

APPENDIX - C

**ENVIRONMENTAL ASSESSMENT
of a
Generic Amendment
for
Addressing Essential Fish Habitat Requirements
in
Fishery Management Plans
of the Gulf of Mexico**

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October 1998

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EXECUTIVE SUMMARY	

This Environmental Assessment (EA) addresses the National Environmental Policy Act (NEPA) requirements for the Gulf of Mexico Fishery Management Council's (GMFMC) generic amendment to its fishery management plans (FMPs). The generic amendment addresses the essential fish habitat (EFH) requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), as amended by the Sustainable Fisheries Act.

The purpose of the GMFMC's generic amendment is to amend simultaneously all seven of the existing FMPs for the Gulf of Mexico to comply with requirements of the Magnuson-Stevens Act for all Councils to address EFH in their FMPs by October 11, 1998. The amendment identifies and describes EFH (Section 4) based primarily on the common distribution of the various life stages of 26 representative species under management (Section 5); it identifies adverse impacts to EFH from fishing and nonfishing activities (Section 6); it provides recommendations to minimize impacts to EFH from identified threats from nonfishing activities (Section 7); it addresses threats to EFH from fishing-related activities but defers potential management options to future FMP amendments when the requisite information becomes available (Section 7); and, it identifies research needed better to identify and describe EFH (Section 8).

No management measures or regulations are associated with this amendment. Management measures and associated regulations concerning EFH are deferred to future amendments when the GMFMC has the requisite information to identify and analyze the practicability of such measures.

1.0 PURPOSE AND NEED

1.1 Purpose

The purpose of the generic amendment is to fulfill the requirements of sections 305 of the Magnuson-Stevens Act (16 U.S.C. 1801 *et seq.*), as amended by the Sustainable Fisheries Act, Public Law 104 - 267. The Act requires the Councils to amend all FMPs through description and identification of essential fish habitat (EFH), including adverse impacts, and consideration of actions to conserve and enhance EFH.

1.2 Need

The fish and shellfish under management of the GMFMC are valuable and renewable natural resources. These resources contribute to the food supply, economy, and health of the nation and provide recreational opportunities. Commercial and recreational fishing are a major source of employment and contribute significantly to the economy of the gulf states and to the nation. Certain stocks of fish (e.g., king mackerel, red snapper, red drum) have been reduced in number because of fishing pressure and/or habitat losses that have resulted in a diminished capacity to support existing fishing levels. To rebuild these diminished stocks the GMFMC has implemented measures to reduce fishing mortality (i.e., quotas, bag limits, closed seasons, etc.) and is actively involved in protecting habitat. The Gulf of Mexico, therefore, is an integral part of a national program of conservation and management that is necessary to realize the full potential of the Nation's fishery resources.

2.0 BACKGROUND AND DEFINITIONS

An amendment of all FMPs for fisheries of the Gulf of Mexico is required by the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act, signed into law on October 11, 1996. The Magnuson-Stevens Act mandates that the Council will, by October 11, 1998, describe and identify EFH in FMPs (including adverse impacts on such habitat) and consider actions to ensure the conservation and enhancement of such habitat. The GMFMC responded to that requirement by preparing a generic amendment to the following FMPs:

- *Fishery Management Plan for the **Shrimp** Fishery of the Gulf of Mexico, United States Waters*
- *Fishery Management Plan for the **Red Drum** Fishery of the Gulf of Mexico*
- *Fishery Management Plan for the **Reef Fish** Fishery of the Gulf of Mexico*
- *Fishery Management Plan for the **Coastal Migratory Pelagic Resources (Mackerels)** in the Gulf of Mexico and South Atlantic (Note: amendment applies only to habitat within boundaries of Gulf Council authority).*
- *Fishery Management Plan for the **Stone Crab** Fishery of the Gulf of Mexico*
- *Fishery Management Plan for **Spiny Lobster** in the Gulf of Mexico and South Atlantic (Note: amendment applies only to habitat within boundaries of Gulf Council authority).*
- *Fishery Management Plan for **Coral and Coral Reefs** of the Gulf of Mexico*

Essential fish habitat is defined in the Magnuson-Stevens Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." For interpreting the definition of EFH, "waters" include aquatic areas and their associated physical, chemical, and biological properties used by fish, and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle.

The GMFMC's generic amendment identifies and describes EFH (Section 4) based primarily on the common distribution of the various life stages of selected species under management (Section 5); it identifies adverse impacts to EFH from fishing and non-fishing activities (Section 6); it provides recommendations to minimize impacts to EFH from identified threats from non-fishing activities (Section 7); it addresses threats to EFH from fishing-related activities but defers potential management options to future FMP amendments when the requisite information becomes available (Section 7); and, it identifies research needed for better identification and description of EFH (Section 8).

Many species under management by the GMFMC are estuarine dependent. That is, they spend a part of their life cycle (usually the early phase) in estuarine habitats and then migrate to marine waters with the onset of maturation. EFH, therefore, is separated into *estuarine* and *marine* components for purposes of the amendment. For the *estuarine* component, ***EFH is all estuarine waters and substrates (mud, sand, shell, rock and associated biological communities), including the sub-tidal vegetation (seagrasses and algae) and adjacent inter-tidal vegetation (marshes and mangroves).*** In *marine* waters of the Gulf of Mexico, ***EFH is virtually all marine waters and substrates (mud, sand, shell, rock and associated biological communities) from the shoreline to the seaward limit of the EEZ.***

No management measures or regulations are associated with this amendment. Management measures and associated regulations concerning EFH are deferred to future amendments when the GMFMC has the requisite information to analyze the practicability of such measures.

3.0 ALTERNATIVES

3.1 No Action Alternative

The "No Action Alternative," required by NEPA, consists of conditions under current programs and regulations pursued by Federal and state agencies outside the requirements of the Magnuson-Stevens Act. It is the baseline against which other actions can be compared. There presently is no other program that would address the concerns covered under the Magnuson-Stevens Act.

The consequence of the "No Action Alternative" is that the Gulf of Mexico would not be a part

of a national program for the conservation and management of the fishery resources to prevent overfishing, to rebuild overfished stocks, to ensure conservation, and to facilitate long-term protection of essential fish habitats. Thus, the full potential of the Nation's fishery resources would not be realized. In addition, the legal requirements of the Act would not be met.

3.2 Preferred Alternative

The GMFMC's generic amendment fulfills the Magnuson-Stevens Act's requirement that the Council identify and describe EFH (including adverse impacts) in FMPs, and consider conservation and management measures for EFH. The generic amendment accomplishes this statutory requirement by identifying and describing EFH (Section 4) based primarily on the common distribution of the various life stages of species under management (Sections 5); identifying adverse impacts to EFH from fishing and nonfishing activities (Section 6); providing recommendations to minimize impacts to EFH from identified threats from nonfishing activities (Section 7); deferring for consideration in subsequent FMP amendments (when requisite information becomes available) potential management options to minimize threats to EFH from fishing-related activities (Section 7); and, identifying research needed better to identify and describe EFH (Section 8).

The four-level approach suggested in NMFS guidelines was considered in gathering and organizing the data necessary to describe and identify EFH for this generic amendment. Each level represents a different kind of information about the habitat requirements of managed species. At the lowest level (Level 1) only presence/absence data are available to describe the distribution of a species. At the higher levels information is available on density by habitat (Level 2), reproduction and survival by habitat (Level 3), and production by habitat (Level 4). Unfortunately, only Level 1 information exists for most of the Gulf species under management. The preferred alternative with respect to identifying and describing EFH, therefore, is that EFH is everywhere that the managed species commonly occur. Additionally, as recommended by NMFS guidelines, this information was used in a risk-averse manner, erring of the side of inclusiveness to ensure adequate protection for EFH of managed species.

As required by the Magnuson-Stevens Act, the generic amendment also identifies fishing activities and those activities not related to fishing that threaten EFH. Regarding adverse impacts from fishing, the Act requires that FMPs must contain an assessment of the potential adverse effects of all gear types used in EFH, including consideration of the establishment of research closure areas, to evaluate the impact of any fishing activity that physically alters EFH. In that regard, NMFS guidelines state that FMPs must include management measures that minimize adverse effects on EFH from fishing, to the extent practicable. To decide whether minimizing an adverse effect from fishing is practicable, the Council has to consider whether, and to what extent, the fishing activity is adversely affecting EFH, including the fishery, the nature and extent of the adverse effect on EFH, and whether the management measures are practicable, taking into consideration the long and short-term costs and benefits to the fishery and its EFH, along with other appropriate factors consistent with national standard 7. The Council concluded that any attempt to develop and implement fishing-related management

measures at this time is premature because (1) information necessary to analyze the practicability of such management measures does not presently exist, and (2) even if the necessary information did exist, the controversial nature of such management measures undoubtedly would delay the amendment beyond the congressionally mandated October 1998 deadline. Thus, fishing-related management measures concerning EFH are deferred to future amendments.

The description and identification of EFH will provide additional information to fishery managers, regulatory agencies, and the public on areas that are particularly important to fisheries. That additional information, and the strengthened consultation the Act requires for activities that adversely affect EFH, should improve natural resource management decisions and result in increased conservation of EFH. The long-term effect of better habitat conservation will be healthier fish stocks.

3.3 Other Alternatives

No other alternatives were considered, as none were available.

4.0 AFFECTED ENVIRONMENT

The environment that may be directly affected is fish habitats designated as EFH. Environments that could be indirectly affected include fish habitat (i.e., freshwater areas) that is not designated as EFH, and other areas (i.e., uplands) where activities determined to have an adverse impact on EFH are modified or redirected. Fish populations themselves may be indirectly affected through conservation and enhancement of EFH.

The EFH designation also has the potential to have an impact on the fishing industry, depending on the fishing-related management measures the Council may establish with future amendments. The specific measures will be identified and fully addressed in future NEPA documents as the Council develops operational details in future amendments. These future NEPA documents will address alternatives and mitigation measures for each FMP amendment.

The achievement of increased protection for EFH depends on individual decisions made by Federal and state regulatory agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the beneficial consequences of the amendment on the environment is not possible.

4.1 Environment Affected Directly

Because of the extensive areal distribution of the wide variety of fish species managed in the Gulf of Mexico, the estuarine and marine areas proposed for designation as EFH encompass a wide range of habitat types (see Section 4.0 of the Amendment). For example, habitats such as seagrass beds, coral reefs, tidal marshes, submerged aquatic vegetation, nonvegetated substrates of mud, sand and shell, rocks and rubble with attached fauna, and oceanic banks, as well as the estuarine and marine water columns, are EFH for one or more fish species. Collectively, EFH

for these species encompasses virtually all of the Gulf's estuarine areas (see Section 4.1 of the Amendment) and its marine habitat from the shoreline throughout the EEZ (see Section 4.2 of the Amendment).

In summary, the environment directly affected will be the habitat currently used by fish managed under the Act. Again, the degree to which this habitat is affected will depend on individual decisions made by Federal and state regulatory agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the beneficial consequences of the amendment on the environment that may be directly affected is not possible. Many of these habitats are already adversely affected by urban/suburban development and agriculture (see Section 6 of the amendment).

4.2 Environment Affected Indirectly

Activities determined to have an adverse impact on EFH may be redirected and concentrated in other areas such as uplands or aquatic areas (i.e., freshwater) not designated as EFH. Almost any part of the coastal watershed of the Gulf of Mexico could be indirectly affected by redirected activities resulting from the consultation process established under the Act. Fish populations managed under the Magnuson-Stevens Act may be indirectly affected if EFH receives increased protection or is restored. The achievement of restoration or increased protection for EFH depends on individual decisions made by Federal and state regulatory agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the beneficial consequences of the amendment on the environment that may be indirectly affected is not possible.

The socioeconomic environment of the Gulf of Mexico amendment includes a commercial fishing industry that harvested 0.7 million metric tons of fish and shellfish worth \$ 0.7 billion dockside in 1996 (William Antozzi, NMFS, Southeast Regional Office, personal communication). In 1994 commercial fishing employed over 60,000 fishermen and 12,000 shore workers. Commercial fishing is an important part of the economies of all Gulf states, but is particularly important in Louisiana which ranks second in the U.S. for both quantity and value. Overall, although some parts of the Gulf's fishing industry are thriving, many fish stocks are currently overfished and the general sense among fishermen and fishery managers is that the commercial fishing industry faces some serious challenges in the decades to come.

Recreational fishing also provides significant social, cultural, and economic benefits to the Gulf states. Recreational fishing in the Gulf of Mexico supported over 34,000 jobs and provided more than \$353 million in earnings in 1987 (Dr. Steve Holiman, NMFS Southeast Regional Office, personal communication). The recreational fishing industry is thriving, but it is facing increasingly restrictive bag and size limits, as well as closures, to offset the fishing mortality associated with recreational demand.

5.0 ENVIRONMENTAL CONSEQUENCES

The intent of the generic EFH amendment is to identify habitat essential to fish managed by the GMFMC and to promote its conservation and restoration. Through the development and synthesis of fish habitat information, coupled with the specific commenting and consultation requirements of the Magnuson-Stevens Act, the generic EFH amendment may change the way fish habitats are currently managed by placing additional emphasis on habitats important to fisheries. However, increased protection or restoration of EFH will continue to depend on individual decisions made by Federal and state regulatory agencies. Neither the Act nor this generic amendment establishes any new regulatory jurisdiction for NMFS or the Council over these habitats.

5.1 Effects on Consultation and Commenting Process

The generic amendment should contribute to the current Federal consultation and comment process by identifying essential habitat. Coupled with the Act's requirement that Federal agencies must respond in writing to NMFS and Council recommendations to conserve and enhance fish habitat, the synthesis and publication of information on EFH may encourage avoidance of activities that will adversely affect fish habitat in these areas.

5.2 Effects on Fish Habitat

The intent of the generic amendment is to identify EFH so that it might be considered for increased protection under the expanded consultation requirements of the Magnuson-Stevens Act. However, the achievement of that goal depends on individual decisions made by Federal and state regulatory agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the beneficial consequences of the amendment on EFH is not possible as to acreage of fish habitat preserved, nor is it possible to state definitively that those intended beneficial consequences will always occur. Similarly, predicting the consequences to areas where activities may be redirected is not possible.

5.3 Effects on Fish Populations

As noted above under section 5.2 above, the intent of the generic amendment is to identify EFH so that it might be considered for increased protection under the expanded consultation requirements of the Magnuson-Stevens Act. To the extent that fish populations and EFH are directly related, fish populations should benefit from increased protection or restoration of their essential habitat. However, the achievement of increased protection for EFH depends on individual decisions made by Federal and state agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the beneficial consequences of the amendment on EFH is not possible as to fish populations, nor is it possible to state definitively that those intended beneficial consequences will occur always.

5.4 Consequences in the Socioeconomic Environment

The long term expectation of the Act's EFH mandate is that declining trends in fish stocks can be halted or reversed by minimizing adverse impacts to EFH and restoring lost habitats or access to habitats, where feasible, along with the other management measures called for in the Act. Protecting the quality and quantity of EFH should help ensure survival potentials of managed fishery species and help maintain biological productivity of both the ecosystem and the stocks of managed species dependent on the components of that ecosystem. Any increases in stock abundance should result in increased economic return and stabilization of inter-annual variations in catch as well as provide increased resistance to episodic disturbance events. As noted above, however, the achievement of increased protection for EFH depends on individual decisions made by federal and state regulatory agencies. Predicting the nature of those decisions is not possible. For that reason, quantifying the socioeconomic effects of the amendment on EFH is not possible.

5.5 Unavoidable Adverse Environmental Impacts

The implementation of the generic EFH amendment should not produce any unavoidable adverse environmental impacts. The amendment is intended to identify and describe EFH for species under management, the adverse impacts on that habitat, and the actions that should be considered to ensure the conservation and enhancement of that habitat. No regulations are proposed, but this information eventually may result in some changes in the patterns of resource use to avoid activities that degrade coastal waters and habitats. These changes, however, should not result in any unavoidable adverse environmental impacts.

5.6 Relationship Between Short-Term Uses of Environment and Maintenance and Enhancement of Long-Term Productivity

The generic amendment does not include any short-term uses of the environment that may reduce long-term productivity.

5.7 Irreversible and Irrecoverable Commitment of Resources

Implementation of the generic amendment will not cause any irreversible or irretrievable commitment of resources. The identification of EFH may restrict development or other activities in the critical coastal areas and concentrate these activities in other locations. As noted above, however, the protection of EFH depends on individual decisions made by federal and state regulatory agencies. Predicting the nature of those decisions is not possible.

6.0 OTHER APPLICABLE LAW

6.1 Vessel Safety

A determination of vessel safety with regard to compliance with 50 CFR Section 600.355(d) has been requested from the U.S. Coast Guard. Actions in this amendment are not expected to affect vessel safety.

6.2 Coastal Zone Consistency

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all federal activities which directly affect the coastal zone be approved with approved state coastal zone management programs to the maximum extent practicable. The actions in this amendment will make no changes in federal regulations. Thus, the amendment is not inconsistent with either existing or proposed state regulations.

This amendment is consistent with the CZM programs of the states of Alabama, Florida, Louisiana, Mississippi and Texas to the maximum extent possible. This determination was submitted to the responsible state agencies under Section 307 of the Coastal Zone Management Act administering approved CZM programs in the states of Alabama, Florida, Louisiana, Mississippi and Texas.

6.3 Paperwork Reduction Act

This amendment imposes no paperwork requirements on the public.

6.4 Federalism

No federalism issues have been identified relative to actions proposed in this amendment. Therefore, preparation of a federalism assessment under Executive Order 12612 is not necessary.

6.5 Marine Mammals and Endangered Species

The Council has concluded that the actions contained in this amendment are not likely to jeopardize the continued existence of any threatened or endangered species or marine mammals, or adversely affect their habitat. By copy of this EA, NMFS was asked to conduct a Section 7 consultation during the informal review period.

7.0 COORDINATION WITH OTHERS

The following agencies have been consulted on the provisions of this amendment:

Gulf of Mexico Fishery Management Council:	Habitat Protection Committee
	Habitat Protection Advisory Panels
	Scientific and Statistical Committee
	Special EFH Technical Review Panel

Gulf States Marine Fisheries Commission:	Habitat Subcommittee
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Coastal Zone Management Programs:	Florida
	Alabama
	Mississippi

Louisiana
Texas

National Marine Fisheries Service:

Southeast Regional Office
Southeast Fisheries Science Center

8.0 LIST OF PREPARERS

William N. Lindall, Jr. - Fishery Biologist

FINDING OF NO SIGNIFICANT IMPACT

In compliance with the National Environmental Policy Act, an environmental assessment has been prepared for the Gulf of Mexico Fishery Management Council's generic amendment that fulfills the requirements of the Magnuson-Stevens Act to describe, identify, conserve, and enhance Essential Fish Habitat. The environmental review process led me to conclude that this action will not have a significant effect on the human environment. Therefore, an Environmental Impact Statement is not required by Section 102 (2) (C) of NEPA or its implementing regulations. A copy of the environmental assessment and supporting documentation are available at the Office of Habitat Conservation, National Marine Fisheries Service, Silver Spring, MD 20910.

Assistant Administrator for Fisheries, NOAA

Date