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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

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F/SER:DD

SEP 21 2011

Dr. Steve Bortone
Executive Director
Gulf of Mexico Fishery Management Council
2203 North Lois Avenue
Suite 1100
Tampa, Florida 33607

Steve Dear Dr. Bortone:

NOAA's National Marine Fisheries Service, Southeast Regional Office (SER), has reviewed the Final Report Gulf of Mexico Fishery Management Council 5-Year Review of the Final Generic Amendment Number 3 Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the Fishery Management Plans of the Gulf of Mexico (Five-Year Review) provided by Gulf of Mexico Fishery Management Council (Council) staff to support the five-year review of the Council's essential fish habitat (EFH) designations. The regulations implementing the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) require the EFH components of fishery management plans (FMP) to be reviewed no less often than every five years to determine if those components require revision or amendment. By letter dated June 9, 2009, SER provided the Council with guidance on the substantive requirements of this review.

EFH Five-year Review Process

Section 1 of the Five-Year Review outlines the process used for developing the document. Two Council staff along with a representative of the Southeast Region Habitat Conservation Division reviewed the 2005 EFH Amendment (and associated 2004 EFH Environmental Impact Statement) for errors. Council staff performed an extensive literature search to determine if any new EFH information was available. They also communicated with researchers around the Gulf of Mexico to discover new information. Council staff explored new methods of designating EFH. A literature search was also performed to review any changes and new information on fishing impacts to EFH. Commercial fishing logbook data and recreational fishing effort data were obtained to examine if fishing effort or intensity has changed since the 2005 EFH Amendment. A literature review and discussions with experts were held to determine changes to non-fishing impacts that may adversely affect EFH. The EFH Habitat Areas of Particular Concern (HAPC) were reviewed with researchers and a literature review conducted.



Results of the EFH Five-year Review

Based on the Five-Year Review and comments received during its review by Habitat Advisory Panels and the Council, new information is available to map various life stages of certain managed species including some newly discovered areas of deepwater corals and certain high-relief areas. Maps based on newer information would not result in changes in the EFH identifications and descriptions. The results of the Five-Year Review also identified areas recommended for consideration as EFH HAPC. Should the Council choose to pursue the EFH-HAPC designations the procedure used in the 2004 EFH EIS should be followed. In addition to the above changes to EFH maps and HAPC designations, other recommendations by Council staff and stakeholders included enhanced discussion of fishing and non-fishing affects on EFH. Absent development of an abbreviated (e.g., framework-type) procedure, any changes to EFH information would necessitate development of an FMP amendment to include information required by 50 C.F.R. Subpart J. Section 600.815(a).

Conclusions and Recommendations for the Next Five Years

The Council's current five-year review of its EFH information is complete. The next comprehensive periodic review should be completed no later than December 2016. In preparation for that review, SER recommends the Council address several administrative gaps in its EFH program. The enclosed table, based on the EFH regulations, identifies required and recommended components of FMPs with respect to EFH. This information can be used to prioritize those gaps for future refinement of EFH designations. SER also recommends the development of a set of review papers that focus on the EFH requirements of managed fisheries in a manner similar to the EFH source documents developed by the Northeast Fisheries Science Center. The SER believes this approach would bolster the Council's EFH designations and their value in management decisions by: (1) more explicitly describing habitat use by life stage for managed species; (2) more explicitly using the EFH information levels framework in describing EFH; and (3) refining the current spatial depictions of EFH to reflect best available data. Utilizing a student intern, the SER has initiated a pilot project to produce draft information documents for selected fisheries. The draft information document for the Red Drum FMP in the Gulf of Mexico will be provided to the Council.

The partnership between the Council and SER for promoting the protection, conservation, and enhancement of EFH within the Gulf of Mexico is an important component of conserving and managing fisheries under the Magnuson-Stevens Act. SER greatly appreciates the efforts by the Council and its staff to complete the five-year review of information used to identify and designate EFH.

Sincerely,

Roy E. Crabtree, Ph.D.

Regional Administrator

Enclosure

cc: F/SER4-Swafford, Dale F/HC-Bigford GSMFC-Rester

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(1) Describe & Identify EFH (ii) Habitat Information by Life Stage	demonstrate that the best scientific information available was used in the description and identification of EFH, consistent with national standard 2	summarize life history information in text, tables and figures as necessary to understand each species relationship to, or dependence on its various habitats
Councils need basic information to understand the use of various habitat by each managed including: - Geographic range and habitat requirements by life stage - Distribution and characteristics of those habitats - Current and historic stock size as it affects occurrence in available habitats	(600.815(a)(1)(ii)(B))	(600.815(a)(1)(ii)(A) document patterns of temporal and spatial variation in the distribution of each major life stage (600.815(a)(1)(ii)(A)) summarize (in tables) all available information on environmental and habitat variables that control or limit distribution, abundance, reproduction, growth, survival and productivity of the managed species (600(a)(1)(ii)(A))
		obtain information from the best available sources including: - peer-reviewed literature - unpublished scientific reports - data of government resource agencies - fisheries landings reports - any other information according to its scientific rigor (600.815(a)(1)(ii)(B))
Y 1000 11 C 16 C) (i - E' 1 -) (Council (Gulf Council) amended the seven fishery ma	support information with citations (600(a)(1)(ii)(A))

In 1998, the Gulf of Mexico Fishery Management Council (Gulf Council) amended the seven fishery management plans (FMP) of the Gulf of Mexico identifying and describing EFH based on various life stages of 26 representative managed species and the coral complex. The selected species accounted for about one third of the species under management and were considered ecologically representative of the remaining species within the respective FMPs. A lawsuit brought forth by a coalition of environmental groups found that the agency's 1998 decisions on EFH amendments by several Councils (including the Gulf Council) were found to be in accordance with the Magnuson-Stevens Fishery Conservation and Management Act but in violation of the National Environmental Policy Act. As a result, in 2004, the Gulf Council completed a Final Environmental Impact Statement and in 2005 produced Generic Amendment 3 for addressing Essential Fish Habitat Requirements of Gulf of Mexico FMPs. In 2010, the Gulf Council conducted a review of the EFH information as described in Section 1.4 of the Five-Year Review document. The Five-Year Review document was reviewed by three Habitat Advisory Panels and the Gulf Council. Comments received during that review are addressed in the applicable sections below. The Five-Year Review document identified several coral and hard-bottom habitats that have been recently mapped but were not mapped as EFH in the 2005 EFH Amendment. Additional information is available to map other managed species and life-stages but no new information was found that would result in changes to the textual descriptions of EFH.

Southeast Region recommendations:

• See mapping comments below.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST: SHOULD:
(1) Describe & Identify EFH (iii) Analysis of Habitat Information	organize information necessary to describe and identify EFH by: - Level 1 - Distribution - Level 2 - Habitat-related Densities - Level 3 - Habitat-related Growth, Reproduction or Survival Rates - Level 4 - Habitat-related Production Rates (600.815(a)(1)(iii)(A)
	strive to describe habitat based on the highest level of detail (600(a)(1)(iii)(B))

Sections 2.0 and 3.0 of the Five-Year Review document provide discussion of information regarding the biology, distribution, and status of Gulf Council managed species. While the discussion provides much of the information represented by the four-level system; the discussion does not explicitly follow this recommended approach for organizing the information.

Southeast Region recommendations:

Updates to EFH identifications should follow the four-level system to improve accessibility and organization of the underlying technical information and facilitate updating.

Subpart J. Section 600.815(a) Mandatory	MUST:	SHOULD:
Contents of Fishery Management Plans: (1) Describe & Identify EFH (iv) EFH Determination The information in (a)(1)(ii) & (iii) will allow Councils to assess the relative value of habitats. (600.815(a)(1)(iv)(A)) If a species is overfished and habitat loss or degradation may be contributing to the species being identified as overfished, all habitats currently used by the species may be considered essential in addition to certain historic habitats that are necessary to support rebuilding the fishery (600.815(a)(1)(iv)(C)) Areas described as EFH will normally be greater than or equal to aquatic areas that have been identified as "critical habitat" for any managed species listed as	include text that clearly states the habitats or habitat types determined to be EFH for each life stage of the managed species (600.815(a)(1)(i)) identify specific geographic location or extent of habitats described as EFH using boundaries such as latitude/longitude, isotherms, isobaths, political boundaries or major landmarks (600.815(a)(1)(i)) and (600.815(a)(1)(iv)(B)) justify and scientifically rationalize EFH designated for species groupings or assemblages (600.815(a)(1)(iv)(E)	not designate EFH if there is no information on a given species or life stage and habitat use cannot be inferred from other means (600.815(a)(1)(iii)(B)) analyze available ecological, environmental, and fisheries information and data relevant to the managed species, the habitat requirements by life stage, and the species' distribution and habitat usage to describe and identify EFH (600.815(a)(1)(iv)(A)) interpret information in a risk-averse fashion to ensure adequate areas are identified as EFH for managed species (600.815(a)(1)(iv)(A)) explain the analyses conducted to distinguish EFH from all habitats potentially used by a species (600.815(a)(1)(iv)(A))
		(600.815(a)(1)(iv)(B)) review the identification of EFH when a fishery is no longer considered overfished (600.815(a)(1)(iv)(C)) include degraded or inaccessible habitats that have contributed to reduced yields and would be necessary to a species to obtain increased yields where the conditions can be reversed through technologically and economically feasible measures (600.815(a)(1)(iv)(F))

Section 4.0 of the 2005 EFH Amendment provides textual descriptions of EFH for each fishery management plan; however, each of these EFH identifications and descriptions contain references back to the functional relationships analysis contained in the life-history tables in the 2004 EFH EIS. Inland boundaries of EFH are linked to U.S. Fish and Wildlife National Wetland Inventory maps. Information incorporated by reference and cross-referenced in the 2004 EFH EIS creates difficulty in understanding species and life-stage-specific EFH identifications and descriptions. While satisfying the requirements of the EFH rule, the overall organization of EFH information across documents creates difficulty in determining the extent of EFH particularly to the non-fishing-regulated public (i.e., those whose activities require federal permits or licenses that may require EFH consultation).

Southeast Region recommendations:

- Species and life-stage information used to identify and describe EFH should be organized in a manner that is easier for the general public to understand. (NOTE: The Southeast Region has initiated a pilot to create EFH Information Documents for fishery management plans. We will be sharing this draft document for the Red Drum FMP with the Gulf Council in the near future.)
- Where feasible, updates to EFH identifications and maps should include static boundaries such as latitude/longitude, political boundaries (e.g., state/county lines), or other static features (e.g., highways).

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD;
(1) Describe & Identify EFH (v) EFH Mapping Councils and NMFS should confer regarding mapping standards to ensure mapping and data compatibility (600.815(a)(1)(v)(A) If there are differences between the descriptions of EFH in text, maps and tables, the textual description is ultimately determinative of the limits of EFH (600.815(a)(1)(iv)(B)	include maps of the geographic locations of EFH or geographic boundaries within which EFH for each species and life stage is found (600.815 (a)(1)(i)) & (600.815(a)(1)(v)(A))	identify different types of habitat designated as EFH on maps to the extent possible (600.815(a)(1)(v)(A)) explicitly distinguish EFH from non-EFH areas on maps (600.815(a)(1)(v)(A)) incorporate data into GIS to facilitate analysis and presentation (600.815(a)(1)(v)(A)) include maps of HAPCs identified (600.815(a)(1)(v)(C)) include maps of historical habitat boundaries, if known, when the present distribution or stock size (of a species or life stage) is different from historical

While the Gulf Council and NMFS strived to comply with the provision to incorporate data into a GIS for analysis and presentation during development of the 2004 EFH EIS and 2005 EFH Amendment; extremely limited GIS capabilities were available, particularly at the Southeast Region, at that time. Resultantly, the Five-Year Review document identified several problems with the maps produced during the development of the 2004 EFH EIS and 2005 EFH Amendment. In 2008, NMFS and Gulf Council staff, with assistance from the National Coastal Data Development Center, produced maps that correctly reflected the textual description of the EFH designation and created associated metadata. However, because these maps only provide the geographic extent of EFH within each FMP, they do not provide any habitat related spatial information. Significant improvements and availability of spatial habitat data have occurred since 2004 with new data sources noted in the Five-Year Review document that could be used to inform EFH identifications. A difficulty experienced with habitat related spatial data is the resolution and minimum mapping units used for creating the data. Larger mapping units will not fully identify habitat areas (e.g., shoreline fringes) that NMFS strives to protect during EFH Consultations. The non-fishing regulated public and regulatory agencies need to be fully aware of the limitations of using habitat and EFH maps for activity-based regulatory decision making purposes.

The Southeast Region recommendations:

- As staff and funding resources allow, maps of species and life-stage specific EFH designations should be produced.
- Future maps and supporting materials should clearly identify the spatial resolution and minimum mapping unit used to create maps.
- As noted above, maps with clearly defined boundaries that delineate the geographic extent of EFH for each fishery would be helpful to those engaged in EFH consultations.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
Contents of Fishery Management Plans: (2) Fishing Activities Councils must act to prevent, mitigate, or minimize any adverse effects from fishing, to the extent practicable, if there is evidence that a fishing activity adversely affects EFH in a manner that is more than minimal and not temporary in nature based on evaluation conducted pursuant to (a)(2)(i) or (a)(5) Options for managing adverse effects from fishing may include, but are not limited to: (A) Equipment restrictions including seasonal and areal restrictions and equipment modifications	evaluate potential adverse effects on EFH designated under this FMP of fishing activities regulated under this and other FMPs (600.815(a)(2)(i)) describe each fishing activity, review and discuss all available relevant information (such as intensity, extent, and frequency) and provide conclusions whether and how each fishing activity adversely affects EFH (600.815(a)(2)(i)) minimize, to the extent practicable, adverse effects from fishing on EFH designated under this and other FMPs (600.815.(a)(2)(ii))	SHOULD: list past management actions that minimize potential adverse effects on EFH and describe the benefits of those actions to EFH (600.815(a)(2)(i)) give special attention to adverse effects of fishing on HAPC (600.815(a)(2)(i)) consider measures to evaluate the impacts of fishing activities on EFH such as the establishment of research closure areas (600.815(a)(2)(i)) identify a range of potential actions that could be taken to address adverse effects of fishing on EFH (600.815(2)(ii))
modifications (B) Time/area closures to all fishing or specific equipment types during certain seasons or designating marine protected areas to protect certain vulnerable or rare species or habitats (such as HAPCs) (C) Harvest limits to limit the take of species that provide structural habitat for other species and limits on the take of prey species (600.815(a)(2)(iv)	when amended, continue to minimize to the extent practicable adverse effects on EFH caused by fishing (600.815(a)(2)(ii)) explain the reasons for the Council's conclusion regarding past and/or new actions that minimize to the extent practicable the adverse effects of fishing on EFH (600.815(a)(2)(ii))	include an analysis of the practicability of potential new actions and adopt any new measures that are necessary and practicable (600.815(2)(ii)) should consider the practicability of minimizing adverse effects from fishing based on long and short-term costs and benefits of potential management measures to EFH, associated fisheries, and the Nation, consistent with national standard 7 (600.815(a)(2)(iii) use the best scientific information available as well
	cusses research on the affects of fishing gears on vari	as other appropriate information sources according its scientific rigor (600.815(a)(2)(i))

Section 5.0 of the Five-Year Review document discusses research on the affects of fishing gears on various habitats that has occurred since the 2004 EFH EIS. The Gulf Council has implemented restrictions on fisheries to the extent that no significant activities were identified in the review of gear impacts including the review conducted for NMFS by Auster and Langton in 1998, as discussed in Section 4.5 of the 2004 EFH EIS. Section 8.3 of the Five-Year Review document notes that fish traps have since been prohibited and fishing effort has been reduced with the implementation of measures to minimize adverse affects of fishing in the 2005 EFH Amendment. A Habitat Advisory Panel review noted a potential affect from a gear in a fishery that is largely prosecuted in state waters that may warrant further investigations as discussed in the next section below.

Southeast Region recommendations:

None.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(3) Non Magnuson-Stevens Act Fishing Activities	identify any fishing activities that are not managed under the Magnuson-Stevens Act that may adversely affect EFH (600.815 (a)(3))	

As noted above, Sections 5.0 and 8.3 discuss recent research into the affects of fishing gears on various habitats. A Habitat Advisory Panel member indicated a lack of discussion in the Five-Year Review document on the affects of lobster traps on various sensitive habitats, although Section 3.5.2. of the 2004 EIS contains considerable discussion of fishing gear impacts including those described as occurring from fish and lost lobster traps. The Advisory Panel Member provided a personal account of lost traps causing "extensive damage" to mangroves. The fishing gear sensitivity matrix in the 2004 EFH EIS did not consider lobster traps to have adverse affects on mangrove habitat because the gear is not fished in mangrove habitat.

Southeast Region recommendations:

• While anecdotal information on the impacts of ghost gear on habitat exists, no peer-reviewed scientific information was cited in the comments.

NMFS and the Gulf Council should further investigate any such data (e.g. Marine Debris and gear buy-back programs) and incorporate those into the discussion of fishing gear impacts as warranted.

Subpart J. Section 600,815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(4) Non-Fishing Related Activities	identify activities other than fishing that may adversely affect EFH (600.815 (a)(4))	
	describe known and potential effects on EFH (600.815 (a)(4))	

Sections 6.0 of the Five-Year Review document identified information from a 2008 NOAA Technical Memorandum that could supplement the discussion of the affects of various non-fishing activities on EFH contained in Section 3.5.3. of the 2004 EFH EIS. Comments from a Habitat Advisory Panel member noted the affects of vessel use (both fishing and non-fishing vessels) were omitted from the list of analyzed affects in the Five-Year Review document. Those affects are, however, discussed in the 2004 EFH EIS in Section 3.5.3.1.1.4. and the activity was erroneously omitted from the list in the Five-Year Review document.

Southeast Region recommendations:

• Information regarding the affects of non-fishing activities should be updated, as noted in Section 8.4 of the Five-Year Review document, as appropriate.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(5) Cumulative Impacts	cı ac	analyze, to extent feasible and practicable, how the umulative impacts of fishing and non-fishing ctivities influence the function of EFH on an cosystem or watershed scale (600.815(a)(5))

Section 4.3.8. of the 2004 EFH EIS provided an analysis of cumulative impacts of fishing and non-fishing activities.

Southeast Region recommendations:

• Cumulative impact assessments remain a technically difficult goal to achieve in many regulatory activities. Partnering with the Southeast Fisheries Science Center and others to develop a research program that a priori assesses cumulative impacts would be beneficial.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(6) Conservation and Enhancement	identify actions to encourage the conservation and enhancement of EFH including options to avoid, minimize or compensate adverse effects identified in (3), (4) and (5); especially in HAPCs (600.815(a)(6))	

Sections 6.0, 7.0, 8.3 and 8.4 of the Five-Year Review document provide a discussion of activities that may have adverse affects on EFH. General Conservation and Enhancement recommendations are included in Section 4.5.2. of the 2004 EFH EIS pertaining to activity-based impacts as described in the 1998 EFH EA and Amendment.

Southeast Region recommendations:

• The Gulf Council should consider development and adoption of a comprehensive habitat protection policy document to satisfy this section of the EFH rule. Included should be a procedure to periodically review and update the information, as needed.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST: SHOULD:
(7) Prey Species	list major prey species for the species in the FMU
	and discuss location of prey species habitat
	(600.815(a)(7))

Prey species were identified, as required, for each fishery management unit in the 2004 EFH EIS. During the course of conducting literature reviews and communicating with researchers around the Gulf of Mexico during preparation of the Five-Year Review document (Section 8.6), no new information regarding prey species in the FMUs became known.

Southeast Region recommendations:

None.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(8) Habitat Areas of Particular Concern .		identify specific types or areas of habitat within EFH based on: (i) Importance of ecological function (ii) Sensitivity to human induced degradation (iii) Extent of development stress (iv) Rarity (600.815(a)(8))
		identify any EFH (as HAPC) that is particularly vulnerable to fishing activities (600.815(a)(2)(i))include maps of HAPCs identified (600.815(a)(1)(v)(C))

Section 7.0 of the Five-Year Review document discusses the HAPC designations made in the 2005 EFH Amendment. The Five-Year Review document identified additional areas of high-relief banks suggested by Flower Garden Banks National Marine Sanctuary staff and discussed recent offshore development threats to the Pinnacle Trend area off Mississippi and Alabama. During the Habitat Advisory Panel review of the Five-Year Review document, one member suggested most of the estuaries around the Gulf of Mexico be designated as HAPCs. In the 2004 EIS, the Council utilized a matrix and decision tree to identify candidate areas and habitat types for HAPC designation and many of the currently suggested areas were identified and considered for HAPC designation. The final list of HAPCs, however, was determined by expert opinion of the Gulf Council.

Southeast Region recommendations:

- A process to consider new information or factors affecting the four HAPC criteria should be developed as well as a procedure to add, delete, or modify existing HAPC designations.
- Previous HAPC designations were linked to a single (most appropriate) FMP. Where appropriate, the Gulf Council should consider HAPC designations across FMPs.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(9) Research and Information Needs		provide prioritized recommendations of research
		efforts necessary to improve:
		- the description and identification of EFH
<u> </u>		- identification of fishing and non-fishing threats to
		EFH
		- conservation and enhancement measures for EFH
		(600.815(a)(9))

Section 4.4 of the 2004 EIS identified research recommendations and discussed a broad range of research and data collection activities supporting fishery and ecosystem-based fishery management purposes. The Five-Year Review document also discusses the Habitat Assessment Improvement Plan published by NMFS in 2010 and the corresponding First National Habitat Assessment Workshop (NHAW) held in May 2010. A proceedings document was under development during the time of the Five-Year Review.

Southeast Region recommendations:

- Information needs (where proxies were used for life history information) and gaps (Table 3.2.35 of the 2004 EFH EIS) should be more explicitly stated to identify research needs.
- The Region should work with the Gulf Council as the Top Recommendations from the NHAW Proceedings and Southeast Region breakout sessions are implemented.

Subpart J. Section 600.815(a) Mandatory Contents of Fishery Management Plans:	MUST:	SHOULD:
(10) Periodic Review	conduct a complete review of EFH information at least every five years or as recommended by the Secretary (600.815(a)(10))	review, revise and amend EFH provisions based on available information (600.815(a)(10)) outline procedures the Council will follow to review and update EFH information (600.815(a)(10)) report their review of EFH information in annual
		report their review of EFH information in annual SAFE reports (600.815(a)(10))

By letter dated June 9, 2009, the Southeast Region provided the Gulf Council with guidance on the substance of a five year review. In response, Gulf Council staff reviewed and prepared a Five-Year EFH Review document in late 2010. Section 1.4 describes the process used to review EFH information. Additionally, the document was subsequently reviewed by the Council's three Habitat Protection Advisory Panels.

Southeast Region recommendations:

• The Region finds that the development of the Five-Year Review document adequately satisfies the periodic review requirement. The Region recommends the Gulf Council work with them during 2012 to update the Gulf Council's Habitat Policy to include the process for the next five-year review within staffing and funding constraints.