon in both river systems for telemetry and microchemistry samples. Standard protocols published by Kahn and Mohead (NOAA/NMFS, 2010) for the handling of Shortnose, Atlantic, Gulf, and Green Sturgeon will be followed. Adherence to these protocols will limit the negative impacts to the species. Similar activities that involve capture and handling of Gulf Sturgeon have been conducted routinely over the last 3 decades (>10,000 fish captures) across the range of the species, with very limited cases of mortality related to handling. All activities will take place from a vessel on the river, field staff briefly standing in the river, or field staff briefly standing on river banks. Nets will be deployed from vessel, and brought back to vessel with no dragging on the river bottom. Arrays and receivers to be deployed in relation to Objective 2 will be attached to existing structures (such as piers, bridges, or pilings) and will not be in contact with river bottom or banks.

West Indian Manatee

The West Indian manatee could occur within the project action area (Pearl and Pascagoula Rivers). Standard Manatee Conditions for In-Water Work BMPs (see attachment) will be implemented to minimize any potential impacts to manatees, such as disturbance due to increased human activity or proximity/contact with vessels.

All other listed species

Negative impacts to listed species are not anticipated as a result of this project. Activities will primarily take place from a vessel in open current river channels. Nets will be deployed from vessel, and brought back to vessel with no dragging on the river bottom. Arrays and receivers (Objective 2) will be attached to existing structures (such as piers, bridges, or pilings) and will avoid contact with river bottom. Project activities are unlikely to impact river bottom habitat (sediment or pebbles) or log/detritus habitat favored by listed turtles, fish or mussels. Field staff may briefly stand in the river, or on river banks, but only if absolutely necessary.

II. *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 and where possible, quantify effects (e.g. acres of habitat, miles of habitat). Describe your rationale if designated or proposed critical habitats are present and will not be adversely affected.*

No effects to critical habitat are expected, rather, this project aims to map and characterize the essential spawning habitat of Gulf sturgeon throughout both the Pearl and Pascagoula River systems. At present, knowledge of available spawning habitat is extremely limited, yet this information is fundamental for restoration project planning and evaluation.

I. Actions to Reduce Adverse Effects

I. *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.)*

Standard protocols published by Kahn and Mohead (NOAA/NMFS, 2010) for the handling of Shortnose, Atlantic, Gulf, and Green Sturgeon will be followed. Adherence to these protocols will avoid negative impacts to the species.

Reference

Kahn, J., and M. Mohead. 2010. A protocol for use of Shortnose, Atlantic, Gulf, and Green Sturgeons. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-OPR-45, 62 p.

Additionally, BMPs will be implemented (Standard Manatee Conditions for In-Water Work 2011) to reduce potential impacts to manatees.

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.)*

NA

J. 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

Is your activity likely to impact 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

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

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>

Permitted netting procedures will be use to collect Gulf sturgeon in both river systems for telemetry and microchemistry samples, however, we anticipate very limited to no sampling whatsoever in marine or estuarine waters. Gulf sturgeon fishing activities will be conducted in Spring-early Summer and Fall in freshwater, riverine reaches of both river systems where Gulf sturgeon are known to aggregate. Gulf sturgeon do not typically reside in marine waters during these seasons, and are known to venture into marine environments in the Winter to feed; during this season they are exceedingly difficult to capture due to their dispersed distribution.

IV. Are any measures planned to mitigate potential impacts to marine mammals? If yes, NO YES
provide text in box below.

All proposed activities will take place outside the jurisdiction of marine mammals managed by NMFS.

The implementing trustee will implement and enforce the Standard Manatee Conditions BMPs (see attachment) to avoid and minimize any impacts to manatees. Additionally, prior to setting nets for Gulf sturgeon capture the field crew will survey the reach for any signs of marine mammals. If marine mammals are observed, netting will not be conducted in the area. If a marine mammal enters an area being fished, nets will immediately be removed from the water and relocated. Marine mammals are rarely or never observed in the riverine areas of rivers fished for Gulf sturgeon during the Spring-Fall fishing seasons.

K. Bald Eagles

Are bald eagles present in the action area? NO

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

L. Migratory Birds

Identify the species anticipated in the action area and behaviors (breeding, roosting, foraging) anticipated during project implementation. You may list similar species on a single line and categorize by type (e.g., Wading birds - great blue heron, snowy egret, reddish egret). If species are present and impacts to individuals or habitat could occur, identify avoidance and minimization measures to prevent incidental take. Incidental take of Migratory Birds cannot be authorized. Use additional tables on the next page if needed.

I.

<u>Species/Species Group</u>	<u>Behavior</u>	<u>Species/Habitat Impacts and Conservation Measures to Minimize Impacts</u>
		<p>All activities will take place from a vessel on the river, field staff standing in the river, or field staff briefly standing on river banks. We do not anticipate any negative impacts to migratory birds.</p>

M. Migratory Birds

Continuation page if needed.

<u>II.</u> <u>IMPACTS</u>	<u>SPECIES/SPECIES GROUP</u>	<u>BEHAVIOR</u>	<u>SPECIES/HABITAT IMPACTS and CONSERVATION MEASURES TO MINIMIZE</u>

N. Best Practices

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 practices you'll be using in your project.

A.1.1.2 - Migratory Birds: We will implement applicable BMP's as needed. This project is not expected to impact migratory birds.

O. Submitting the BE Form

NMFS ESA § 7 Consultation

We request that all ESA §7 consultation requests/packages be submitted electronically to: **Christina.Fellas@noaa.gov**

Questions about consultation status may be directed to the email address above or by phone: Christy Fellas: 727-551-5714

USFWS ESA § 7 Consultation

We request that all consultation requests/packages to USFWS be submitted electronically to: **Ashley_Mills@fws.gov**.

You will be notified when we receive your Biological Evaluation. 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 send your Biological Evaluation to the appropriate Field Office to conduct consultation.

Questions about consultation status may be directed to the email address above or by phone: Ashley Mills: 812-756-2712

Endangered Species Act Programmatic Biological Opinion

Deepwater Horizon Oil Spill RestorationNational Marine Fisheries Service

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. By checking all boxes below that apply to this project you are confirming that PDCs are incorporated into the project design and construction. The entire Biological Evaluation Form must be completed and include any information necessary to verify that all applicable PDCs are incorporated into the project. If the project incorporates more than one type of restoration, check boxes in all appropriate categories.

Are you using this form to request approval for use of NMFS PDCs for this project?

Yes No

You must receive NMFS approval before proceeding with your project. Note that this PDC checklist does not apply to ESA consultation with USFWS.

Full text of the PDCs can be reviewed at: http://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/DWH_bo/appendix_a.pdf

Oyster Reef Creation and Enhancement

Yes No

- Project is designed to avoid techniques and locations listed in the oyster reef creation and enhancement PDCs 1.a-1.e.
- Follows NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions (PDC 2.a)
- Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.b)
- In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.c)
- In Gulf sturgeon critical habitat, oyster reef creation and enhancement occurs only on existing shell substrata or relic reef locations (PDC 2.d)
- Cultch material is free of debris and contaminants (PDC 2.e)
- Fresh shell has been properly aged or quarantined before being deployed (PDC 2.f)
- Cultch material is placed in a manner to minimize disturbance of sediment (PDC 2.g)
- Methods are employed to avoid turbidity impacts to ESA-listed species (PDC 2.h)
- Plan/drawings for intermittent breaks between oyster reef segment has been provided (2.i)
- Spill prevention and response plan has been developed (2.j)
- Design and materials used avoid entanglement and entrapment risks for ESA-listed species (2.k)
- Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Marine Debris Removal

Yes No

- This project is designed to avoid techniques and locations listed in the marine debris removal PDCs 1.a-1.c
- All on-water operations shall take place during daylight hours (PDC 2.a)
- Follows NMFS' Sea Turtle and Smalltooth Sawfish Conditions (PDC 2.b)
- Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.c)
- Project personnel have been notified of procedures if approached by a marine mammal or sea turtle (PDC 2.d)
- Trash and debris will be disposed of at an upland location (PDCs 2.e)
-

Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Construction of Living Shorelines

Yes No

- This project is designed to avoid techniques and locations listed in the living shoreline PDCs 1.a-1.h
- Follows NMFS' Sea Turtle and Smalltooth Sawfish Conditions (PDC 2.a)
- All in-water work activities will be conducted during daylight hours (PDC 2.b)
- Piles for navigation of public safety purposes are less than 24" diameter and non-metal if impact hammer used (PDC 2.c)
- Spill prevention and response plan has been developed (2.d)
- Fill material is not sourced using hopper dredge or from sea turtle, Gulf sturgeon or smalltooth sawfish critical habitat and in-water borrow sites do not impact turtle nesting beaches (PDC 2.e)
- Design and materials do not create entrapment or entanglement risks to ESA-listed species and do not block migration (PDC 2.f)
- In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.g)
- Methods are employed to avoid turbidity impacts to ESA-listed species (PDC 2.h)
- Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.i)
- Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Marsh Creation and Enhancement

Yes No

- Project is designed to avoid techniques and locations listed in the marsh creation PDCs 1.a-1.f
- Follows NMFS' Sea Turtle and Smalltooth Sawfish Conditions (PDC 2.a)
- Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.b)
- All in-water work activities will be conducted during daylight hours (PDC 2.c)
- Spill prevention and response plan has been developed (PDC 2.d)
- Fill material is not sourced using hopper dredge or from sea turtle, Gulf sturgeon or smalltooth sawfish critical habitat and in-water borrow sites do not impact turtle nesting beaches (PDC 2.e)
- Design and materials do not create entrapment or entanglement risks to ESA-listed species and do not block migration (PDC 2.f)
- In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.g)
- Methods are employed to avoid turbidity impacts to ESA-listed species (PDCs 2.h)
- Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Construction of Non-Fishing Piers

Yes No

- This project is designed to avoid locations listed in the non-fishing piers PDCs 1.a
- Spill prevention and response plan has been developed (PDC 2.a)
- Design and materials do not create entrapment or entanglement risks to ESA-listed species and do not block migration (PDC 2.b)
- Follows NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions (PDC 2.c)
- Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.d)
- Follow Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat (PDC 2.e)
- In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.f)
- Follows methods and timing for pile driving (2.g)
- Follows construction sequencing and avoids propwashing (PDC 2.h)
- Water depth will not be altered (PDC 2.i)
- Lighting specifications are incorporated for piers on or adjacent to sea turtle nesting beaches (PDC 2.j)
- Follows educational and fishing signage requirements (PDC 2.k)
- Methods are employed to avoid turbidity impacts to ESA-listed species (PDC 2.l)
- Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Check the box to confirm that all applicable requirements are met and a streamlined consultation with NMFS is requested:

Name of person(s) completing this form:

Date form completed:

***You must receive NMFS approval before proceeding with your project ***

BEST PRACTICES FROM THE PDARP/PEIS

The following section is a direct excerpt from Section 6, Appendix A in Deepwater Horizon oil spill: Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement, *Practices Included in Environmental Consequences Analysis in Chapter 6, Section 6.4* (DWH Trustees 2016).

Birds

Migratory Birds

Use care to avoid birds when operating machinery or vehicles near birds.

During the project design phase, coordinate with the USFWS and the state trust resource agency to site and design projects to avoid or minimize impacts to migratory bird nesting habitats or important feeding/loafing areas.

Avoid working in migratory bird nesting habitats during breeding, nesting, and fledging (approximately mid-February through late August). If project activities must occur during this timeframe and breeding, nesting, or fledging birds are present, contact the state trust resource agency to obtain the most recent guidance to protect nesting birds or rookeries, and their recommendations will be implemented.

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

If vegetation clearing is necessary, clear vegetation outside the migratory bird nesting season (approximately mid-February through late August) or have a qualified biologist inspect for active nests.

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

Avoid driving over the natural organic material (“wrack”) line or areas of dense seaweed, as these habitats may contain hatchlings and chicks that are difficult to see.

Install pointy, white piling caps on exposed pilings to prevent bird roosting on piers, docks, and marinas.

Mammals

Manatee

For in-water work in Alabama, Mississippi, and Texas where manatees could be present, follow conditions a, b, c, and d of the Standard Manatee Conditions for In-water Work 2011. Report any collisions to the USFWS or state trust resource agency. Temporary signs, if necessary, can be modified from the Florida Fish and Wildlife Conservation Commission’s template to reflect local conditions. In Louisiana, follow the most recent version of the Standard Conditions for In-Water Work in the Presence of Manatees.

https://www.fws.gov/northflorida/manatee/Manate_Key_Programmatic/20130425_gd_Appendix%20B_2011_Standard%20Manatee%20Construction%20Conditions.pdf

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK 2011

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The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or in Vero Beach (1-772-562-3909) for south Florida, and emailed to FWC at ImperiledSpecies@myFWC.com.
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads Caution: Boaters must be posted. A second sign measuring at least 8½ " by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at http://www.myfwc.com/WILDLIFEHABITATS/manatee_sign_vendors.htm. Questions concerning these signs can be forwarded to the email address listed above.

Manatee Work in Louisiana

In Louisiana, follow the most recent version of the *Standard Manatee Conditions for In-water Activities* provided below:

During in-water work in areas that potentially support manatees all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:

- All work, equipment, and vessel operation should cease if a manatee is spotted within a 50- footradius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes havepassed without additional sightings of manatee(s) in the buffer zone, in-water work can resumeunder careful observation for manatee(s).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the projectsould operate at “no wake/idle” speeds within the construction area and at all times while inwaters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers should be properly secured, made of material in whichmanatees cannot become entangled, and be monitored to avoid manatee entrapment orimpeding their movement.
- Temporary signs concerning manatees should be posted prior to and during all in-water projectactivities and removed upon completion. Each vessel involved in construction activities shoulddisplay at the vessel control station or in a prominent location, visible to all employees operatingthe vessel, a temporary sign at least 8½ " X 11" reading language similar to the following: “CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT”. A second temporary sign measuring 8½ " X 11" should be

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posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: "CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".

- Collisions with, injury to, or sightings of manatees should be immediately reported to the Service's Louisiana Ecological Services Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.