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 23, 2018

To: Field Supervisor, Ecological Services Field Office, Daphne, AL

From: Assistant Gulf Restoration Manager, *Deepwater Horizon* Gulf Restoration Office

Subject: Concurrence Request for twenty-two proposed projects in Alabama

Overview
Projects are currently being evaluated as potential restoration projects to restore natural resources in Alabama that were injured as a result of the *Deepwater Horizon* (*DWH*) oil spill. We have reviewed twenty-two of these projects in accordance with Section 7 of the ESA. We have made "No Effect" determinations for five of these projects and are requesting written concurrence on the other seventeen projects. A list and brief description of these twenty-two projects is provided in Table 1 with all species determinations summarized in Table 2 (see below).

Background
After the *DWH* oil spill, federal and state natural resource trustee agencies (Trustees) came together to assess the effects of the spill and plan for the restoration of injured natural resources. As part of the legal settlement reached with BP in 2016, the Trustees prepared a Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement (Final PDARP/PEIS), to provide the framework for *DWH* oil spill restoration across the Gulf.

The Final PDARP/PEIS established Trustee Implementation Groups (TIGs) that develop plans for, choose, and implement specific restoration actions under the Final PDARP/PEIS. The Alabama Trustee Implementation Group (AL TIG) is made up of the following agencies: Alabama Department of Conservation and Natural Resources (ADCNR); Geological Survey of Alabama; U.S. Department of the Interior (DOI), as represented by the National Park Service, Bureau of Land Management and U.S. Fish and Wildlife Service (USFWS); National Oceanic and Atmospheric Administration (NOAA), on behalf of the U.S. Department of Commerce; U.S. Department of Agriculture (USDA); and U.S. Environmental Protection Agency (EPA).

The AL TIG is currently evaluating the subject projects as potential restoration projects under the AL TIG Draft Restoration Plan II / Environmental Assessment – Restoration of Wetlands, Coastal, and Near Shore Habitats; Habitat Projects on Federally Managed Lands; Nutrient Reduction (Nonpoint Source); Sea Turtles; Marine Mammals; Birds; and Oysters (RP/ES). The

Draft RP/ES was made available for public comment on April 5, 2018. The draft RP II/EA describes the restoration project alternatives considered by the Alabama TIG to meet the Trustee's goals to restore and conserve habitat, to replenish and protect living coastal and marine resources, to restore water quality, and to provide for monitoring and adaptive management. If the AL TIG selects the subject projects, the AL TIG partners would implement the projects. A brief description of the subject projects is provided in Table 1 below.

These facts lead us to the conclusion that consultation under Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.S 1531 *et seq.),* is required for the proposed projects. We have reviewed each of the projects for potential impacts to listed, candidate, and proposed species, and designated and proposed critical habitats in accordance with Section 7 of the ESA. Potential effects, conservation measures, and justifications for our determinations are presented in the attached Biological Evaluation (BE) forms. Our determinations are summarized in Table 2 below.

Within the BE forms, we have also reviewed the proposed projects for impacts to bald eagles and migratory birds in accordance with the Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703–712), respectively and we determined take would be avoided.

This letter requests your concurrence with our determinations for seventeen of the subject projects:

- **Lower Perdido Islands Restoration Phase I**
- **Coffee Island Restoration – Phase I**
- **Little Lagoon Living Shorelines**
- **Fowl River Nutrient Reduction**
- **Weeks Bay Nutrient Reduction**
- **Coastal Alabama Sea Turtle Conservation Program (share the beach)**
- **Coastal Alabama Sea Turtle Triage and Treatment Center**
- **Coastal Alabama Sea Turtle Habitat Usage and Population Dynamics**
- **Coastal Alabama Sea Turtle Protection: Enhancement and Education**
- **Enhancing Capacity for the Alabama Marine Mammal Stranding Network**
- **Assessment of Alabama Estuarine Bottlenose Dolphin Populations and Health**
- **Alabama Estuarine Bottlenose Dolphin Protection: Enhancement and Education**
- **Colonial Nesting Wading Bird Telemetry Study**
- **Oyster Cultch Relief and Reef Configuration**
- **Side-scan Mapping of Mobile Bay Relic Oyster Reefs**
- **Oyster Hatchery at Claude Peteet Mariculture Center**
- **Oyster Grow Out Restoration Reef Placement**

If you have questions or concerns regarding this informal consultation request, please contact Erin Chandler, Fish and Wildlife Biologist, at 361-244-3540 or erin_chandler@fws.gov.

Attachments (22)

- Biological Evaluation (BE) forms (22) including project maps

Table 1. Brief descriptions of twenty-two subject projects in the AL TIG RP/EA.
* indicates that consultations and permits exist for this project
^ indicates that concurrence is requested

Proposed Projects	Brief Description
Southwestern Coffee Island Habitat Restoration Project - Phase I^	This project would support planning activities for the restoration and creation of nesting habitat for colonial nesting water birds, in addition to tidal wetlands along the southwestern shoreline of Coffee Island, located in Mississippi Sound in south Mobile County, Alabama. This project would include two tasks. The first task would be to perform data synthesis and assessment of colonial-nesting birds on the Gulf Coast. The second task would include conducting engineering, design, and regulatory compliance.
Colonial Nesting Wading Bird Tracking and Habitat Use Assessment^	This project would involve a four-year study designed to provide information about wading bird populations that breed on the Alabama Gulf Coast. The study proposes a telemetry tracking study of the movements of up to four bird species breeding along the Alabama coast—tricolored heron, little blue heron, cattle egret and white ibis. The project objective is to better understand the extent to which declines in colonial nesting wading bird populations result from habitat limitations versus other potential causes such as increased prevalence of predators or human disturbance.
Restoring the Night Sky – Assessment, Training, and Outreach (E&D)^	This project aims to address the issue of light pollution on the Alabama coast by upgrading lighting practices in Baldwin and Mobile counties in Alabama. The first phase of the project would have three primary objectives: (1) assessing the issue of light pollution on the Alabama coast; (2) developing a detailed strategy to improve the identified problematic lighting; and (3) working with local governments to improve their understanding and capacity to address lighting concerns in the future.
Little Lagoon Living Shorelines^	The Little Lagoon Living Shoreline project aims to restore a minimum of 2,200 feet of shoreline of Little Lagoon, on Bon Secour National Wildlife Refuge (BSNWR), to the west of Gulf Shores, Alabama. Little Lagoon is a shallow body of brackish water, 10 miles long and 0.5 mile wide, and the targeted length of shoreline is actively eroding, threatening the adjacent Pine Beach Road. Few viable options exist to move/repair the road. Construction of a living shoreline would protect habitat on adjacent federal land by buffering the shoreline against erosion.
Assessment of Alabama Estuarine Bottlenose Dolphin Populations and Health^	This project would conduct a study to: (1) investigate the seasonal (summer/winter) abundance, distribution, and habitat use of bottlenose dolphin on the Alabama coast; and (2) assess dolphin condition following the DWH oil spill using field observation and remote biopsy sampling. This research would provide valuable post-spill data for bottlenose dolphins, a largely unstudied top predator in Alabama waters.
Alabama Estuarine Bottlenose Dolphin	This project would enhance state enforcement of the Marine Mammal Protection Act (MMPA) in Alabama state waters by: (1) increasing resources for state enforcement agencies to dedicate toward MMPA-related activities,

Protection: Enhancement and Education^	and (2) increasing awareness and understanding of the MMPA through education to assist state enforcement efforts. This project would also enhance public knowledge of marine mammal protection and the MMPA by: (1) contracting with a company who will conduct a social science survey, which will inform the (2) creation of a targeted education and outreach program for the Alabama coast. This program will inform the public and vessel operators about the harmful effects of illegal feeding and harassment of marine mammals in the Gulf of Mexico.

Enhancing Capacity for the Alabama Marine Mammal Stranding Network^	This project will enhance the capacity of the ALMMSN to respond to, necropsy, and analyze samples collected from stranded cetaceans in Alabama waters to better understand causes of cetacean illness and death. It will also support increased data consistency for information collected from stranded cetaceans by supporting the ALMMSN to enter their data into a regional marine mammal health database (Gulf MAP). The information collected by the ALMMSN from stranded cetaceans will enable managers to mitigate impacts to cetaceans from natural and anthropogenic threats and to monitor population recovery post-DWH.
Fowl River Nutrient Reduction Project^	This project will restore resources injured by the Deepwater Horizon (DWH) oil spill with the goal of restoring water quality in the Fowl River watershed through non-point nutrient and sediment reduction from rural agricultural lands. Excessive nutrient enrichment, or eutrophication, of Fowl River and its estuaries is a chronic threat that can lead to hypoxia (low oxygen levels), harmful algal blooms, habitat loss, and fish kills. This project would reduce rural nonpoint source pollution through the implementation of conservation practices on agricultural lands.
Toulmins Spring Branch Engineering and Design^	The Toulmins Spring Branch engineering and design project would target reductions in non-point sources of nutrients (and other pollutants) through a variety of non-structural and structural BMPs. The project would include a watershed assessment and a conceptual plan for the entire length of Toulmins Springs Branch, which details opportunities for erosion and sedimentation reduction, nutrient and pathogen reduction, and flooding and stormwater management.
Weeks Bay Nutrient Reduction Project^	This project will restore resources injured by the Deepwater Horizon oil spill with the goal of restoring water quality in the Weeks Bay watershed through non-point nutrient and sediment reduction from rural agricultural lands. Excessive nutrient enrichment, or eutrophication, of the Mobile Bay estuaries is a chronic threat that can lead to hypoxia (low oxygen levels), harmful algal blooms, habitat loss, and fish kills. This project would reduce rural nonpoint source pollution through the implementation of conservation practices on agricultural lands.
Oyster Cultch Relief and Reef Configuration Study^	The Alabama Marine Resources Division is proposing to investigate the merit of deploying different types of cultch material in various configurations to facilitate positive settlement of spat and growth of oysters upon selected reef areas in Mobile Bay, Alabama. This project has three primary objectives: (1) determine if there are differences in oyster settlement, growth, and survival on reefs of differing levels of relief and/or orientation relative to

	currents, (2) determine optimum reef material relief needed to restore oyster density on specific reefs within historical reef areas in which hydrology parameters such as oxygen and salinity and oyster recruitment and survival are highly variable, (3) estimate the cost/benefits of deploying cultch in certain configurations as opposed to traditional cultch broadcast methods.
Oyster Hatchery at Claude Peteet Mariculture Center^	The Alabama Marine Resources Division is proposing to construct an oyster hatchery at AMRD's Claude Peteet Mariculture Center in Gulf Shores and operate the facility within a four year project period. The oyster spat produced as a result of this project will be used to encourage oyster recruitment in portions of Mobile Bay, which has experienced reduced oyster production compared to the early 20th century.
Side-Scan Mapping of Mobile Bay Relic Oyster Reefs^	The purpose of this project is to: (1) identify areas of mid- to lower-Mobile Bay that are suitable for oyster restoration activities; and (2) survey the current extent and conditions of the relic oyster reefs identified in the 1968 reef surveys and other areas not surveyed. Mapping the bottom of Mobile Bay in these areas with side-scan will enhance our knowledge of natural larval production and better enable us to plan the most suitable locations to establish a network of patch reefs.
Establishment of protected oyster gardening program grow out areas^	This five-year project proposes creating up to three "off-bottom oyster grow-out areas" in the Mississippi Sound and Bon Secour Bay, identifying and prioritizing future restoration reef locations (including nearshore living shorelines and intertidal reefs), and monitoring the success in terms of oyster survival and reproduction of both the grow-out areas and restoration sites to determine effective techniques to increase the sustainability of oyster populations in Alabama.
Alabama Sea Turtle Protection: Enhancement and Education^	The CAST Protection: Enhancement and Education project would support state enforcement of the ESA and increase turtle protection in Alabama state waters through a variety of activities. First, it would increase awareness and understanding of the ESA through public education initiatives designed to assist state enforcement efforts. Second, it would increase state enforcement resources dedicated to sea turtle ESA-related activities. Third, it would initiate steps to reduce fisheries sea turtle bycatch, including fishery and social science surveys, and purchasing and distributing turtle excluder devices to skimmer trawl boats. Fourth, it would take steps to reduce anthropogenic impacts on nesting turtles, such as nest vandalism and lighting harassment.
CAST Conservation Program Transfer and Expansion^	The purpose of the Coastal Alabama Sea Turtle Conservation Program Transfer and Expansion Project is to build upon the existing program's capacity to protect and increase Alabama's sea turtle population. This project would transfer the existing Share The Beach Program from the Friends of Bon Secour National Wildlife Refuge to the Alabama Coastal Foundation . This project would ensure that the CAST program is adequately funded to operate into the future, starting at the 2018 sea turtle nesting season.
Coastal Alabama Sea Turtle Habitat Usage and Population Dynamics^	The project would use biological, genetic and stable isotope analyses to study sea turtle migration patterns, habitat use, human threats, and life history parameters for sea turtles using Alabama waters. Sea turtles spend the majority of their lives at sea, but little is known about their life history and distribution patterns along the Alabama Coast. In particular, hardly anything is known about juvenile sea turtles, although limited research and the number of stranded or injured sea turtles suggests that the Gulf of Mexico supports

	large numbers of juveniles. Population modeling has shown that the juvenile life-stage is the most critical to the stability and recovery of sea turtle populations
Coastal Alabama Sea Turtle Triage and Treatment Center^	The purpose of this project is to provide an appropriately equipped facility and program for the initial triage, treatment, release and/or transfer of injured/ill marine turtles. The project would construct a new facility on property owned by the City of Orange Beach. This facility and associated program would allow greater numbers of sea turtles to be treated and released, faster and with less stress on the animal from handling and transport.
Weeks Bay Land Acquisition-East Gateway Tract^	The Weeks Bay Land Acquisition (East Gateway Tract) project would protect the East Gateway property in perpetuity through a fee simple acquisition. The East Gateway Tract is located in Baldwin County at the mouth of Weeks Bay and contains approximately 175 undeveloped acres. This property contains more than 100 acres of wetlands, including estuarine intertidal marsh and freshwater forested wetlands.
Weeks Bay Land Acquisition-Harrod Tract^	This project would acquire and place in conservation approximately 231 acres of land and salt marsh alongside the Fish River, approximately 1.25 miles upstream of Weeks Bay. The land, referred to as the Harrod Tract, would be protected by this project in perpetuity through a fee simple acquisition. This project would be accomplished with support from the Weeks Bay Foundation and the Weeks Bay National Estuarine Research Reserve.
Magnolia River Land Acquisition-Holmes Tract^	This project would acquire and place in conservation approximately 80 acres of inland forest habitat along the Magnolia River, referred to as the Holmes Tract. The land is bounded by approximately one mile of the Magnolia RIver on its northern and western boundary and approximately 0.5 mile of Weeks Creek on its western and southern boundary. As one of the few remaining tracts of undeveloped (but developable) riverfront land in Magnolia Springs, the land has great environmental and public benefit.
Lower Perdido Islands Restoration Phase I (Engineering and Design)^	The Lower Perdido Islands Restoration Phase I project would develop a proactive and unified strategy for protecting the ecological functions of the Perdido Islands complex, while continuing to allow for public recreation. For this phase (Phase I) of the Lower Perdido Islands Restoration, a conservation management plan would be developed by the Nature Conservancy to evaluate the best methods for minimizing adverse impacts on sensitive habitats, and conduct a sediment modeling study to provide information on island erosion, which would inform future habitat restoration activities on the islands. Project elements would include identifying and describing the issues (such as erosion) and evaluating and recommending habitat protection and restoration strategies such as shoreline restoration, establishing protective buffers around critical habitat areas, protecting submerged aquatic vegetation (SAV), or dune habitat protection.

Table 2. Summary of ESA determinations for proposed projects in the AL TIG RP/EA.

ESA Species under USFWS jurisdiction	Status	Magnolia River Land Acquisition (Holmes Tract)	Weeks Bay Land Acquisition East Gateway Tract	Weeks Bay Land Acquisition Harrod Tract	Lower Perdido Islands Restoration Phase I	Coffee Island Restoration – Phase I	Little Lagoon Living Shorelines	Restoring the Night Sky	Toulmin Springs Branch E&D	Fowl River Nutrient Reduction	Weeks Bay Nutrient Reduction	Coastal Alabama Sea Turtle Conservation Program (share the beach)
Loggerhead sea turtle	Threatened	--	--	--	--	--	--	NE	--	--	--	NLAA
Loggerhead sea turtle - CH	Designated	--	--	--	--	--	--	NE (LOGG-T-AL-03)	--	--	--	NLAA (LOGG-T-AL-01)
Green sea turtle	Threatened	--	--	--	--	--	--	--	--	--	--	--
Kemp's ridley sea turtle	Endangered	--	--	--	--	--	--	NE	--	--	--	NLAA
West Indian Manatee	Endangered	NE	NE	NE	NLAA	NLAA	NLAA	NE	--	NE	NE	NE
Piping plover	Threatened	--	--	--	NLAA	NLAA	NE	NE	--	NE	--	NLAA
Piping plover - CH	Designated	--	--	--	--	NE (Unit AL-1)	--	NE (AL-2, AL-3)	--	--	--	NLAA (AL-1, AL-2, AL-3)
Red knot	Threatened	--	--	--	NLAA	NLAA	NE	NE	--	NE	--	NLAA
Wood stork	Threatened	NE	NE	NE	NLAA	NLAA	NLAA	NE	NE	NLAA	NLAA	NLAA
Alabama beach mouse	Endangered	--	--	--	NE	--	NLAA	NE	--	--	--	NLAA
Alabama beach mouse -CH	Designated	--	--	--	--	--	--	NE (1,2,3,4,5)	--	--	--	NLAA (1-5)
Gopher tortoise	Threatened; Candidate**	NE	NE	NE	NE	--	NE	NE	NE	NLAA	NLAA	--
Eastern indigo snake	Threatened	NE	NE	NE	NE	--	NE	NE	NE	NLAA	NLAA	--
Alabama red-belly turtle	Endangered	NE	NE	NE		NE	--	NE	NE	NE	NE	--
Black pine snake	Threatened	--	--	--	--	--	--	--	NE	NLAA	--	--
Perdido Key beach mouse	Endangered	--	--	--	NE	--	--	--	--	--	--	NLAA
Perdido Key beach mouse CH	Designated	--	--	--	--	--	--	--	--	--	--	NLAA (PKBM-1, PKBM-2)
Gulf Sturgeon	Threatened	--	NE	NE	--	--	--	--	--	--	--	--

-- indicates the species or critical habitat does not occur in the project area

**In Alabama, the gopher tortoise is threatened west of the Mobile and Tombigbee rivers, and is a candidate for listing in the eastern part of its range.

Table 2. (Continued) Summary of ESA determinations for thirteen proposed projects in the AL TIG RP/EA 2018.

ESA Species under USFWS jurisdiction	Status	Coastal Alabama Sea Turtle Triage and Treatment Center	Coastal Alabama Sea Turtle Habitat Usage and Population Dynamics	Coastal Alabama Sea Turtle Protection: Enhancement and Education	Enhancing Capacity for the Alabama Marine Mammal Stranding Network	Assessment of Alabama Estuarine Bottlenose Dolphin Populations and Health	Alabama Estuarine Bottlenose Dolphin Protection: Enhancement and Education	Colonial Nesting Wading Bird Telemetry Study	Oyster Cultch Relief and Reef Configuration	Side-scan Mapping of Mobile Bay Relic Oyster Reefs	Oyster Hatchery at Claude Peteet Mariculture Center	Oyster Grow Out Restoration Reef Placement
Loggerhead sea turtle	Threatened	--	--	NLAA	NLAA	--	NLAA	--	--	--	--	--
Loggerhead sea turtle - CH	Designated	--	--	NLAA (LOGG-T-Al-01)	NE (LOGG-T-AL-01)	--	NLAA	--	--	--	--	--
Green sea turtle	Threatened	--	--		--	--	--	--	--	--	--	--
Kemp's ridley sea turtle	Endangered	--	--	NLAA	--	--	--	--	--	--	--	--
West Indian Manatee	Endangered	NE	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Piping plover	Threatened	NE	--	NLAA	NLAA	--	NLAA	NLAA	--	--	NLAA	NLAA
Piping plover - CH	Designated	--	--	NLAA (AL-1, AL-2, AL-3)	NE (1,2,3)	--	NLAA	--	--	--	--	--
Red knot	Threatened	NE	--	NLAA	NLAA	--	NLAA	NLAA	--	--	NLAA	NLAA
Wood stork	Threatened	NE	--	NLAA	NLAA	--	NLAA	NLAA	--	--	NLAA	NLAA
Alabama beach mouse	Endangered	NE	--	NLAA	NLAA	--	NLAA	--	--	--	NE	--
Alabama beach mouse -CH	Designated	--	--	NLAA (1-5)	NE (1,2,3,4,5)	--	NLAA	--	--	--	--	--
Gopher tortoise	Threatened; Candidate**	NLAA	--	NLAA	--	--	NLAA	--	--	--	NLAA	--
Eastern indigo snake	Threatened	NLAA	--	--	--	--	--	--	--	--	NLAA	--
Alabama red-belly turtle	Endangered	--	NLAA	--	NLAA	NE	NLAA	NE	NE	NE	--	--
Black pine snake	Threatened	--	--	--	--	--	--	--	--	--	--	--
Perdido Key beach mouse	Endangered	--	--	--	--	--	--	--	--	--	--	--
Perdido Key beach mouse CH	Designated	--	--	--	--	--	--	--	--	--	--	--
Gulf Sturgeon	Threatened	--	--	--	--	--	--	--	--	--	--	--

-- indicates the species or critical habitat does not occur in the project area

**In Alabama, the gopher tortoise is threatened west of the Mobile and Tombigbee rivers, and is a candidate for listing in the eastern part of its range.