

# Essential Fish Habitat:

**A Marine Fish Habitat Conservation Mandate  
for Federal Agencies**

South Atlantic Region



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## *Executive Summary*

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) set forth a new mandate for the National Marine Fisheries Service (NMFS), regional fishery management councils (FMC), and other Federal agencies to identify and protect important marine and anadromous fish habitats. The EFH provisions of the Magnuson-Stevens Act support one of the Nation's overall marine resource management goals - maintaining sustainable fisheries. Essential to achieving this goal is the maintenance of suitable marine fishery habitat quality and quantity. The FMCs, with assistance from NMFS, has delineated "essential fish habitat" (EFH) for Federally managed species. As new FMPs are developed, EFH for newly managed species will be defined as well. Federal action agencies which fund, permit, or carry out activities that may adversely affect EFH are required to consult with NMFS regarding the potential impacts of their actions on EFH, and respond in writing to NMFS or FMC recommendations. In addition, NMFS and the FMCs may comment on and make recommendations to any state agency on their activities which may affect EFH. Measures recommended by NMFS or an FMC to protect EFH are advisory, not proscriptive.

On December 19, 1997, interim final rules were published in the Federal Register (Vol. 62, No. 244) which specify procedures for implementation of the EFH provisions of the Magnuson-Stevens Act. These rules were amended by publication of final rules on January 17, 2002 (Vol. 67, No. 12). The rules, in two subparts, address requirements for fishery management plan (FMP) amendment, and detail the coordination, consultation, and recommendation requirements of the Magnuson-Stevens Act.

Within the area encompassed by the NMFS Southeast Region, EFH has been identified for hundreds of marine species covered by 20 FMPs, under the auspices of the Gulf of Mexico, South Atlantic, or Caribbean FMC or the NMFS. Generic FMP amendments delineating EFH for species managed by the three FMCs and NMFS were completed in early 1999. In addition, EFH for some species managed by the Mid-Atlantic FMC has been identified and includes various coastal and offshore waters as far south as the Florida Keys.

Wherever possible, NMFS intends to use existing interagency coordination processes to fulfill EFH consultations for Federal agency actions that may adversely affect EFH. Provided certain regulatory specifications are met, EFH consultations will be incorporated into interagency procedures established under the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Fish and Wildlife Coordination Act, or other applicable statutes. If existing processes cannot adequately address EFH consultation requirements, appropriate new procedures should be developed in cooperation with the NMFS. Programmatic consultations may be implemented or General Concurrences may be developed when program or project impacts are individually and cumulatively minimal in nature. Moreover, NMFS will work closely with Federal agencies on programs requiring either expanded or abbreviated individual project consultations.

An effective, interagency EFH consultation process is vital to ensure that Federal actions are consistent with the Magnuson-Stevens Act resource management goals. The NMFS will strive to work with action agencies to foster an understanding of EFH consultation requirements and identify the most efficient interagency mechanisms to fulfill agency responsibilities.



# ESSENTIAL FISH HABITAT:

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### **Introduction**

This document has been prepared by the Southeast Regional Office of the National Marine Fisheries Service (NMFS) to provide an overview of the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and implementing regulations. The following pages provide a brief legislative and regulatory background, introduce the concept of EFH, and describe consultation requirements. Consistent with elements of the NMFS's National Habitat Plan, Strategic Plan, and Habitat Conservation Policy, this document is intended to: provide a mechanism for information exchange; foster interagency discussion and problem-solving; and enhance communication and coordination among the NMFS, regional fishery management councils (FMC), and affected state and Federal agencies. Ultimately, improved interagency coordination and consultation will enhance the ability of the agencies, working cooperatively, to sustain healthy and productive marine fishery habitats.

### **Legislative and Regulatory Background**

The 1996 amendments to the Magnuson-Stevens Act (excerpted at Appendix 1) set forth a new mandate to identify and protect important marine and anadromous fisheries habitat. NMFS and the FMCs, with assistance from NMFS, are required to delineate EFH in fishery management plans (FMP) or FMP amendments for all Federally managed fisheries. Federal action agencies which fund, permit, or carry out activities that may adversely affect EFH are required to consult with NMFS regarding potential adverse impacts of their actions on EFH, and respond in writing to NMFS and FMC recommendations. In addition, NMFS is directed to comment on any state agency activities that would impact EFH.

The purpose of addressing habitat in this act is to further one of the Nation's important marine resource management goals - maintaining sustainable fisheries. Achieving this goal requires the long-term maintenance of suitable marine fishery habitat quality and quantity. Measures recommended to protect EFH by NMFS or an FMC are advisory, not proscriptive. An effective EFH consultation process is vital to ensuring that Federal actions are consistent with the Magnuson-Stevens Act resource management goals.

Guidance and procedures for implementing the 1996 amendments of the Magnuson-Stevens Act were provided through interim final rules, as revised by final rules published by the NMFS in 2002 (50 CFR Sections 600.805 - 600.930). These rules specify that FMP amendments be prepared to describe and identify EFH and identify appropriate actions to conserve and enhance those habitats. In addition, the rules establish procedures to promote the protection of EFH through interagency coordination and consultation on proposed Federal and state actions.

### **EFH Designation**

The Magnuson-Stevens Act requires that EFH be identified for all fisheries which are Federally managed. This includes species managed by the FMCs under Federal FMPs, as well as those managed by the NMFS under FMPs developed by the Secretary of Commerce. Applicable FMP

authorities for the Atlantic coast segment of the NMFS Southeast Region, along with some of the species covered by the FMPs of the South Atlantic and Mid-Atlantic FMCs, are listed in Appendix 2. Species listed are those for which data were adequate to define and map EFH. The listed species under each FMC's authorities collectively occur throughout the areas managed by the South Atlantic FMC, therefore, inclusion of those species for which life history data are limited would not encompass a greater geographic area. Inclusion of species managed by the Mid-Atlantic FMC is necessary because EFH for some species managed by that council has been identified to extend as far south as the Florida Keys in the South Atlantic area. Similar information is provided in Appendix 3 for billfish and other highly migratory species directly managed by the NMFS.

EFH is defined in the Magnuson-Stevens Act as “. . . those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The rules promulgated by the NMFS further clarify EFH with the following definitions: **waters** - aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; **substrate** - sediment, hard bottom, structures underlying the waters, and associated biological communities; **necessary** - 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** - stages representing a species' full life cycle. EFH may be a subset of all areas occupied by a species. Acknowledging that the amount of information available for EFH determinations will vary for the different life stages of each species, the rules direct the FMCs to use the best information available, to take a risk averse approach to designations, and to be increasingly specific and narrow in their delineations as more refined information becomes available.

The areas designated as EFH by the South Atlantic and Mid-Atlantic FMCs are broadly identified in Appendix 4. Additional sources of information, useful for preparing EFH assessments, and to further one's understanding of EFH designations and Federally managed fishery resources are available through the NMFS and FMCs. Appendix 9 provides citations for published Fishery Management Plan amendments and identifies web sites containing information on the Magnuson-Stevens Act, the NMFS final rules for the implementation of EFH designation and consultation provisions, and data on specific managed fisheries and associated habitats. NMFS and FMC points of contact are identified in Appendix 10.

The rules also direct FMCs to consider a second, more limited habitat designation for each species in addition to EFH. Habitat Areas of Particular Concern (HAPCs) are described in the rules as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. In general, HAPC include high value intertidal and estuarine habitats, offshore areas of high habitat value or vertical relief, and habitats used for migration, spawning, and rearing of fish and shellfish. Areas identified as HAPC by the NMFS and the FMCs are presented in Appendix 5. For a complete description of designated HAPCs the reader should reference EFH amendments of the Councils and NMFS. HAPCs are not afforded any additional regulatory protection under the Magnuson-Stevens Act; however, Federal actions with potential adverse impacts to HAPCs will be more carefully scrutinized during the consultation process and will be subject to more stringent EFH conservation recommendations.

Designating the spatial and seasonal extent of EFH has taken careful and deliberate consideration by NMFS and the FMCs. The effort to identify and delineate EFH in the various fishery management plans was a rigorous process that involved advice and input by numerous state and Federal agencies and the public at large. The South Atlantic FMC has produced a generic management plan amendment to define and designate EFH for all of its managed fisheries. The Mid-Atlantic FMC and NMFS have prepared multiple FMPs/amendments to identify EFH within their respective authorities. Reference may be made to Appendices 6 through 8 for summaries of many of the Federally-managed species and the associated categories of EFH for each life stage based on information provided by the FMCs (note, information for all species and all life stages is not available). These three appendices

are intended to provide an interpretative summary of habitat and geographic information on species managed by the South Atlantic and Mid-Atlantic FMCs, as well as for highly migratory species managed by the NMFS, where EFH has been identified for the managed species within oceanic, coastal, and estuarine habitats of the southeastern U.S. To review a definitive description of EFH, the reader should refer to each of the FMP amendments for species-specific descriptions of EFH.

Besides delineating EFH, the FMP amendments produced by NMFS and each council identify and describe potential threats to EFH, which include threats from development, fishing, or any other sources. Also identified are recommended EFH conservation and enhancement measures. Guidelines used in the development of EFH amendment sections for each of these issues are included in the EFH rules.

FMCs and NMFS also are required to implement management measures to minimize, to the extent practicable, any adverse impacts to EFH caused by fishing gears. Those measures can include area closures, gear restrictions, seasonal restrictions, and other measures designed to avoid or minimize degradation of EFH attributable to fishing activities. The councils have imposed various protective measures (e.g., gear restrictions and area closures) on some of the fisheries under their jurisdiction and are coordinating with the NMFS to identify research necessary to determine where additional conservation measures might be appropriate.

### **EFH Consultations**

In the regulatory context, one of the most important provisions of the Magnuson-Stevens Act for conserving fish habitat is that which requires Federal agencies to consult with NMFS when any activity proposed to be permitted, funded, or undertaken by a Federal agency may have adverse effects on designated EFH. The consultation requirements in the Magnuson-Stevens Act direct Federal agencies to consult with NMFS when any of their activities may have an adverse effect on EFH. The EFH rules define an **adverse affect** as “any impact which reduces quality and/or quantity of EFH . . . [and] may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species’ fecundity), site-specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions.”

The consultation provisions have caused some concern among Federal action agencies regarding potential increases in workload and the regulatory burden on the public. NMFS has addressed these concerns in the EFH rules by emphasizing and encouraging the use of existing environmental review processes and time frames. Provided the specifications outlined in the rules are met, EFH consultations should be incorporated into interagency procedures previously established under the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Fish and Wildlife Coordination Act, or other applicable statutes.

To incorporate EFH consultations into coordination, consultation and/or environmental review procedures already required by other statutes, three criteria must be met:

- (1) The existing process must provide NMFS with timely notification of the action;
- (2) Notification of the action must include an *EFH Assessment* of the impacts of the proposed action as outlined in the EFH rules; and
- (3) NMFS must have completed a written *finding* that the existing coordination process satisfies the requirements of the Magnuson-Stevens Act.

An *EFH Assessment* is a review of the proposed project and its potential impacts to EFH. As set forth in the rules, *EFH Assessments* must include: (1) a description of the proposed action; (2) an analysis of the effects, including cumulative effects, of the action on EFH, the managed species, and associated species by life history stage; (3) the Federal agency's views regarding the effects of the action on EFH; and (4) proposed mitigation, if applicable. If appropriate, the assessment should also include the results of an on-site inspection, the views of recognized experts on the habitat or species affected, a literature review, an analysis of alternatives to the proposed action, and any other relevant information.

Once NMFS learns of a Federal or state activity that may have an adverse effect on EFH, NMFS is required to develop EFH conservation recommendations for the activity, even if consultation has not been initiated by the action agency. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH and are to be provided to the action agency in a timely manner. The Magnuson-Stevens Act also authorizes FMCs to comment on Federal and state projects, and directs FMCs to comment on any project that may substantially impact EFH. The Magnuson-Stevens Act requires that Federal agencies respond to EFH conservation recommendations of the NMFS and FMCs in writing and within 30 days.

Consultations may be conducted through programmatic, general concurrence, or project specific mechanisms. Evaluation at a programmatic level may be appropriate when sufficient information is available to develop EFH conservation recommendations and address all reasonably foreseeable adverse impacts under a particular program area. General Concurrences can be utilized for categories of similar activities having minimal individual and cumulative impacts. Programmatic and General Concurrence consultations minimize the need for individual project consultation in most cases because NMFS has determined that the actions will likely result in no more than minimal adverse effects, and conservation measures would be implemented. For example, NMFS might agree to a General Concurrence for the construction of docks or piers, which with incorporation of design or siting constraints, would minimally affect Federally managed fishery resources and their habitats.

Consultations at a project-specific level are required when critical decisions are made at the project implementation stage, or when sufficiently detailed information for development of EFH conservation recommendations does not exist at the programmatic level. To facilitate project-specific consultations, NMFS and the action agency should discuss how existing review or coordination processes can be used to accomplish EFH consultation. With agreement on how existing coordination mechanisms will be used, the NMFS will transmit a *findings* letter to the action agency describing the conduct of EFH consultation within existing project review frameworks.

Project specific consultations must follow either the abbreviated or expanded procedures. Abbreviated consultations allow NMFS to quickly determine whether, and to what degree, a Federal action may adversely impact EFH, and should be used when impacts to EFH are expected to be minor. For example, the abbreviated consultation procedure would be used when the adverse effect of an action or proposed action could be alleviated through minor design or operational modifications, or the inclusion of measures to offset unavoidable adverse impacts.

Expanded consultations allow NMFS and a Federal action agency the maximum opportunity to work together in the review of an activity's impact on EFH and the development of EFH conservation recommendations. Expanded consultation procedures must be used for Federal actions that would result in substantial adverse effects to EFH. Federal action agencies are encouraged to contact NMFS at the earliest opportunity to discuss whether the adverse effect of a proposed action makes expanded consultation appropriate. In addition, it may be determined after review of an abbreviated consultation that a greater level of review and analysis would be appropriate and that review through expanded consultation procedures should be employed. Expanded consultation procedures provide additional time for the development of conservation recommendations, and may be appropriate for

actions such as the construction of large marinas or port facilities and activities subject to preparation of an environmental impact statement.

The Magnuson-Stevens Act mandates that a Federal action agency must respond in writing to EFH conservation recommendations from NMFS and FMCs within 30 days of receiving those recommendations. The rules require that such a response be provided at least 10 days prior to final approval of the action, if a decision by the Federal agency is required in fewer than 30 days and that decision is inconsistent with the recommendations of the NMFS. The response must include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with NMFS conservation recommendations, the agency must explain its reasons for not following the recommendations, including the scientific rationale for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to offset such effects.

The regulations provide an important opportunity to resolve critical and outstanding EFH issues prior to an action agency rendering a final decision. When an agency decision is inconsistent with NMFS conservation recommendations, the NMFS Assistant Administrator may request a meeting with the head of the action agency to further discuss the project and achieve a greater level protection of EFH and Federally managed fisheries. The process for higher-level review of proposed actions is not specified in the regulations; rather it is to be addressed on an agency-by-agency basis. In keeping with NMFS's effort to minimize the regulatory burden of EFH consultation requirements, review by the Assistant Administrator and action agency representative should be streamlined and highly focused.

## **Conclusion**

The EFH mandates of the Magnuson-Stevens Act represent an integration of fishery management and habitat management by stressing the dependency of healthy, productive fisheries on the maintenance of viable and diverse estuarine and marine ecosystems. Federal action agencies are required to consult with the NMFS whenever a construction, permitting, funding, or other action may adversely affect EFH. The EFH consultation process will ensure that Federal agencies explicitly consider the effects of their actions on important habitats, with the goal of supporting the sustainable management of marine fisheries. The NMFS is committed to working with Federal and state agencies to implement these mandates effectively and efficiently, with the ultimate goal of sustaining of the Nation's fishery resources.

**Appendix 1. Selected Text from the Magnuson-Stevens Fishery Conservation and Management Act (As Amended Through October 11, 1996)**

16 U.S.C. 1854 note, 1855  
M-S Act §§ 304 note, § 305

SEC. 305. OTHER REQUIREMENTS AND AUTHORITY  
104-297

16 U.S.C. 1855

(b) FISH HABITAT.

(1) (A) The Secretary shall, within 6 months of the date of enactment of the Sustainable Fisheries Act, establish by regulation guidelines to assist the Councils in the description and identification of essential fish habitat in fishery management plans (including adverse impacts on such habitat) and in the consideration of actions to ensure the conservation and enhancement of such habitat. The Secretary shall set forth a schedule for the amendment of fishery management plans to include the identification of essential fish habitat and for the review and updating of such identifications based on new scientific evidence or other relevant information.

(B) The Secretary, in consultation with participants in the fishery, shall provide each Council with recommendations and information regarding each fishery under that Council's authority to assist it in the identification of essential fish habitat, the adverse impacts on that habitat, and the actions that should be considered to ensure the conservation and enhancement of that habitat.

(C) The Secretary shall review programs administered by the Department of Commerce and ensure that any relevant programs further the conservation and enhancement of essential fish habitat.

(D) The Secretary shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat.

(2) Each Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act.

(3) Each Council--

(A) may comment on and make recommendations to the Secretary and any Federal or State agency concerning any activity authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any Federal or State agency that, in the view of the Council, may affect the habitat, including essential fish habitat, of a fishery resource under its authority; and

(B) shall comment on and make recommendations to the Secretary and any Federal or State agency concerning any such activity that, in the view of the Council, is likely to substantially affect the habitat, including essential fish habitat, of an anadromous fishery resource under its authority.

(4) (A) If the Secretary receives information from a Council or Federal or State agency or determines from other sources that an action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any State or Federal agency would adversely affect any essential fish habitat identified under this Act, the Secretary shall recommend to such agency measures that can be taken by such agency to conserve such habitat.

(B) Within 30 days after receiving a recommendation under subparagraph (A), a Federal agency shall provide a detailed response in writing to any Council commenting under paragraph (3) and the Secretary regarding the matter. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary, the Federal agency shall explain its reasons for not following the recommendations.

## Appendix 2. Fishery Management Plans and Managed Species for the South Atlantic Region.

### SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

#### Shrimp Fishery Management Plan

brown shrimp - *Farfantepenaeus aztecus*  
pink shrimp - *F. duorarum*  
rock shrimp - *Sicyonia brevirostris*  
royal red shrimp - *Pleoticus robustus*  
white shrimp - *Litopenaeus setiferus*

#### Red Drum Fishery Management Plan

red drum - *Sciaenops ocellatus*

#### Snapper Grouper Fishery Management Plan

blackfin snapper - *Lutjanus buccanella*  
blueline tilefish - *Caulolatilus microps*  
goliath grouper - *Epinephelus itajara*  
gray snapper - *L. griseus*  
greater amberjack - *Seriola dumerili*  
mutton snapper - *L. analis*  
red porgy - *Pagrus pagrus*  
red snapper - *L. campechanus*  
scamp - *Mycteroperca phenax*  
silk snapper - *L. vivanus*  
snowy grouper - *E. niveatus*  
speckled hind - *E. drummondhayi*  
vermillion snapper - *Rhomboplites aurorubens*  
yellowedge grouper - *E. flavolimbatus*  
warsaw grouper - *E. nigritus*  
white grunt - *Haemulon plumieri*  
wreckfish - *Polyprion americanus*

#### Coastal Migratory Pelagics Fishery Management Plan

cobia - *Rachycentron canadum*  
king mackerel - *Scomberomorus cavalla*  
Spanish mackerel - *S. maculatus*

#### Golden Crab Fishery Management Plan

golden crab - *Chaceon fenneri*

#### Spiny Lobster Fishery Management Plan

spiny lobster - *Panulirus argus*

#### Coral and Coral Reef Fishery Management Plan

varied coral species and coral reef communities

#### Calico Scallop Fishery Management Plan

calico scallop - *Argopecten gibbus*

#### Dolphin-Wahoo Fishery Management Plan

common dolphin - *Coryphaena hippurus*  
pompano dolphin - *C. equiselis*  
wahoo - *Acanthocybium solanderi*

#### Sargassum Fishery Management Plan

Sargassum - *Sargassum sp.*

### MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

#### Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan

black sea bass - *Centropristus striata*  
scup - *Stenotomus chrysops*  
summer flounder - *Paralichthys dentatus*

#### Bluefish Fishery Management Plan

bluefish - *Pomatomus saltatrix*

#### Atlantic Surfclam and Ocean Quahog Fishery Management Plan

ocean quahog - *Artica islandica*  
surfclam - *Spisula solidissima*

#### Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan

Atlantic butterfish - *Peprilus triacanthus*  
Atlantic mackerel - *Scomber scombrus*  
long finned squid - *Loligo peales*  
short finned squid - *Illex illecebrosus*

#### Dogfish Fishery Management Plan

spiny dogfish - *Squalus acanthias*

### Appendix 3. Species Managed under the Federally-Implemented Fishery Management Plans.

#### Tuna

albacore - *Thunnus alalunga*  
Atlantic bigeye - *T. obesus*  
Atlantic bluefin - *T. thynnus*  
Atlantic yellowfin - *T. albacares*  
skipjack - *Katsuwonus pelamis*

#### Swordfish

swordfish - *Xiphias gladius*

#### Billfish

blue marlin - *Makaira nigricans*  
sailfish - *Istiophorus platypterus*  
white marlin - *T. albidus*  
longbill spearfish - *Tetrapturus pfluegeri*

#### Large Coastal Sharks

basking shark - *Cetorhinus maximus*  
great hammerhead - *Sphyrna mokarran*  
scalloped hammerhead - *S. lewini*  
smooth hammerhead - *S. zygaena*  
white shark - *Carcharodon carcharias*  
nurse shark - *Ginglymostoma cirratum*  
bignose shark - *Carcharhinus altimus*  
blacktip shark - *C. limbatus*  
bull shark - *C. leucas*  
Caribbean reef shark - *C. perezii*  
dusky shark - *C. obscurus*  
Galapagos shark - *C. galapagensis*  
lemon shark - *Negaprion brevirostris*  
narrowtooth shark - *C. brachyurus*  
night shark - *C. signatus*  
sandbar shark - *C. plumbeus*  
silky shark - *C. falciformis*  
spinner shark - *C. brevipinna*  
tiger shark - *Galeocerdo cuvieri*  
bigeye sand tiger - *Odontaspis noronhai*  
sand tiger shark - *O. taurus*  
whale shark - *Rhinocodon typus*

## Small Coastal Sharks

Atlantic angel shark - *Squatina dumerili*  
bonnethead - *Sphyrna tiburo*  
Atlantic sharpnose - *R. terraenovae*  
blacknose shark - *C. acronotus*  
Caribbean sharpnose shark - *R. porosus*  
finetooth shark - *C. isodon*  
smalltail shark - *C. porosus*

## Pelagic Sharks

bigeye sixgill shark - *Hexanchus vitulus*  
sevend Gill shark - *Heptanchias perlo*  
sixgill shark - *H. griseus*  
longfin mako shark - *Isurus paucus*  
porbeagle shark - *Lamna nasus*  
shortfin mako shark - *I. oxyrinchus*  
blue shark - *Prionace glauca*  
oceanic whitetip shark - *C. longimanu*  
bigeye thresher shark - *Alopias superciliosus*  
common thresher shark - *A. vulpinus*

**Appendix 4. Essential Fish Habitat Identified in Fishery Management Plan Amendments of the South Atlantic and Mid-Atlantic Fishery Management Councils. (Generally, EFH for species managed under the NMFS Billfish and Highly Migratory Species plans falls within the marine and estuarine water column habitats designated by the councils)**

South Atlantic FMC

*Estuarine areas*

Estuarine emergent wetlands  
Estuarine scrub/shrub mangroves  
Submerged aquatic vegetation  
Oyster reefs & shell banks  
Intertidal flats  
Palustrine emergent & forested wetlands  
Aquatic beds  
Estuarine water column

*Marine areas*

Live/Hard bottoms  
Coral & coral reefs  
Artificial/manmade reefs  
Sargassum  
Water column

Mid-Atlantic FMC

*Estuarine areas*

Seagrass  
Creeks  
Mud bottom  
Estuarine water column

*Marine areas*

Water column

**Appendix 5. Geographically Defined Habitat Areas of Particular Concern Identified in Fishery Management Plan Amendments Affecting the South Atlantic Area.**

<u>South Atlantic</u>	<u>S. Atlantic (cont)</u>
<u>Area-wide</u>	<u>Georgia</u>
Council-designated artificial reef special management zones	Gray’s Reef National Marine Sanctuary
Hermatypic coral habitat and reefs	<u>Florida</u>
Hard bottoms	Blake Plateau (manganese outcroppings)
Hoyt Hills	Biscayne BayBiscayne National Park
<i>Sargassum</i> habitat	Card Sound
State-designated areas of importance to managed species	Florida BayFlorida Keys National Marine Sanctuary
Submerged aquatic vegetation	Jupiter Inlet Point
<u>North Carolina</u>	Mangrove habitat
Big Rock	Marathon Hump
Bogue Sound	Oculina Bank
Pamlico Sound at Hatteras/Okracoke Islands	
Capes Hatteras, Fear and Lookout (sandy shoals)	
New River	
The Ten Fathom Ledge	
The Point	
<u>South Carolina</u>	
Broad River	
Charleston Bump	
Hurl Rocks	

**Appendix 6. Summary of EFH Requirements for Species Managed by the South Atlantic Fishery Management Council.**

<u>Species</u>	<u>Life Stage</u>	<u>Ecosystem</u>	<u>EFH</u>
Brown shrimp EFH identified from NC - FL Keys	eggs larvae postlarvae/juvenile subadults adults	Marine (M) M Estuarine (E) E M	demersal 13.7 - 110 m planktonic <110 m marsh edge, SAV, tidal creeks, inner marsh mud bottoms, marsh edge <110 m, silt sand, muddy sand
White shrimp EFH identified from NC - St. Lucie Inlet, FL	eggs larvae postlarvae/juvenile subadults adults	M M E E M	nearshore & 6.1 - 24.4 m, demersal <24.4 m, planktonic mud/peat marsh edge, SAV, marsh ponds, inner marsh mud/peat marsh edge, SAV, marsh ponds, inner marsh <27 m, soft mud
Pink shrimp EFH identified from NC and FL	eggs larvae postlarvae/juvenile subadults adults	M M E E M	3.7 - 16 m, demersal planktonic <16 m SAV, sand/shell substrate SAV, sand/shell substrate <100 m; hard sand/shell substrate
<b>Penaeid HAPC - tidal inlets &amp; state nursery and overwintering habitats</b>			
Rock shrimp EFH identified from NC - FL Keys	adults	M	terrigenous and biogenic sand, 18 - 182 m
Royal red shrimp EFH identified from NC - FL	adults	M	mud/sand substrate 180 - 730 m
Red drum EFH identified from NC - FL Keys	eggs larvae postlarvae/juvenile subadults adults	M M E E M/E	tidal inlets, planktonic tidal inlets, planktonic mud bottoms, SAV, marsh/water interface mud bottoms, oyster reef, mangrove inlets & surf zone - 50 m; mud bottoms, oyster reefs
<b>Red drum HAPC - tidal inlets &amp; state nursery habitats, spawning sites &amp; SAV</b>			
Snowy grouper EFH identified from NC - FL	eggs/larvae adults	M M	pelagic < 180 m, boulders & relief features
Yellowedge grouper EFH identified from NC - FL	eggs/larvae adults	M M	pelagic 190 - 220 m, rocky outcrops & hardbottom
Warsaw grouper EFH identified from NC - FL Keys	eggs adults	M M	pelagic 76 - 219 m, cliffs, notches & rocky ledges

## Appendix 6 Continued.

Species	Life Stage	Ecosystem	EFH
Scamp EFH identified from NC - FL	adults	M	20 - 100 m, hardbottoms, rock outcrops
Speckled hind EFH identified from NC - FL	adults	M	27 - 122 m, hardbottom
Goliath grouper EFH identified from FL	juvenile adults	E M	SAV, mangrove, lagoons, structure <50 m, hardbottom, ledges, reefs
Wreckfish EFH identified from NC - FL (Blake Plateau)	adults	M	<1000 m, high relief features
Red snapper EFH identified from NC - FL	larvae postlarvae/juvenile adults	M M M	planktonic pelagic hardbottom; 10 - 190 m
Vermilion snapper EFH identified from NC - FL	juvenile adults	M M	reefs, hard bottom, 20 - 200 m reefs, hard bottom, 20 - 200 m
Gray snapper EFH identified from NC - FL	larvae postlarvae/juvenile adults	M E M/E	planktonic SAV, mangrove, mud reefs/hardbottom <77 m; SAV, mangrove, riverine
Mutton snapper EFH identified from FL	egg/larvae juvenile adults	M M/E M	planktonic SAV, mangrove, sand, mud reefs/hardbottom, sand; < 100m
Blackfin snapper EFH identified from NC - FL	juvenile adults	M M	hardbottom; 12 - 40 m shelf edge, 40 - 300 m
Silk snapper EFH identified from NC - FL	juvenile adults	M M	structure, hardbottom, 12 - 242 m cliffs/ledges, 64 - 242 m
White grunt EFH identified from NC - FL	eggs/larvae adults	M M	planktonic shore - 35 m, reefs/hardbottom, SAV, mangrove
Greater amberjack EFH identified from NC - FL	juvenile adults	M M	floating plants ( <i>Sargassum</i> ), debris pelagic over reefs/wrecks
Blueline tilefish EFH identified from NC - FL	eggs adults	M M	planktonic shelf edge, 68 - 236 m

## Appendix 6 Continued.

Species	Life Stage	Ecosystem	EFH
Golden tilefish EFH identified from NC - FL	adults	M	burrows in rough bottom; 76 - 457 m
<b>Snapper-Grouper HAPC - hardbottom, mangrove, SAV, oyster/shell, inlets, state nursery areas, <i>Sargassum</i>, coral, The Point, Ten Fathom Ledge, &amp; Big Rock (NC); Charleston Bump (SC); Blake Plateau &amp; Oculina Bank (FL); Hoyt Hills</b>			
King mackerel EFH identified from NC - FL	juvenile adults	M M	pelagic, S. Atlantic Bight pelagic, S. Atlantic Bight
Spanish mackerel EFH identified from NC - FL	larvae juvenile adults	M M/E M	offshore <50 m offshore, beach, estuarine pelagic
Cobia EFH identified from NC - FL	eggs larvae postlarvae/juvenile adults	M M/E M/E M/E	pelagic estuarine & shelf estuarine & shelf coastal & shelf
<b>Coastal Migratory Pelagic HAPC - Capes Lookout, Fear, &amp; Hatteras sandy shoals; The Point, Ten Fathom Ledge, Big Rock (NC); Charleston Bump &amp; Hurl Rocks (SC); The Point, The Hump, Marathon Hump, &amp; The Wall (FL); worm reefs, hardbottom, <i>Sargassum</i>, Bogue Sound, New River, Broad River</b>			
Dolphin (spp) EFH identified from NC - FL	all stages	M	Gulf stream, Charleston Gyre, Florida Current, pelagic <i>Sargassum</i>
Wahoo EFH identified from NC - FL	all stages	M	Gulf stream, Charleston Gyre, Florida Current, pelagic <i>Sargassum</i>
<b>Dolphin -Wahoo HAPC - The Point, The Ten Fathom Ledge, and Big Rock (NC); Charleston Bump &amp; Georgetown Hole (SC); The Point, The Hump, Marathon Hump, The "Wall" (FL); and Pelagic <i>Sargassum</i></b>			
Golden crab EFH identified from NC - FL	adults	M	mud, dead coral, pebble; 367 - 549 m
Spiny lobster EFH identified from FL	larvae juvenile adults	M/E M/E M/E	planktonic sponge, algae, coral, hardbottom sponge, algae, coral, hardbottom, crevices
<b>Spiny lobster HAPC - Florida &amp; Biscayne Bays, Card Sound, coral/hardbottom (Jupiter Inlet - Dry Tortugas)</b>			
Coral EFH identified from FL		M	N/A
<b>Coral HAPC - Ten Fathom Ledge, Big Rock &amp; The Point (NC); Hurl Rocks &amp; Charleston Bump (SC); Gray's Reef NMS (GA); FL Keys NMS, Biscayne NP, Biscayne Bay, Oculina Banks &amp; hardbottom/worm reefs (FL)</b>			
Calico scallops EFH identified from NC - FL	adults	M	shell, hard sand, gravel; 13 - 94 m

**Appendix 7. Summary of EFH Requirements for Species Managed by the Mid-Atlantic Fishery Management Council.**

<u>Species</u>	<u>Life Stage</u>	<u>Ecosystem</u>	<u>EFH</u>
Bluefish EFH identified from North Carolina - FL Keys	larvae juveniles adult	M E/M E/M	>15 m to Gulf Stream through Key West as above and estuaries from Albemarle Sound, NC through St Johns River, FL shore to Gulf Stream through Key West and estuaries from Albemarle Sound, NC through Indian River, FL
Spiny dogfish EFH identified from NC - FL	juvenile adult	M M	shelf waters from 10 - 400 m shelf waters from 10 - 450 m
Summer flounder EFH identified from NC - GA	larvae/juvenile adult	E/M E/M	shelf waters and estuaries from Albemarle Sound, NC through St. Andrew/Simon Sounds as above

**Submerged aquatic vegetation is HAPC for larval and juvenile summer flounder.**

**Appendix 8. Summary of EFH Requirements for High Migratory Species Managed by the National Marine Fisheries Service.**

<u>South Atlantic Species</u> Offshore	<u>Life Stage</u>	<u>EFH</u>
Albacore tuna	adult	Blake Plateau & Spur area (FL), >100 m isobath
Atlantic bigeye tuna	Juvenile/adult	same as above
Atlantic bluefin tuna	Eggs/larvae Juvenile/subadult Adults	nearshore to 200 m isobath nearshore, S of 27E N as above and Blake Plateau
Atlantic skipjack tuna	Eggs/larvae Juvenile to adult	S of 28.25E N, 200 m isobath to EEZ as above, 25 - 200 m isobath
Atlantic yellowfin tuna	Eggs/larvae Juvenile to adult	S of 28.25E N, 200 m isobath to EEZ N of 31E N, 500 to 2000 m isobath; Blake Plateau
Swordfish	Eggs/larvae Juvenile/subadult Adults	S of Hatteras, 200 m isobath to EEZ S to 31.5E N, 25 - 2000 m isobath, and S of 29E N from 100 m to EEZ 100 to 2000 m isobath or EEZ
Blue marlin	Eggs/larvae Juvenile Adult	S of 29.5E N, 100 m isobath to EEZ S to 30.75E N and S of 30E N, 200 to 2000 m isobath or EEZ S to 33.5E N, 100 - 2000 m; 32E to 30.75E N, 100 m to 78E W; and S of 29.5E N, 100 m to 50 mi. or EEZ
White marlin	Juvenile Adult	S to 25.25E N, 200 - 2000 m isobath (EEZ off FL) S to 33.75E N, 200 - 2000 m isobath; Charleston Bump; S of 29E N from 200 m to EEZ
Sailfish	Eggs/larvae Juvenile Adults	S of 28.25E N, 5 mi offshore to EEZ S of 32E N, 5 to 125 mi offshore or to EEZ S of 36E N, 5 - 125 mi offshore or to EEZ off NC and S FL
Longbill spearfish	Juvenile Adults	36.5E to 35E N, 200 m isobath to EEZ Charleston Bump
White shark	Juvenile	28E to 29.5E N, 25 - 100 m isobath
Bignose shark	Juvenile	S to 32E N and S of 30E N, 100 - 500 m isobaths
Caribbean reef shark	Priority research area	<25 m off Miami & Cape Canaveral
Night shark	Juvenile Adult	S to 33.5E N, 100 - 2000 m isobaths 36E to 25.5E N, 100 m to EEZ, 100 mi or 2000 m isobath (whichever is nearest to land)
Silky shark	Juvenile	25 m (FL) or 100m to 2000 m isobaths
Longfin mako shark	All stages	N of 35E N, 100 m to EEZ; 35E N -28.25E N, 100 - 500 m isobath; S of 28.25E N, 200 m to EEZ
Shortfin mako shark	All stages	S to Onslow Bay, NC, 25 - 200 m isobaths
Blue shark	Late Juvenile/adult	S to 35E N, 25 m to EEZ

## Appendix 8 Continued.

<u>South Atlantic Species</u>	<u>Life Stage</u>	<u>EFH</u>
<u>Offshore</u>		
Oceanic whitetip shark	Early juvenile Late juvenile Adult	Charleston Bump 32E to 26E N, 200 m to EEZ 36E to 30E N, 200 m to EEZ
Bigeye thresher shark	All stages	36.5E to 34E N, 200 - 2000 m isobaths
<u>Coastal/Inshore Species</u>		
<u>Florida Only</u>		
Great hammerhead shark	Juvenile/adult	coastal waters to 100 m, S of 30E N
Nurse shark	Juvenile/adult	S of 30.5E N, shoreline to 25 m isobath
Blacktip shark	Juvenile Adult	S to 28.5E N, coastal waters to 25 m isobath Outer Banks, NC, shore to 200 m; 30E to 28.5E N, coastal waters to 50 m isobath
<u>Florida - Georgia</u>		
Bull shark	Juvenile	S of 32E N, inlets, estuaries, waters < 25 m FL
<u>Florida - South Carolina</u>		
Lemon shark	Juvenile Adult	Bull's Bay, SC to 28E N & S of 25.5E N, inlets, estuaries, waters < 25 m 31E to 30E N & S of 27E N, inlets, estuaries, waters < 25 m
Blacknose shark	Juvenile Adult	SC - Cape Canaveral, to 25 m St. Augustine to Canaveral, FL, coastal water to 25 m
Finetooth shark	All stages	33E to 30E N, coastal waters to 25 m
<u>Florida - North Carolina</u>		
Scalloped hammerhead shark	Juvenile Adults	shoreline to 200 m isobath S to 28E N, 25 - 200 m isobaths
Dusky shark	Juvenile Adult	S to 33E N and S of 30E N, inlets, estuaries, waters < 200 m S to 28E N, 25 to 200 m isobaths
Sandbar shark	Juvenile Adult	S to 27.5E N, coastal waters to 25 m coastal waters to 50 m.
<b><i>HAPC for this species identified for Pamlico Sound adjacent to Hatteras and Ocracoke Islands and offshore.</i></b>		
Spinner shark	Early juvenile Juvenile/adult	S of 32.25E N, coastal waters to 25 m 30.7E to 28.5E N, coastal waters to 200 m
Tiger shark	Early juvenile Late juvenile Adult	S to Canaveral, coastal waters to 200 m shore to 100 m, except GA to Cape Lookout, where EFH is between 25 - 100 m S to Ft Lauderdale, coastal to Gulf Stream
Sand tiger shark	Juvenile Adult	S to Cape Canaveral, coastal water to 25 m St. Augustine to Canaveral, FL, coastal water to 25 m

## Appendix 8 Continued.

<u>South Atlantic Species</u>	<u>Life Stage</u>	<u>EFH</u>
Florida - North Carolina Bonnethead shark	Juvenile	Cape Fear NC to W. Palm Beach and Miami FL - FL Keys, inlets, estuaries, waters <25 m
	Adult	Cape Fear NC - Cape Canaveral FL, inlets, estuaries & shallow coastal waters; shallow waters of the FL Keys.
Atlantic sharpnose shark	Juvenile	Daytona Beach - Cape Hatteras, bays and waters to 25 m
	Adult	NC & St. Augustine - C. Canaveral, to 100 m isobath

### NOTES:

1. In 2006, NMFS prepared the Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. NMFS presented new EFH information and data collected since 1999 but did not modify any of the existing EFH descriptions or boundaries in that FMP. However, based on an assessment of the data collected, NMFS made a determination that modification to existing EFH for some species and/or life stages may be warranted. Any modifications to existing EFH descriptions and boundaries and potential measures to minimize fishing impacts would be addressed in a subsequent FMP action

## **Appendix 9. Sources of EFH and Related Resource Information.**

### Fishery Management Plan Amendments

- Mid-Atlantic Fishery Management Council. 1998. Amendment 1 to the bluefish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE. 2 vols.
- Mid-Atlantic Fishery Management Council. 1998. Amendment 8 to the Atlantic mackerel, squid, and butterfish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.
- Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the Atlantic surfclam and ocean quahog fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.
- Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the summer flounder, scup, and black sea bass fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.
- National Marine Fisheries Service. 1999. Amendment 1 to the Atlantic billfish fishery management plan amendment. National Marine Fisheries Service. Silver Spring, MD.
- National Marine Fisheries Service. 1999. Fishery management plan for Atlantic tunas, swordfish, and sharks. National Marine Fisheries Service. Silver Spring, MD.
- National Marine Fisheries Service. 2006. Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Marine Fisheries Service. Silver Spring, MD.
- South Atlantic Fishery Management Council. 1998. Final habitat plan for the South Atlantic region: Essential Fish Habitat requirements for Fishery Management Plans of the South Atlantic fishery Management Council: The Shrimp Fishery Management Plan, The Red Drum Fishery Management Plan, The Snapper Grouper Fishery Management Plan, The Coastal Migratory Pelagics Fishery Management Plan, The Golden Crab Fishery Management Plan, The Spiny Lobster Fishery Management Plan, The Coral, Coral Reefs, and Live/Hard Bottom Habitat Fishery Management Plan, and The Calico Scallop Fishery Management Plan. South Atlantic Fishery Management Council. Charleston, SC.
- South Atlantic Fishery Management Council. 2003. Fishery management plan for the dolphin and wahoo fishery of the Atlantic. South Atlantic Fishery Management Council. Charleston, SC.
- South Atlantic Fishery Management Council. 2003. Fishery management plan for the pelagic Sargassum habitat of the south Atlantic region. South Atlantic Fishery Management Council. Charleston, SC.

### EFH Related Web Sites

- |                                     |   |
|-------------------------------------|---|
| South Atlantic FMC                  | <a href="http://www.safmc.net/">http://www.safmc.net/</a>   |
| Mid-Atlantic FMC                    | <a href="http://www.mafmc.org/">http://www.mafmc.org/</a>   |
| NMFS Office of Habitat Conservation | <a href="http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/index.htm">http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/index.htm</a> |
| NMFS Southeast Region               | <a href="http://sero.nmfs.noaa.gov/">http://sero.nmfs.noaa.gov/</a>   |
| NMFS Highly Migratory Species       | <a href="http://www.nmfs.noaa.gov/sfa/hms">http://www.nmfs.noaa.gov/sfa/hms</a>   |

**Appendix 10. Points of Contact for Essential Fish Habitat Activities from North Carolina through Florida along the South Atlantic Coastal Area.**

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