

APPENDIX C

NOAA FISHERIES SERVICE COORDINATION LETTER



**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

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F/SER46/RH:jk
225/389-0508

Dr. William P. Klein, Jr.
Environmental Planning and Restoration Branch
New Orleans District
Department of the Army, Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Dr. Klein:

NOAA's National Marine Fisheries Service (NMFS) has received the public notice advertising a scoping meeting to be held for the Louisiana Coastal Area (LCA), Louisiana; Terrebonne Basin Barrier Shoreline Restoration Project. According to the public notice, the U.S. Army Corps of Engineers (COE) intends to undertake a feasibility study and prepare a supplemental environmental impact statement (SEIS) to evaluate restoring major reaches of the Terrebonne barrier island chain, including Timbalier Island, East Timbalier Island, and the Isle Dernieres. This SEIS will be tiered off a programmatic EIS completed for the Louisiana Coastal Area Ecosystem Restoration Study completed in November 2004. The COE has requested the public and natural resource agencies provide recommendations on: 1) the environmental problems and needs that should be addressed in the document; 2) the important resources in the project area; and, 3) reasonable restoration alternatives to be considered in the feasibility study and SEIS.

Aquatic and tidally influenced wetland habitats in portions of the study area are designated as essential fish habitat (EFH) for a number of species listed in the fishery management plans for shrimp, red drum, reef fish, coastal migratory pelagic resources, and stone crab managed by the Gulf of Mexico Fishery Management Council (GMFMC). The attached tables lists life stages and subcategories of EFH for federally managed fishery species and highly migratory species potentially impacted by this project. Detailed information on federally-managed fisheries and their EFH is provided in the 2005 generic amendment of the FMPs for the Gulf of Mexico prepared by the GMFMC. The generic amendment was prepared as required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act, P.L. 104-297).

In addition to being designated as EFH for the species listed in the attached tables, barrier islands provide unique transitional habitat from the marine to the estuarine environment. Categories of barrier island aquatic habitats include ponds, lagoons, creeks, tidal channels, sand flats, surf zone, and back-barrier marshes. These island habitats and associated near shore water bodies in the study area support fish and crustacean assemblages distinctly different from mainland marshes. Examples of economically important marine fishery species in the study area include striped mullet, white mullet, Atlantic croaker, spot, gulf menhaden, Florida pompano, spotted seatrout, sand seatrout, southern flounder, black drum, and blue crab¹. These barrier island habitats also support a number of ecologically important estuarine and marine fishery species, such as spot, white mullet, anchovies, killifishes, lesser blue crab, and inland silverside. Research of Ship Shoal, a potential offshore borrow site, suggests there are more diverse and productive macroinfauna on the slopes of the shoal and that the shoal may be spawning habitat for blue crab. The

¹ Williams, P.R. 1998. Nekton assemblages associated with the barrier island aquatic habitats of East Timbalier Island, Louisiana. M.S. thesis, Louisiana State University. 144pp.



COE's subcontractor for this project already has contacted NMFS staff on this matter and we will be supplying them additional information by separate correspondence. Some of these species and others that utilize barrier island habitats serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by NMFS (e.g., billfishes and sharks).

NMFS recommends the SEIS include separate sections titled "Essential Fish Habitat" and "Marine Fishery Resources" that identify the EFH and fisheries resources of the study area and describe the potential impacts and benefits to those resources that could be caused by various activities to be described in the document. While NMFS believes that overall project implementation would be beneficial to protecting and restoring EFH and to maintaining the productivity of marine fishery resources, there are some potential localized adverse impacts to some species and life stages that could be caused by project implementation. These potential adverse impacts include: 1) loss of shallow water shoal habitat if the proposed borrow site is Ship Shoal; 2) increased levels of turbidity in both the borrow and fill placement locations; 3) smothering of benthic food sources in the vicinity of the borrow and fill placement locations; and, 4) likely conversion of some more productive categories of EFH to supratidal or upland elevations as various features typical of barrier islands are constructed. The EFH and marine fishery resource sections of the SEIS should identify and discuss these potential adverse impacts to those resources. NMFS also recommends these sections of the document discuss the potential beneficial effects of the proposed barrier island restoration efforts for maintaining a diverse and rapidly dwindling habitat supportive of marine fishery resources.

The EFH and marine fishery resources sections of the document also should describe and quantify the potential impacts and benefits of the proposed construction activities on EFH sub-categories (e.g., marsh, marsh edge, mud and sand bottoms, oyster reefs, and estuarine water column). The appropriate sections should describe the potential impacts and benefits of the barrier island construction activities on the utilization of these sub-categories of EFH by those fishery and highly migratory species and life stages included in the enclosed tables. The SEIS should evaluate alternatives to any activities that would result in an adverse impact to those resources to determine if there are less damaging methods to achieve the same result. The overall net benefits of the project on wetland habitats supportive of marine fishery resources should not preclude efforts to avoid or minimize negative impacts of some design features on those resources.

A fundamental need for barrier island restoration is the development and understanding of sediment budgets. To date, sediment budgets only have been developed for certain islands within the study area in isolation of the connectivity of those budgets throughout the study area. NMFS recommends the COE along with other federal and state partners and any others that can contribute develop a system wide sediment budget for use in this SEIS to establish this basic understanding of coastal processes needed in design plan formulation and alternatives analysis. Development of statewide sediment budgets has been undertaken in other coastal states and should be considered a critical component of this study.

Sediment in coastal Louisiana is a finite resource. This is problematic in that sand resources necessary for beach and dune restoration are particularly limited in Louisiana. Identifying sediment sources of sufficient quantity and quality has proven to be difficult. NMFS recommends the COE and the State develop a programmatic sediment source and management plan as part of the SEIS. To that end, there are various ongoing regional sediment management efforts (e.g., Louisiana Sediment Management Workgroup, Gulf Region Sediment Management Master Plan, etc) with which there should be integration and communication as part of this feasibility study and SEIS. The integration of these other ongoing efforts should be documented in the SEIS. General guiding principles identified by these sediment management master planning efforts should be considered. For example, higher priority consideration

should be given to borrow sources located offshore outside the depth of closure to avoid inducing wave impacts on the shore face. The SEIS should include a full description of potential borrow sites, associated borrow impact analyses, potential impacts to environmental resources, and means to avoid and minimize those impacts. One example may include excluding areas from dredging and dredging windows that do not overlap with peak use of Ship Shoal by economically important fisheries.

NMFS recommends the feasibility study concentrate on identifying and evaluating alternatives that would maximize the longevity of barrier island habitat while avoiding adverse environmental impacts (e.g., filling marshes to uplands) and minimizing construction costs. Barrier island features such as supratidal berms and dunes should be constructed only to that elevation shown to be necessary to maintain shoreline integrity and prevent formation of island breaches and subsequently tidal inlets. We also recommend that consideration be given to creation and restoration of extensive back-barrier marshes which provide both habitat value and promote island stability by providing a platform for over wash and island rollover.

NMFS discourages consideration of the use of hard structures in restoration alternatives unless it is clearly demonstrated that there would be no adverse environmental impacts to the islands and associated sediment transport processes. An example where this may be appropriate is Raccoon Island, which is the westerly and most downdrift island in the Terrebonne Island chain.

Please note that our Protected Resources Division is responsible for all issues regarding threatened and endangered species and marine mammals for which NMFS is responsible. For information regarding those resources, please contact Mr. David Bernhart of our Protected Resources Division at (727) 824-5312. For additional information regarding EFH, marine fisheries, or National Environmental Policy Act issues, please contact Mr. Richard Hartman of our Habitat Conservation Division, Baton Rouge Office at (225) 389-0508, ext 203.

Sincerely,



for Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

Enclosures

c:
FWS, Lafayette
EPA, Dallas
LA DNR, Consistency
F/SER46, Swafford
F/SER3, Bernhart
Files

Table 1. EFH Requirements for Species Managed by the Gulf of Mexico Fishery Management Council: Ecoregion 4, Mississippi River Delta (South Pass) to Freeport, TX.

Species	Life Stage	System ^a	EFH
Brown shrimp	eggs	M	<18-110 m; sand/shell/soft bottom
	larvae/postlarvae	M/E	<82 m; planktonic, sand/shell/soft bottom, SAV, emergent marsh, oyster reef
	juvenile	E	<18 m; SAV, sand/shell/soft bottom, SAV, emergent marsh, oyster reef
	adults	M	14-110 m; sand/shell/soft substrate
White shrimp	eggs	M	<9-34 m; sand/shell/soft bottom
	larvae/postlarvae	M/E	<82 m; planktonic, soft bottom, emergent marsh
	juvenile	E	<30 m; soft bottom, emergent marsh
	adult	M	9-34 m; soft bottom
Gulf stone crab	eggs	M/E	<18 m; sand/shell/soft bottom
	larvae/postlarvae	M/E	<18 m; pelagic, oyster reef, soft bottom
	juvenile	E	<18 m; sand/shell/soft bottom, oyster reef
Red drum	eggs	M	Gulf of Mexico (GOM) <46 m
	larvae/postlarvae	E	all estuaries planktonic, SAV, sand/shell/soft bottom, emergent marsh
	juvenile	M/E	GOM <5 m all estuaries SAV, sand/shell/soft/hard bottom, emergent marsh
	adults	M/E	GOM 1-46 m all estuaries SAV, pelagic, sand/shell/soft/hard bottom, emergent marsh
Red snapper	eggs	M	18-37 m; pelagic
	larvae	M	18-37 m; pelagic
	juvenile	M	17-183 m; hard/soft/sand/shell bottom
	adults	M	7-146 m; reefs, hard/sand/shell bottoms
Lane snapper	eggs	M	4-132 m; pelagic
	larvae	E/M	4-132 m; reefs, SAV
	juvenile	E/M	<20 m; SAV, mangrove, reefs, sand/shell/soft bottom
Dog snapper	juvenile	E/M	SAV, mangrove, emergent marsh

^a E=estuarine, M=marine

Dwarf sand perch	juvenile	M	hard bottom
Greater amberjack	eggs	M	1-183 m; pelagic
	larvae	M	1-183 m; pelagic
	juvenile	M	1-183 m
Lesser amberjack	eggs	M	pelagic
	larvae	M	pelagic
	juvenile	M	55-130 m;
Almaco jack	juvenile	M	15-160 m
Gray triggerfish	eggs	M	10-100 m; reefs
	postlarvae/juvenile	M	10-100 m
King mackerel	eggs	M	35-180 m; pelagic
	larvae	M	9-180 m; pelagic
	juvenile	M	<9 m; pelagic
	adult	M	35-180 m; pelagic
Cobia	eggs	M	pelagic
	larvae	M	11-53 m; pelagic
	juvenile	M	5-183 m; pelagic

Table 2. Summary of EFH Designations for Highly Migratory Species Managed by the National Marine Fisheries Service.

<u>Gulf of Mexico Species</u>	<u>Life Stage</u>	<u>EFH</u>
<u>Nearshore/Inshore</u> Bonnethead shark	juvenile adult	inlets, estuaries, coastal waters <25 m <25 m