

Appendix C:
Essential Fish Habitat (EFH) Consultation



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

November 1, 2023

Mr. Brandon Howard
Fishery Biologist
NOAA National Marine Fisheries Service
5757 Corporate Blvd, #375
Baton Rouge, LA 70808

SUBJECT: Reggio Marsh Creation project (BS-0043) funded by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) Determination

Dear Mr. Howard:

The Environmental Protection Agency Region 6 requests the U.S. National Marine Fisheries Service concurrence on our determination that the Reggio Marsh Creation project (BS-0043) will not have a substantial adverse effect on essential fish habitat (EFH) or federally managed fishery species and requests concurrence on this determination from the NOAA National Marine Fisheries Service, Southeast Regional Office, Habitat Conservation Division.

A description of the project, as well as information related to potential impacts to essential fish habitat, is enclosed. If you require further assistance or have questions regarding our determination, please contact Dr. Sharon L. Osowski (214-665-7506; Osowski.sharon@epa.gov) of my staff.

Sincerely,

A handwritten signature in black ink, appearing to read "K. McCormick", written over a horizontal line.

Karen McCormick, Supervisor
Marine, Coastal, and Non-Point Source Section
Water Division
U.S. EPA Region 6

Enclosures

BS43 Essential Fish Habitat (EFH) Consultation

Project Information

The Reggio Marsh Creation project area (Figure 1) is in Region Two (2) of the Breton Sound Basin in St. Bernard Parish, Louisiana. The community of Reggio, LA is located approximately twenty-one (21) miles southeast of New Orleans, in St. Bernard Parish. The Reggio Marsh Creation project area is bounded on the north by an existing tidal levee, on the south by the Reggio Canal, and on the west by the Reggio community, and will serve as an important buffer to protect this coastal community from storm surge. St. Bernard Parish may incur some of the highest wetland loss as a percentage of total parish land area over the next fifty (50) years of any coastal parish (CPRA, 2017). With no further coastal protection or restoration actions, the parish could lose an additional two hundred thirty-seven (237) square miles, or seventy-two percent (72%) of the parish land area over the next fifty (50) years (CPRA, 2017). In this area, coastal wetland loss can be attributed to both anthropogenic and natural factors, such as drilling and dredging for oil and gas, flooding marshes from sea-level rise, storm-driven erosion from Hurricanes Katrina (2005), Rita (2005), Isaac (2012) and Ida (2021), and subsidence. The Coastal Protection and Restoration Authority (CPRA) and the 2017 Coastal Master Plan (CMP) utilize two (2) primary marsh restoration techniques to help offset marshland loss in the Breton Sound Basin. These marsh restoration techniques include river diversions and marsh creation projects. The loss of coastal marsh in the project area has increased dramatically over the last several decades due to a combination of anthropogenic and natural processes. These factors include hydrologic modifications of the Basin, storm-driven erosion, subsidence, and sea-level rise. Canals that were once used for access to the extraction locations are still prevalent, such as Howard's Ditch and Reggio Canal. Today, all gas wells within the project area are listed as plugged and abandoned.

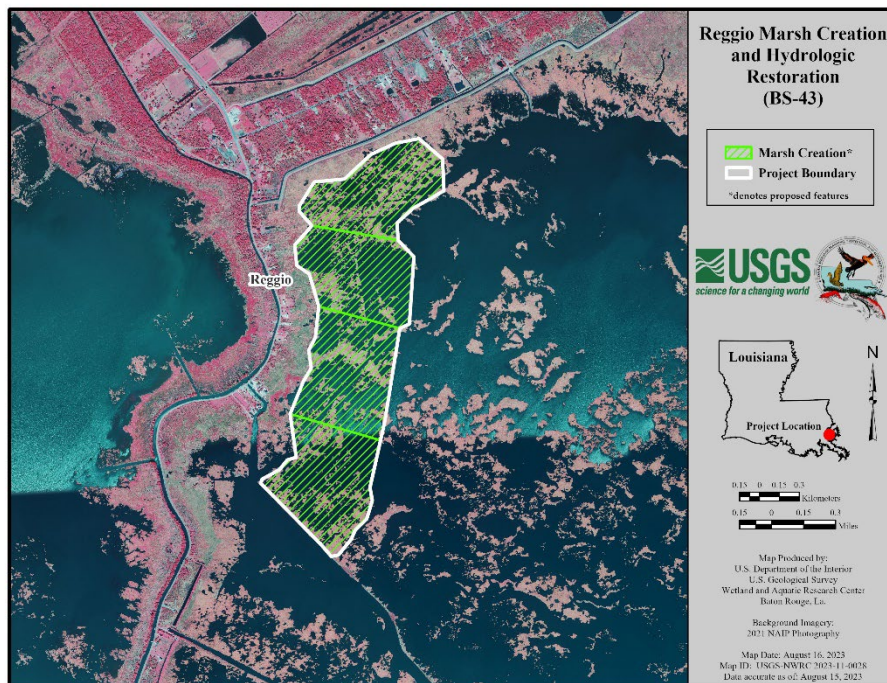


Figure 1. Project Area.

Marsh elevation in the project area averages +1.26 ft NAVD88. The mean high water (MHW) elevation at CRMS 4355 during the past five (5) years was +0.96 ft. NAVD88, and the mean low

water (MLW) elevation was +0.56 ft. NAVD88. This equates to a mean range in the tide of 0.40 ft. NAVD88. The project area experiences an approximate subsidence rate of 3.9 mm per year (0.15 inches/yr) (ACRE, 2019) (CPRA, 2023). This equates to a decrease in the project area elevation of 3.07 inches (0.256 ft.) over the twenty (20) year project design life. The Lake Lery borrow area is 111 surface-acres and will be dredged to -15 ft water depth. The pipeline conveyance corridor begins in Lake Lery runs east where it intersects with Bayou Terre aux Beoufs (BTAB) and then into the project area (**Figure 2**). Location of the pipeline corridor is proposed after consideration for existing bathymetry, oil and gas pipeline infrastructure, marine traffic, Highway 300 (HWY 300), and environmentally sensitive areas.

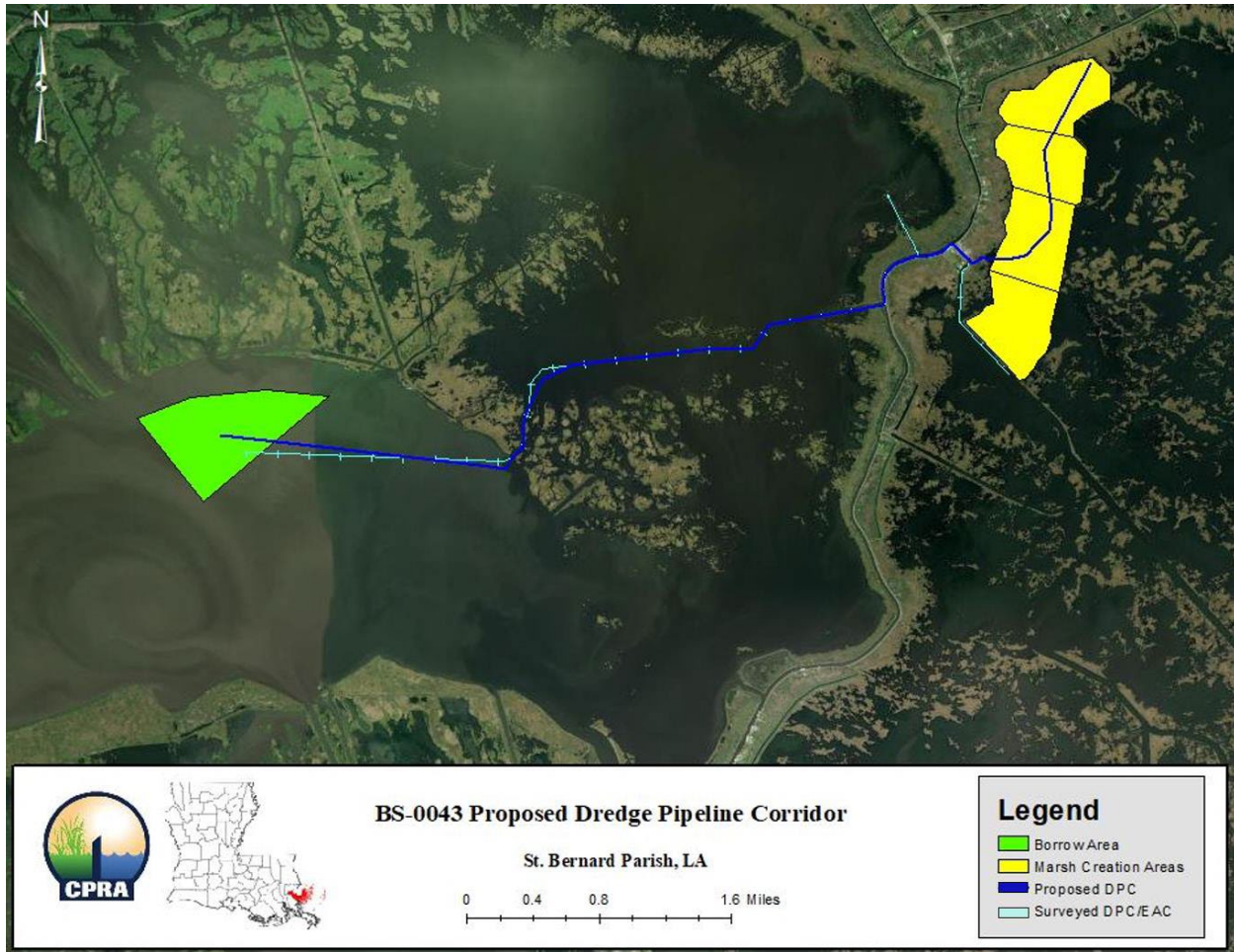


Figure 2. Dredge Pipe Corridor.

Essential Fish Habitat (EFH) Species Information

The proposed project area contains EFH as designated by the Gulf of Mexico Fishery Management Council (GMFMC) for species that are federally managed under the Magnuson-Stevens Fishery Conservation and Management Act, P.L. 104-297; 16 U.S.C. 1801 *et seq.* (Magnuson-Stevens Act). Categories of EFH in the project area include submerged aquatic vegetation (SAV), estuarine emergent wetlands (*e.g.*, marsh), estuarine water column, and estuarine water bottoms (*e.g.*, soft bottom) (GMFMC 2005). Table 1 below lists the categories of

EFH in the project areas, borrow areas, and along the equipment access corridor by life stage for federally managed species.

Table 1. EFH in the BS-43 Project Area, including the borrow area. Fishery Species listed in the table are managed by the National Marine Fisheries Service (NMFS) and GMFMC.

| Species | Life Stage | Habitat |
|--------------|-----------------------------------|--|
| Brown shrimp | Juvenile | estuarine marsh, submerged aquatic vegetation (SAV), and soft bottom |
| White shrimp | Juvenile | estuarine marsh, SAV, and soft bottom |
| Red drum | Larvae/post larvae/juvenile/adult | estuarine marsh, SAV, and soft bottom |

Source: National Marine Fisheries Service

In the Breton Basin, the estuarine-dependent assemblage, including white and brown shrimp, showed decreasing trends in recent decades (LCWCRTF and WCRA 1999). These species migrate through tidal passes during their post-larval life stage and depend on the estuarine environment for survival and reproduction. Shrimp are prey species for other federally managed fish and crustaceans (GMFMC 1998). Red drum larvae are transported back to estuaries for maturation (Perret *et al.* 1980; Pattillo *et al.* 1997), where they settle onto benthic substrate. Larval stages are present in estuaries from August through November, and occur in open bays, estuaries with or without submerged aquatic vegetation, and tidal flats. Juvenile red drum have been reported in quiet, shallow, protected waters with grassy or muddy bottoms (Simmons and Breuer 1962), and around the perimeter of marshes in estuaries (Perret *et al.* 1980). Adult red drum move offshore as they age.

Impacts of No Action

Estuarine marsh, SAV, and estuarine soft bottoms and water column of the project marsh creation areas (MCAs) (approximately 519 acres) and the approximately 111 surface acres of soft bottom in the Lake Lery borrow area are described in detail in the 95% Design Report. The marsh areas are expected to continue the current conversion of marsh to open-water. The land loss rate is estimated at -1.22% per year (-30.56 ac/yr), calculated from 1985 to 2023, with subsidence of the marsh at 3.9 mm/year. Open-water EFH that is already plentiful in the area would increase. SAV observed in shallow ponds and edges at densities ranging from 40-100% in June 2020 is estimated to occur throughout the MCAs which would remain the same without action. The borrow area is not expected to change without the proposed action but would be considered for similar wetland restoration actions which seek accessible viable material sources. No existing oyster leases have been identified within the borrow area or marsh fill area alignments.

A 2023 Wetland Value Assessment of the proposed 519-acre project area estimated that 37 acres of marsh will be converted to water within 20 years:

Target Year 0: Marsh 169ac = 32% Water = 350ac
 Target Year 1: Marsh 166ac = 32% Water = 353ac
 Target Year 20: Marsh 132ac = 25% Water = 387ac

Impacts of Preferred Action (Marsh Creation)

The goal of BS-43 is to restore degrading marsh along the eastern side Hwy 300 and the community of Reggio by constructing MCAs. The project goal is to create and nourish 519 acres of intermediate marsh in current shallow open water/broken marsh and maximize the amount of time the created marsh platform is intertidal throughout the project 20-year design life

Construction impacts from sediment removal and materials placement activities are similar, and would cause direct and indirect, short-term, localized, minor and moderate, adverse impacts to living coastal and marine resources and EFH during the implementation phase of the project. Heavy construction and access machinery has potential to compact soils, leak petroleum products, and increase turbidity at the restoration site.

Slow-moving or sessile organisms in the borrow areas may be killed during dredging activities. Sessile organisms in the placement areas may be buried or injured. These species are anticipated to recolonize once dredging and material placement ceases. Material placement would initially decrease SAV habitat through burial and be replaced by marsh and mudflat during and after construction. Within three years of construction SAV is projected to recover in shallow open water areas and edges of the newly formed marsh. Long term SAV habitat is projected to be sustained and could increase with increases in wetland acreage, longevity, and quality which provides increased access and long-term benefits to fish and wildlife resources.

From the 2023 Wetland Value Assessment of the 519-acre project area that considered projected relative sea level rise, projected marsh acres would increase within three years of the proposed action and have a net increase of 327 acres of marsh within 20 years:

Target Year 1: Marsh 119ac = 23% Water = 3ac
Target Year 3: Marsh 269ac = 52% Water = 9ac
Target Year 5: Marsh 503ac = 96% Water = 16ac
Target Year 20: Marsh 459ac = 88% Water = 60ac
Net acres (FWOP-FWP) at Target Year 20 = 327ac

Determination

EPA has determined the project will not have a substantial adverse effect on EFH or federally managed fishery species and requests concurrence on this determination from the NOAA National Marine Fisheries Service, Southeast Regional Office, Habitat Conservation Division.

References

Coastal Protection and Restoration Authority (CPRA) of Louisiana. 2017. Louisiana's Comprehensive Master Plan for a Sustainable Coast. Coastal Protection and Restoration Authority of Louisiana. Baton Rouge, LA.

GMFMC. 1998. Generic amendment for addressing essential fish habitat requirements in the following Fishery Management plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States waters; Red Drum Fishery of the Gulf of Mexico, Reef Fish Fishery of the Gulf of Mexico, Coastal Migratory Pelagic Resources (Mackerel) in the Gulf of Mexico and South Atlantic; Stone Crab Fishery of the Gulf of Mexico; Spiny Lobster Fishery of the Gulf of Mexico; Coral and Coral Reefs of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida, 244 pp.

<http://gulfcouncil.org/Beta/GMFMCWeb/downloads/FINALEFH-%20Amendment%201-%20no%20appendices.pdf>

GMFMC. 2005. Generic Amendment Number 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the following Fishery Management Plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States Waters Red Drum Fishery of the Gulf of Mexico Reef Fish Fishery of the Gulf of Mexico Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic Stone Crab Fishery of the Gulf of Mexico Spiny Lobster in the Gulf of Mexico and South Atlantic Coral and Coral Reefs of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida, 106 pp.
http://gulfcouncil.org/Beta/GMFMCWeb/downloads/FINAL3_EFH_Amendment.pdf

Louisiana Coastal Wetlands Conservation and Restoration Task Force (LCWCRTF) and the Wetlands Conservation and Restoration Authority (WCRA). 1999. Coast 2050: Toward a Sustainable Coastal Louisiana. Louisiana Department of Natural Resources. Baton Rouge, La.

Pattillo, M. E., T. E. Czaplá, D. M. Nelson and M. E. Monaco. 1997. Distribution and abundance of fishes and invertebrates in Gulf of Mexico estuaries, Volume II: Species life history summaries. ELMR Report No. 11. NOAA/NOS Strategic Environmental Assessments Division, Silver Spring, MD. 377 pp. URL: <http://repositories.tdl.org/tamug-ir/handle/1969.3/25790>

Perret, W.S., J.E. Weaver, R.C. Williams, F.L. Johanson, T.D. McIlwain, R.C. Raulerson, and W.M. Tatum. 1980. Fishery profiles of red drum and spotted seatrout. Gulf States Marine Fisheries Commission, Ocean Springs, MS. No. 6: 60 pp.

Simmons, E.G. and J.P. Breuer. 1962. A study of redfish (*Sciaenops ocellatus* Linnaeus) and black drum (*Pogonias cromis* Linnaeus). Publications of the Institute of Marine Science, University of Texas 8:184- 211.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
<https://www.fisheries.noaa.gov/region/southeast>

November 8, 2023 F/SER46:BH/RS

Karen McCormick
Supervisor
Marine, Coastal, and Non-Point Source Section
U.S. EPA, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75207-2102

Dear Ms. McCormick:

NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has reviewed your agency's essential fish habitat (EFH) assessment dated November 1, 2023, regarding the Reggio Marsh Creation Project (BS-0043) funded through the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA). The project would impact remnant marsh through the construction of containment dikes and submerged aquatic vegetation (SAV) from filling to marsh elevations. The project would create and nourish 519 acres of intermediate marsh in the community of Reggio, Louisiana.

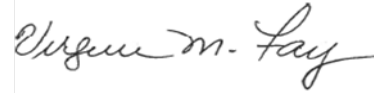
The NMFS agrees with the EFH, species, and life history stages listed in the EFH assessment as those identified by the Gulf of Mexico Fishery Management Council (GMFMC). Detailed information on federally managed fisheries and their EFH is provided in the 2005 Generic Amendment of the Fishery Management Plans for the Gulf of Mexico prepared by the GMFMC and in the 2017 Amendment 10 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan prepared by NMFS as required by the Magnuson-Stevens Act (P.L. 104 - 297).

Impacts to remnant marsh and SAV would be relatively minimal and offset by marsh creation. Containment dikes will be gapped within three years of construction allowing aquatic organism passage and tidal influence. The original project proposal included water control structures intended to lower salinity in the immediate project area. These features were removed after modeling efforts revealed limited benefit, and NMFS identified impediments to aquatic organism passage.



The NMFS agrees with the EPA's determination that the project will not have a substantial adverse impact on EFH or federally managed fishery species. We appreciate the early coordination with Dr. Sharon L. Osowski of your staff and willingness to modify project features. This satisfies the consultation procedures outlined in 50 CFR Section 600.920, the regulation to implement the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act. Please contact Brandon Howard, Fishery Biologist, at Brandon.Howard@noaa.gov in our Baton Rouge field office if you require further assistance or have questions.

Sincerely,

A handwritten signature in cursive script that reads "Virginia M. Fay". The signature is written in black ink on a white background.

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:

F/SER4 – Dale, Young, Davis

F/HC3 – Williams

GMFMC – Froeschke

EPA – Osowski