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National Marine Fisheries Service
Southeast Region
Habitat Conservation Division

http://sero.nmfs.noaa.gov

Essential Fish Habitat - Gulf of Mexico

Fish require healthy surroundings to survive and reproduce. Essential fish habitat includes all types of aquatic habitat - wetlands, coral reefs, seagrasses, mangroves - where fish spawn, breed, feed, or grow to maturity.

This document has been prepared by the Habitat Conservation Division of NOAA's National Marine Fisheries Service (NMFS) Southeast Regional Office to provide an overview of the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act in the Gulf of Mexico.

NMFS and the Gulf of Mexico Fishery Management Council have identified essential fish habitat for federally managed species and federal agencies are required to consult with NMFS when their activities, including permits and licenses they issue, may adversely affect EFH. NMFS must also identify measures to minimize the adverse affects of fishing gear and fishing activities on EFH.

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Background

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) set forth a mandate for NOAA's National Marine Fisheries Service (NMFS), regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The essential fish habitat (EFH) provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals - maintaining sustainable fisheries. Maintaining suitable marine fishery habitat quality and quantity is critical to achieve this goal.

WHAT IS ESSENTIAL FISH HABITAT?

The Magnuson-Stevens Act, defines essential fish habitat as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."

Habitat Conservation Division

The Southeast Region's Habitat Conservation Division (HCD) implements the NMFS EFH program in the coastal states from North Carolina south through Texas, as well as the territories of Puerto Rico and the U.S. Virgin Islands. One of the principal authorities for protecting and conserving marine fishery habitats is the EFH provisions of the Magnuson-Stevens Act which requires federal agencies that authorize, fund, or undertake projects that may adversely affect EFH to consult with NMFS. Through consultation, the HCD provides recommendations to federal agencies to avoid, minimize, mitigate, or otherwise offset the effects of their actions on EFH.

The review, advisory, and consultative services provided by the HCD to effect conservation and enhancement of fishery habitats largely use existing laws in addition to the Magnuson-Stevens Act, including the Fish and Wildlife Coordination Act, Clean Water Act, the National Environmental Policy Act, Federal Power Act, and the Coral Reef Conservation Act.

The HCD's Gulf of Mexico Branch is managed from Galveston, Texas, and follows the Gulf of Mexico Fishery Management Council's boundaries from Texas to the Gulf side of the Florida Keys. The Galveston office is located at the Southeast Fisheries Science Center's Galveston Laboratory. This branch has staff located in field offices in Baton Rouge, Louisiana, and St. Petersburg, Florida.

Gulf of Mexico Fishery Management Council (Gulf Council)

The Magnuson-Steven's Act created regional fishery management councils to advise NMFS on fishery management issues. Three regional fishery management councils exist within the area encompassed by the NMFS Southeast Region: Gulf of Mexico; South Atlantic; and Caribbean. The Gulf Council first described EFH in a 1998 fishery management plan (FMP) amendment. The most recent revisions and updates became effective in January 2006 and were reviewed in 2011. The next EFH review by the Gulf Council is due in 2016.

NMFS Highly Migratory Species Division

NMFS is responsible for identifying and describing EFH in fishery management plans for highly migratory species (HMS) such as sharks, tunas, and billfish which cross fishery management council boundaries. EFH for HMS in the Gulf of Mexico was updated in a 2009 FMP amendment by NMFS. A review of HMS EFH information, initiated in 2014, is currently underway.

EFH DESIGNATIONS FOR CURRENT GULF COUNCIL FISHERY MANAGEMENT PLANS

Red Drum EFH – EFH for red drum consists of all Gulf of Mexico estuaries; waters and substrates extending from Vermilion Bay, Louisiana to the eastern edge of Mobile Bay, Alabama out to depths of 25 fathoms; waters and substrates extending from Crystal River, Florida to Naples, Florida between depths of 5 and 10 fathoms; waters and substrates extending from Cape Sable, Florida to the boundary between the areas covered by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council between depths of 5 and 10 fathoms.

1 fathom = 6 feet

Reef Fish EFH – EFH for reef fish consists of Gulf of Mexico waters and substrates extending from the US/Mexico border to the boundary between the areas covered by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council from estuarine waters out to depths of 100 fathoms.

Coastal Migratory Pelagic EFH – EFH for coastal migratory pelagic consists of Gulf of Mexico waters and substrates extending from the US/Mexico border to the boundary between the areas covered by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council from estuarine waters out to depths of 100 fathoms.

Shrimp EFH – EFH for shrimp consists of Gulf of Mexico waters and substrates extending from the US/Mexico border to Fort Walton Beach, Florida from estuarine waters out to depths of 100 fathoms; waters and substrates extending from Grand Isle, Louisiana to Pensacola Bay, Florida between depths of 100 and 325 fathoms; waters and substrates extending from Pensacola Bay, Florida to the boundary between the areas covered by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council out to depths of 35 fathoms, with the exception of waters extending from Crystal River, Florida to Naples, Florida between depths of 10 and 25 fathoms and in Florida Bay between depths of 5 and 10 fathoms.

Spiny Lobster EFH – EFH for spiny lobster consists of Gulf of Mexico waters and substrates extending from Tarpon Springs, Florida to Naples, Florida between depths of 5 and 10 fathoms; waters and substrates extending from Cape Sable, Florida to the boundary between the areas covered by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council out to depths of 15 fathoms.

Coral EFH – EFH for coral consists of the total distribution of coral species and life stages throughout the Gulf of Mexico including the East and West Flower Garden Banks, Florida Middle Grounds, southwest tip of the Florida reef tract, and predominant patchy hard bottom offshore of Florida from approximately Crystal River south to the Keys, and scattered along the pinnacles and banks from Texas to Mississippi, at the shelf edge.

NOTE: Initial EFH identifications and descriptions were completed by the Gulf Council in 1998 (GMFMC, 1998). In 2004, the Gulf Council and NMFS completed an environmental impact statement (EIS) providing new, more thorough NEPA analysis (GMFMC, 2004), and in 2005 a second EFH FMP amendment was approved (GMFMC, 2005). In 2011, the Gulf Council repealed the FMP for Stone Crab and also removed four species of lobster and 10 species of reef from federal management. Therefore, previous EFH designations for those species are no longer in effect. See page 15 for a current list of managed species.

General Habitat Types Identified as EFH in the Gulf of Mexico by the Gulf Council

Photos: NOAA Photo Library

← Estuarine Emergent Wetlands

← Submerged Aquatic Vegetation

← Vegetated Bottoms

Algal Flats

Non-Vegetated Bottoms

← Estuarine & Marine Water Column

← Mangrove Wetlands

← Live (Hard) Bottoms

Mud, Sand, Shell, and Rock Substrates

←Corals & Coral Reefs

Continental Shelf & Geologic Features

EFH-HAPC: Gulf Council EFH Habitat Areas of Particular Concern

The EFH regulations encourage NMFS and fishery management councils to consider a second, more limited habitat designation for each species in addition to EFH. EFH-HAPC are described as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. EFH-HAPCs are not afforded any additional regulatory protection under the Magnuson-Stevens Act; however, federal actions with potential adverse impacts to EFH-HAPCs will be more carefully scrutinized during the EFH consultation process. These areas may be subject to more stringent EFH conservation recommendations.

The NMFS and Gulf Council identified the following areas as EFH-HAPC's in the Coral FMP:

Florida

- Madison-Swanson Marine Reserve
- Tortugas North
- Tortugas South
- Florida Middle Grounds
- Pulley Ridge

Texas/Louisiana Topographic Features (Reefs and Banks)

- West Flower Garden Banks
- East Flower Garden Banks
- Stetson Bank
- 29 Fathom Bank
- MacNeil Bank
- Rezak Sidner Bank
- Rankin Bright Bank
- Geyer Bank
- McGrail Bank
- Bouma Bank
- Sonnier Bank
- Alderdice Bank
- Jakkula Bank

EFH Designations for HMS Fishery Management Plan

EFH for highly migratory species managed by the NMFS is identified in a consolidated FMP (NMFS, 2009). Because the primary data type used was species specific distribution data, NMFS HMS identified geographic areas, rather than specific habitat types, as EFH. Maps of HMS EFH, as shown here for adult bluefin tuna, are located in Chapter 5 of the Consolidated HMS FMP as well as the online EFH Mapper Tool:

http://www.habitat.noaa.gov/
protection/efh/habitatmapper.html

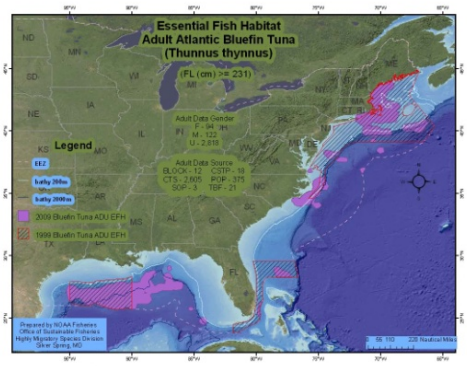


Figure 5.7 Atlantic Bluefin Tuna: Adult.

AMENDMENT 1 TO THE CONSOLIDATED HMS FMP JUNE 2009 151 CHAPTER 5 ESSENTIAL FISH HABITAT

EFH-HAPC for HMS Species

The Gulf of Mexico is the only known spawning location for western Atlantic bluefin tuna. For this reason, it was designated as an EFH HAPC and is the only EFH HAPC designation for HMS in the Gulf of Mexico**.**

SUMMARIZED GULF COUNCIL EFH DESIGNATION PROCESS

The Gulf Council first described EFH in a 1998 fishery management plan (FMP) amendment. The most recent revisions and updates became effective in January 2006 and include estuarine and marine habitats which support federally managed species. The Gulf Council and NMFS analyzed alternatives for EFH based on individual species and life stages condensed to a single EFH designation for each of the FMPs for the Gulf of Mexico. Single maps for each FMP were also used to describe and identify EFH for each fishery.

EFH designations appear to be very expansive, encompassing most of the coastal waters and Exclusive Economic Zone; however, it is important to realize EFH is designated by life stage for each managed species. (See Appendices 1-5). Careful and deliberate consideration by NMFS and the Gulf Council was taken in designating the spatial extent of EFH.

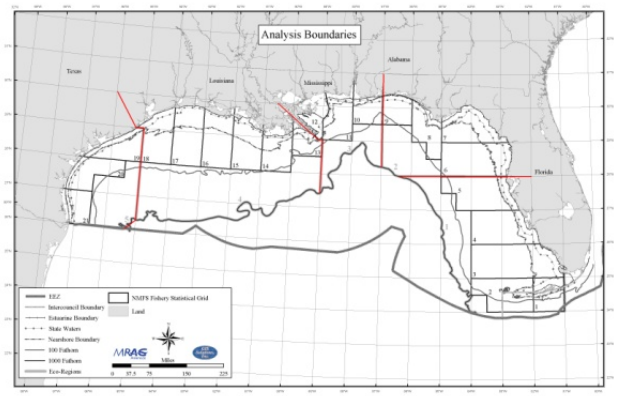
The effort to identify and delineate EFH undertaken by the Gulf Council was a rigorous process and involved advice and input by numerous state and federal agencies and the public at large. Known density and distribution information was combined with life-history information derived from an analysis of functional relationships between fish and their habitats. The methods used distinguish EFH from all habitat types potentially occupied by species throughout their lifecycle as required by the EFH regulations.

Gulf of Mexico Eco-Regions

Recognizing fish distribution and environmental factors vary across the Gulf of Mexico, the Gulf Council subdivided the Gulf into five sub-units they identified as “eco-regions”. For convenience, the eco-regions were selected to coincide with existing statistical grid boundaries used by NMFS for depicting fishing effort. (See map on next page). Within each eco-region, the coastal zone was further subdivided as estuarine, nearshore, or offshore as defined below.

- **Estuarine:** Occurring inside estuaries or bays and areas on or inshore of barrier islands
- **Nearshore:** Occurring in marine waters 60-feet or less in depth.
- **Offshore: O**ccurring in marine waters greater than 60-feet deep

STATISTICAL GRID & ECO REGION MAP



Eco-Region 1: Florida Keys to Tarpon Springs, Florida. This eco-region has a greater amount of subtropical influence and associated marine fauna as compared to the other eco-regions. This region contains a large proportion of reefs, hard bottom, and mangroves.

Eco-Region 2: Tarpon Springs, Florida, to Pensacola Bay, Florida. This eco-region has an increased temperate influence as compared to eco-region 1. Hard bottom, sand, and submerged aquatic vegetation are more common in this eco-region.

Eco-Region 3: Pensacola Bay, Florida, to the Mississippi River Delta. This eco-region is subject to nearshore salinity fluctuations influenced by the Mississippi and Atchafalaya Rivers. This eco-region contains predominantly soft bottom habitats and greater amounts of marsh and oyster reefs.

Eco-Region 4: Mississippi River Delta to Freeport, Texas. This eco-region is directly influenced by the Mississippi and Atchafalaya Rivers and contains extensive areas of marsh. Rocky reefs are found offshore this eco-region.

Eco-Region 5: Freeport, Texas, to the U.S./Mexico border. This eco-region has increased subtropical influence with higher temperatures but lower rainfall as compared to the other eco-regions. The southern end of this eco-region contains hypersaline habitats.

Habitat Types

As the Gulf Council collected data from various sources the need to provide consistent terminology for their EFH designations became apparent. They chose to use the following twelve habitat types for the related and associated terms show in parenthesis.

Habitat Type (Related Terms, if any):

- **Mangroves** (n/a)
- **Emergent Marsh** (tidal wetlands, salt marshes, tidal creeks)
- **Drift Algae** (n/a)
- **Oyster Reefs** (n/a)
- **Submerged Aquatic Vegetation** (SAV, seagrasses, benthic algae)
- **Reefs** (reef halos, patch reefs, deep reefs)
- **Hard Bottom** (live bottom, low- relief bottoms, and high-relief bottoms)
- **Soft Bottom** (mud, clay, silt)
- **Sand/Shell Bottom** (sand, shell)
- **Banks/Shoals** (n/a)
- **Shelf edge/slope** (shelf edge, shelf slope)
- **Pelagic** (n/a)

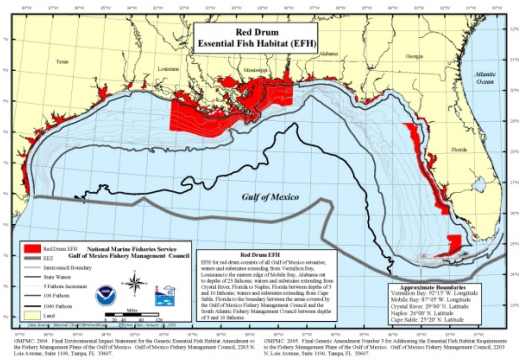
Gulf Council Functional Relationship Analysis

A comprehensive review of scientific literature provided information on the relationship between managed species and habitats. A relational database linked preferences for habitat types, substrates, and water depth. When substrate and depth preferences or geographic density status were not available for certain life stages, information on other life stages of the same species or same life stage information of a similar species was used when possible.

The following life stages were used for each managed species: eggs, larvae, post-larvae, early juveniles, late juveniles, adults, and spawning adults. Life stage distribution and density information was applied to each species life stage within each eco-region. Although information was available for many juvenile and adult life stages, there is a general lack of information for early life history stages.

EFH was not designated for species or species life stages which did not occur, or occurred at a very low density, in an eco-region.

Geospatial habitat information was gathered from a variety of state and federal agencies and academic institutions. EFH maps depicting the density and habitat utilization data were deliberated by the Gulf Council in developing the textual (regulatory) descriptions of EFH for Gulf of Mexico Fishery Management Plans.

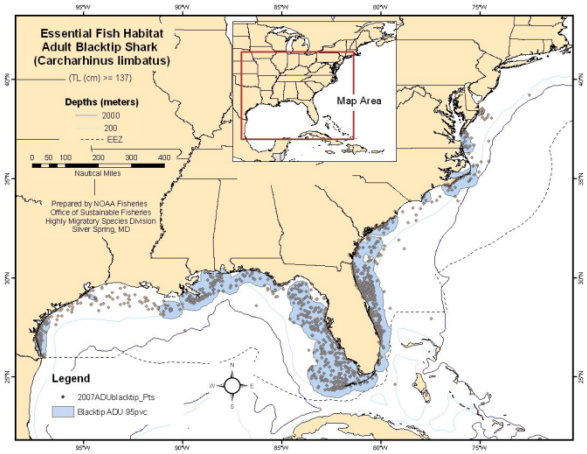


MAP OF RED DRUM EFH

Summarized NMFS HMS EFH Designation Process

In 2009, NMFS HMS updated EFH identifications and descriptions based on a method which creates a probability boundary using point/distribution data from fishery independent surveys and research. All available distribution points for a particular species and life stage were compiled in a geographic information system (GIS).

The method utilized takes into account the distance between each point and the next nearest point and excludes outliers where the species occurred in relatively low numbers. Although lower probability boundaries were also analyzed, the 95 percent boundary was selected representing the most precautionary approach and most closely corresponding to the 1999 EFH boundaries. Specific EFH boundaries were edited due to buffers which overlapped shorelines or extended beyond the exclusive economic zone.



ADULT BLACKTIP SHARK DISTRIBUTION DATA

NOTE: Please see the Consolidated HMS FMP (NMFS 2009) for a detailed description of the GIS and Hawth's Analysis Tools used to create the HMS EFH boundaries.

EFH CONSULTATION PROCESS – See Flow Diagram on Page 10

In the regulatory context, one of the most important provisions of the Magnuson-Stevens Act for conserving fish habitat is the consultation required by federal agencies involved in permitting, funding, or undertaking actions which may adversely impact EFH. The EFH regulations define "adverse effect" to mean any impact that reduces quality and/or quantity of EFH. Federal agencies may designate a non-federal representative (a consultant, for example) to conduct an EFH consultation. However, the federal agency remains responsible for compliance with the requirements of the Magnuson-Stevens Act and EFH regulations.

> At its most basic, an EFH consultation consists of a federal agency providing NMFS with an EFH assessment, NMFS responding with EFH conservation recommendations followed by the federal agency's written response to the recommendations.

EFH Assessment: An EFH consultation generally begins when NMFS receives the federal action agency's EFH assessment. An EFH assessment is a critical review of the proposed project and its potential impacts to EFH. As outlined in the regulation, EFH assessments must include:

(1) a description of the action;

(2) an analysis of the potential adverse effects of the action on EFH and the managed species;

(3) the federal agency's conclusions 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 affects, a literature review, an analysis of alternatives to the proposed action, and any other relevant information.

EFH Conservation Recommendations: NMFS will then review the EFH assessment and provide comments back to the federal agency with recommendations for protecting and conserving EFH. During the development of our comments, HCD staff may visit the project site, meet with the project applicant, and confer with other federal and state agencies or scientific experts. The Gulf Council may also provide EFH conservation recommendations.

Federal Agency Response to EFH Conservation Recommendations: The Magnuson-Stevens Act requires federal agencies to respond in writing to NMFS (and fishery management councils) within 30 days of receiving EFH conservation recommendations. The regulations require the response to include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the anticipated EFH impacts.

Where a response is inconsistent with NMFS/Council recommendations, the agency must provide its response 10 days prior to taking final action. This response must explain reasons for not following the recommendations, including the scientific rationale for any disagreements over the anticipated effects of the proposed action and the measures needed to offset the adverse affects. The consultation process provides an important opportunity to resolve critical and outstanding EFH issues prior to an action agency rendering a final decision. The NMFS Assistant Administrator may request a meeting with the head of the federal action agency to further discuss the project and attempt to achieve a greater level of protection for EFH.

TYPES OF EFH CONSULTATION

Project Specific Consultations: The vast majority of EFH consultations are project specific consultations incorporated into existing environmental review procedures because consultation and coordination is already required by other statutes. To facilitate project-specific consultations, NMFS and the action agency should discuss how existing review or coordination processes can be used to accomplish the EFH consultation. The NMFS will then provide a letter (see number (3) below) to the action agency describing the process of EFH consultation within existing project review framework. To incorporate EFH consultations 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

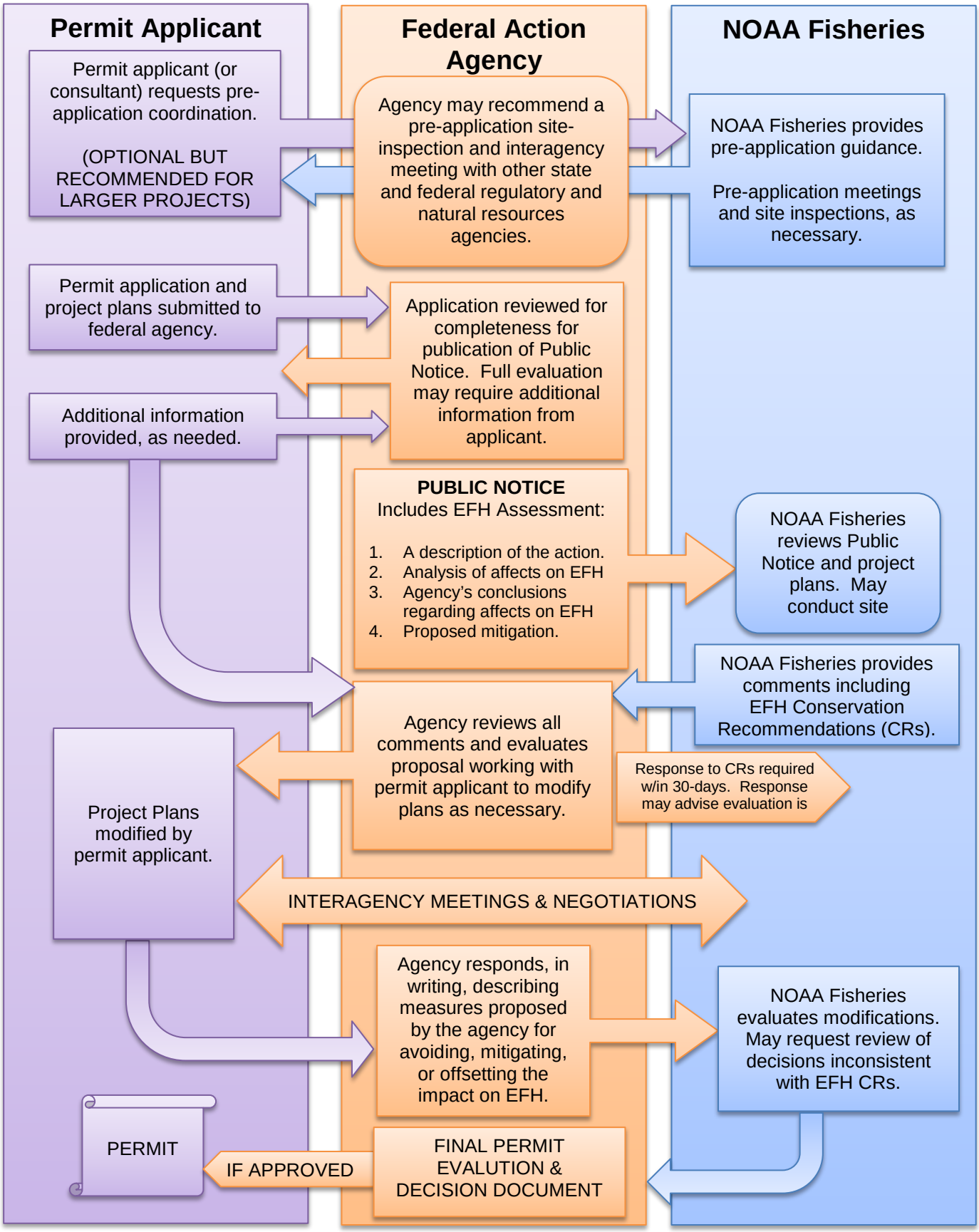
(3) NMFS must have completed a written finding indicating the existing coordination process satisfies the requirements of the Magnuson-Stevens Act.

Abbreviated and Expanded Consultations: When an agreement to use an existing procedure is not in place, project specific consultations must follow procedures in the EFH Final Rule. Abbreviated consultations allow NMFS to quickly determine 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 maximize the opportunity for NMFS and a federal action agency 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 which 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, a greater level of review and analysis would be appropriate. Expanded consultation procedures provide additional time for the development of EFH conservation recommendations.

Programmatic Consultation & General Concurrences: Programmatic and General Concurrence consultations can minimize the need for individual project consultation in cases where NMFS is able to determine the actions are likely to result in no more than minimal adverse affects and conservation measures would be implemented. 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. For example, the NMFS Southeast Region has a programmatic consultation in place with the Department of Interior for the siting and removal of oil and gas structures on the outer continental shelf of the Gulf of Mexico. The EFH regulation allows a General Concurrence to be utilized for categories of similar activities having minimal individual and cumulative impacts such as activities authorized under the U.S. Army Corps of Engineers' Nationwide Permit program. Consultation occurs at the Corps' District level authorizing a variety of activities with minimal impacts.

NOTE: EFH consultation may be required for activities occurring outside of EFH when adverse effects to EFH may occur as a result of that activity. Additionally, although the Magnuson-Stevens Act does not require state or local agencies to consult, NMFS is directed to comment and provide EFH conservation recommendations if we become aware of non-federal activities which may have an adverse affect on EFH.


Permit Applicant
Federal Action Agency
NOAA Fisheries
Permit applicant (or consultant) requests pre-application coordination.
(OPTIONAL BUT RECOMMENDED FOR LARGER PROJECTS)
Agency may recommend a pre-application site-inspection and interagency meeting with other state and federal regulatory and natural resources agencies.
NOAA Fisheries provides pre-application guidance.
Pre-application meetings and site inspections, as necessary.
Permit application and project plans submitted to federal agency.
Application reviewed for completeness for publication of Public Notice. Full evaluation may require additional information from applicant.
Additional information provided, as needed.
PUBLIC NOTICE
Includes EFH Assessment:
1. A description of the action.
2. Analysis of affects on EFH
3. Agency's conclusions regarding affects on EFH
4. Proposed mitigation.
NOAA Fisheries reviews Public Notice and project plans. May conduct site
NOAA Fisheries provides comments including EFH Conservation Recommendations (CRs).
Agency reviews all comments and evaluates proposal working with permit applicant to modify plans as necessary.
Response to CRs required w/in 30-days. Response may advise evaluation is
Project Plans modified by permit applicant.
INTERAGENCY MEETINGS & NEGOTIATIONS
Agency responds, in writing, describing measures proposed by the agency for avoiding, mitigating, or offsetting the impact on EFH.
NOAA Fisheries evaluates modifications. May request review of decisions inconsistent with EFH CRs.
PERMIT
IF APPROVED
FINAL PERMIT EVALUTION & DECISION DOCUMENT

POINTS OF CONTACT:

Texas

National Marine Fisheries Service
Southeast Region
Habitat Conservation Division
4700 Avenue U
Galveston, Texas 77551

(409) 766-3699
Fax: (409)766-3575

Louisiana, Mississippi, & Alabama

National Marine Fisheries Service
Southeast Region
Habitat Conservation Division
c/o Louisiana State University
Baton Rouge, Louisiana 70803

(225) 389-0508
Fax: (225) 389-0506

Florida (Gulf Coast)

National Marine Fisheries Service
Southeast Region
Habitat Conservation Division
263 13th Avenue South
St. Petersburg, Florida 33701

(727) 824-5311
Fax: (727) 824-5300

The inland extent of EFH is generally limited to the following coastal counties and Louisiana parishes:

Texas

- Cameron
- Willacy
- Kenedy
- Kelberg
- Nueces
- San Patricio
- Refugio
- Aransas
- Calhoun
- Victoria
- Jackson
- Matagorda
- Brazoria
- Galveston
- Harris
- Chambers
- Jefferson
- Orange

Louisiana

- Calcasieu
- Cameron
- Vermillion
- Iberia
- St. Mary
- Terrebonne
- Lafourche
- St. Charles
- Jefferson
- Plaquemines
- St. Bernard
- Orleans
- St. Tammany
- Tangipahoa
- Livingston
- St. John the Baptist

Mississippi & Alabama

- Hancock, MS
- Harrison, MS
- Jackson, MS
- Mobile, AL
- Baldwin, AL

Florida – Gulf Coast

- Escambia
- Santa Rosa
- Okaloosa
- Walton
- Bay
- Gulf
- Franklin
- Liberty
- Wakulla
- Jefferson
- Taylor
- Dixie
- Levy
- Citrus
- Hernando
- Pasco
- Pinellas
- Hillsborough
- Manatee
- Sarasota
- Charlotte
- Lee
- Collier
- Monroe

Other Points of Contact:

GULF OF MEXICO OUTER CONTINENTAL SHELF

Habitat Conservation Division
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, Florida 33701

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Gulf of Mexico Fishery
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2203 North Lois Avenue Suite 1100
Tampa, Florida 33607
Fax: (813)348-1711

NMFS HIGHLY MIGRATORY SPECIES DIVISION

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Peter.Cooper@noaa.gov
(301) 713-2347

HMS Division (NMFS/SF1)
1315 East-West Highway
Silver Spring, Maryland 20910

Fax: (301) 713-1917

USEFUL WEBSITES:

Southeast Region, Habitat Conservation:	http://sero.nmfs.noaa.gov/habitat_conservation/
Gulf of Mexico Fishery Management Council:	http://www.gulfcouncil.org /
NMFS Office of Habitat Conservation:	http://www.habitat.noaa.gov/protection/efh/
EFH Habitat Mapper:	http://www.habitat.noaa.gov/protection/efh/habitatmapper.html
NMFS Highly Migratory Species:	http://www.nmfs.noaa.gov/sfa/hms

REGULATORY BACKGROUND

Magnuson-Stevens Fishery Conservation and Management Act & EFH Final Rule

The Magnuson-Stevens Act requires EFH be designated for each fishery as a whole. The EFH regulations clarify every FMP must describe and identify EFH for all life stages of each managed species. The Magnuson-Stevens Act also directs NMFS and the fishery management councils to identify actions to encourage the conservation and enhancement of EFH and identify measures to minimize to the extent practicable the adverse effects of fishing on EFH.

On January 17, 2002, regulations (EFH Final Rule) which specify procedures for implementation of the EFH provisions of the Magnuson-Stevens Act, were published in the *Federal Register*. These rules, in two subparts, address requirements for FMP amendment and detail the coordination, consultation, and recommendation requirements of the Magnuson-Stevens Act. (50 C.F.R. Part 600)

Selected Text from the Magnuson-Stevens Act (16 U.S.C. 1855 *et seq*)

SEC. 305. OTHER REQUIREMENTS AND AUTHORITY
104-297
(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.

Designating EFH

The EFH Final Rule (50 C.F.R. Part 600) provides regulations and guidance on the implementation of the EFH provisions of the Magunson-Stevens Act. The rule includes information on the types of information used for describing and identifying EFH, designating EFH-Habitat Areas of Particular Concern (HAPC), and mitigating fishing impacts on EFH. The guidelines suggest using information in a risk-averse fashion to ensure adequate protection of habitat for all managed species.

EFH Levels of Information

The regulations suggest fishery management councils 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 using the highest level of detail:

Level 1: Habitat related presence-absence or distribution data

Level 2: Habitat related densities

Level 3: Habitat related growth, reproduction, or survival rates

Level 4: Habitat related production rates.

If there is no information on a given species or life stage, and habitat use cannot be inferred from other means (such as information on a similar species or another life stage) then EFH should not be designated for that species.

Mapping EFH

The EFH Final Rule requires FMPs to include maps (within the constraints of available information) of the geographic locations or boundaries of EFH. Spatial data quality issues should be considered when evaluating how EFH and EFH-HAPC data can be effectively used in a geographic information system. For example, if the resolution of the shoreline data used to define the boundaries of EFH is too low to conform to the complexity of actual geographic shoreline features, it will not be reliable in near-shore areas. Additionally, geographic and environmental features can change significantly over time, particularly in the marine and coastal environment. Inaccuracies can be insignificant when creating large-scale maps; however, they become more problematic when relying on data to provide accurate information at very specific locations. The EFH Mapper, however, is an online mapping tool providing spatial representations of EFH, EFH-HAPC, and EFH areas protected from fishing activities. Users are cautioned to understand the constraints of the information provided by the EFH Mapper. (http://www.habitat.noaa.gov/protection/efh/habitatmapper.html)

Gulf Council & HMS Managed Species

GULF COUNCIL	
COASTAL MIGRATORY PELAGICS	
king mackerel	*Scomberomorus cavalla*
Spanish mackerel	*Scomberomorus maculates*
cobia	*Rachycentron canadum*
RED DRUM	
red drum	*Sciaenops ocellatus*
REEF FISH	
queen snapper	*Etelis oculatus*
mutton snapper	*Lutjanus analis*
blackfin snapper	*Lutjanus buccanella*
red snapper	*Lutjanus campechanus*
cubera snapper	*Lutjanus cyanopterus*
gray (mangrove) snapper	*Lutjanus griseus*
lane snapper	*Lutjanus synagris*
silk snapper	*Lutjanus vivanus*
yellowtail snapper	*Ocyurus chrysurus*
wenchman	*Pristipomoides aquilonaris*
vermilion snapper	*Rhomboplites aurorubens*
speckled hind	*Epinephelus drummondhayi*
yellowedge grouper	*Epinephelus flavolimbatus*
goliath grouper	*Epinephelus itajara*
red grouper	*Epinephelus morio*
warsaw grouper	*Epinephelus nigritus*
snowy grouper	*Epinephelus niveatus*
Nassau grouper	*Epinephelus striatus*
black grouper	*Mycteroperca bonaci*
yellowmouth grouper	*Mycteroperca interstitialis*
gag	*Mycteroperca microlepis*
yellowfin grouper	*Mycteroperca venenosa*
scamp	*Mycteroperca phenax*
goldface tilefish	*Caulolatilus crysops*
blueline tilefish	*Caulolatilus microps*
tilefish	*Lopholatilus chamaeleonticeps*
greater amberjack	*Seriola dumerili*
lesser amberjack	*Seriola fasciata*
almaco jack	*Seriola rivoliana*
banded rudderfish	*Seriola zonata*
gray triggerfish	*Balistes capriscus*
hogfish	*Lachnolaimus maximus*
SHRIMP	
brown shrimp	*Farfantepenaeus aztecus*
white shrimp	*Litopenaeus setiferus*
pink shrimp	*Farfantepenaeus duorarum*
royal red shrimp	*Hymenopenaeus robustus*
SPINY LOBSTER	
spiny lobster	*Panulirus argus*
CORALS	
Class Hydrozoa	(stinging and hydrocorals)
Class Anthozoa	(sea fans, whips, precious coral, sea pen, stony corals)

HIGHLY MIGRATORY SPECIES	
TUNAS	
Atlantic albacore tuna	*Thunnus alalunga*
Atlantic bigeye tuna	*Thunnus obesus*
Atlantic bluefin tuna	*Thunnus thynnus*
Atlantic skipjack tuna	*Katsuwonus pelamis*
Atlantic yellowfin tuna	*Thunnus albacres*
BILLFISH	
swordfish	*Xiphias gladius*
blue marlin	*Makaira nigricans*
white marlin	*Tetrapturus albidus*
sailfish	*Istiophorus platypterus*
longbill spearfish	*Tetrapturus pfluegeri*
SHARKS – Large Coastal	
basking shark	*Cetorhinus maximus*
great hammerhead	*Sphyrna mokarran*
scalloped hammerhead	*Sphyrna lewini*
smooth hammerhead	*Sphyrna zygaena*
white shark	*Carcharodon carcharias*
nurse Shark	*Ginglymostoma cirratum*
bignose shark	*Carcharhinus altimus*
blacktip shark	*Carcharhinus limbatus*
bull shark	*Carcharhinus leucas*
Caribbean reef shark	*Carcharhinus perezi*
dusky shark	*Carcharhinus obscurus*
Galapagos shark	*Carcharhinus*
lemon shark	*Negaprion brevirostris*
narrowtooth shark	*Carcharhinus brachyurus*
night shark	*Carcharhinus signatus*
sandbar shark	*Carcharhinus plumbeus*
silky shark	*Carcharhinus falciformis*
spinner Shark	*Carcharhinus brevipinna*
tiger shark	*Galeocerdo cuvier*
bigeye sand tiger	*Odontaspis noronhai*
sand tiger shark	*Carcharias taurus*
whale Shark	*Rhincodon typus*
SHARKS – Small Coastal	
Atlantic angel shark	*Squatina dumeril*
bonnethead shark	*Sphyrna tiburo*
Atlantic sharpnose shark	*Rhizoprionodon*
blacknose shark	*Carcharhinus acronotus*
Caribbean sharpnose	*Rhizoprionodon porosus*
finetooth shark	*Carcharhinus isodon*
smalltail shark	*Carcharhinus porosus*
SHARKS - Pelagic	
bigeye sixgill shark	*Hexanchus nakamurai*
sevengill shark	*Heptranchias perlo*
sixgill shark	*Hexanchus griseus*
longfin mako shark	*Isurus paucus*
porbeagle shark	*Lamna nasus*
shortfin mako shark	*Isurus oxyrinchus*
blue shark	*Prionace glauca*
oceanic whitetip shark	*Carcharhinus*
bigeye thresher shark	*Alopias superciliosus*
thresher shark	*Alopias vulpinus*

References:

16 U.S.C. §1853(a)(7)

50 Code of Federal Regulations Part 600

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NOAA Habitat Program

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http://sero.nmfs.noaa.gov/habitat_conservation

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