A Primer for Federal Agencies

Essential Fish Habitat:

New Marine Fish Habitat Conservation Mandate for Federal Agencies

National Marine Fisheries Service
Habitat Conservation Division
Southwest Regional Office
501 W. Ocean Blvd., Suite 4200
Long Beach, California 90802-4213
(562) 980-4041

Executive Summary

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for the National Marine Fisheries Service (NMFS), regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The Councils, with assistance from NMFS, are required to delineate "essential fish habitat" (EFH) for all managed species. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and respond in writing to the fisheries service's recommendations. In addition, NMFS is required to comment on any state agency activities which would impact EFH.

The EFH provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals - maintaining sustainable fisheries. As evidenced for all wildlife resources, suitable habitat is absolutely essential for their sustenance. Although the concept of EFH is similar to "Critical Habitat" under the Endangered Species Act, measures recommended by NMFS or a Council to protect EFH are advisory, not proscriptive.

For the Pacific and Western Pacific regions, EFH is identified for a total of 89 species covered by three fishery management plans (FMPs) under the auspices of the Pacific Fishery Management Council and 62 species covered by four FMPs under the auspices of the Western Pacific Regional Fishery Management Council. FMP amendments describing and identifying EFH were to be completed by October 1998 and are expected to take effect in early to mid 1999.

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 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, a number of other avenues are available for carrying out consultations. Programmatic consultations may be implemented or General Concurrences may be developed when program or project impacts are consistently 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 EFH consultation process is vital to ensuring that federal actions serve the Magnuson-Stevens Act resource management goals.

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Introduction

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act set forth a number of new mandates for the National Marine Fisheries Service (NMFS), regional fishery management councils, and federal action agencies to identify and protect important marine and anadromous fish habitat. The Councils, with assistance from NMFS, are required to delineate "essential fish habitat" (EFH) in fishery management plans (FMPs) or FMP amendments for all managed species. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to the fisheries service's recommendations. In addition, NMFS is required to comment on any state agency activities that would impact EFH.

The purpose of addressing habitat in this act is to provide for one of the nation's overall marine resource management goals - maintaining sustainable fisheries. As evidenced for all wildlife resources, suitable habitat is absolutely essential for their sustenance. Although the concept of EFH is similar to that of "Critical Habitat" under the Endangered Species Act, measures recommended to protect EFH by NMFS or a Council are advisory, not proscriptive. An effective EFH consultation process is vital to ensuring that Federal actions serve the Magnuson-Stevens Act resource management goals.

EFH Designation

The Act requires that EFH be identified for all species which are federally managed. This includes species managed by the Councils under Council fishery management plans (FMPs), as well as those managed by the National Marine Fisheries Service under FMPs developed by the Secretary of Commerce. Applicable species in the southwestern U.S. are listed in Table 1, along with the FMP authority.

Table 1. Fishery management plans and managed species or species complexes for the Pacific and Western Pacific regions.

PACIFIC FISHERY MANAGEMENT COUNCIL

COASTAL PELAGICS FISHERY MANAGEMENT PLAN

- Northern anchovy - *Engraulis mordax*
- Pacific sardine - *Sardinops sagax*
- Pacific (chub) mackerel - *Scomber japonicus*
- Jack mackerel - *Trachurus symmetricus*
- Market squid - *Loligo opalescens*

PACIFIC SALMON FISHERY MANAGEMENT PLAN

- Chinook salmon - *Oncorhynchus tshawytscha*
- Coho salmon - *Oncorhynchus kisutch*
- Pink salmon - *Oncorhynchus gorbuscha*

PACIFIC GROUNDFISH FISHERY MANAGEMENT PLAN

- Butter sole - *Isopsetta isolepis*
- Curlfin sole - *Pleuronichthys decurrens*
- Dover sole - *Microstomus pacificus*
- English sole - *Parophrys vetulus*
- Flathead sole - *Hippoglossoides elassodon*
- Pacific sanddab - *Citharichthys sordidus*
- Petrale sole - *Eopsetta jordani*
- Rex sole - *Glyptocephalus zachirus*
- Rock sole - *Lepidopsetta bilineata*
- Sand sole - *Psettichthys melanostictus*
- Starry flounder - *Platichthys stellatus*
- Arrowtooth flounder - *Atheresthes stomias*
- Ratfish - *Hydrolagus colliei*
- Finescale codling - *Antimora microlepis*
- Pacific rattail - *Coryphaenoides acrolepis*
- Leopard shark - *Triakis semifasciata*

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(*Table 1 continued*)

PACIFIC GROUNDFISH FISHERY MANAGEMENT PLAN (cont.)

Soupfin shark - *Galeorhinus zyopterus*
Spiny dogfish - *Squalus acanthias*
Big skate - *Raja binoculata*
Longnose skate - *Raja rhina*
Pacific ocean perch - *Sebastes alutus*
Shortbelly rockfish - *Sebastes jordani*
Widow rockfish - *Sebastes entomelas*
Aurora rockfish - *Sebastes aurora*
Bank rockfish - *Sebastes rufus*
Black rockfish - *Sebastes melanops*
Black-and-yellow rockfish - *Sebastes chrysomelas*
Blackgill rockfish - *Sebastes melanostomus*
Blue rockfish - *Sebastes mystinus*
Bocaccio - *Sebastes paucispinis*
Bronzespotted rockfish - *Sebastes gilli*
Brown rockfish - *Sebastes auriculatus*
Calico rockfish - *Sebastes dallii*
California scorpionfish - *Scorpaena gutatta*
Canary rockfish - *Sebastes pinniger*
Chilipepper - *Sebastes goodei*
China rockfish - *Sebastes nebulosus*
Copper rockfish - *Sebastes caurinus*
Cowcod rockfish - *Sebastes levis*
Darkblotched rockfish - *Sebastes crameri*
Dusky rockfish - *Sebastes ciliatus*
Flag rockfish - *Sebastes rubrivinctus*
Gopher rockfish - *Sebastes carnatus*
Grass rockfish - *Sebastes rastrelliger*
Greenblotched rockfish - *Sebastes rosenblatti*
Greenspotted rockfish - *Sebastes chlorostictus*
Greenstriped rockfish - *Sebastes elongatus*
Harlequin rockfish - *Sebastes variegatus*
Honeycomb rockfish - *Sebastes umbrosus*
Kelp rockfish - *Sebastes atrovirens*
Mexican rockfish - *Sebastes macdonaldi*
Olive rockfish - *Sebastes serranoides*
Pink rockfish - *Sebastes eos*
Quillback rockfish - *Sebastes maliger*
Redbanded rockfish - *Sebastes babcocki*
Redstripe rockfish - *Sebastes proriger*
Rosethorn rockfish - *Sebastes helvomaculatus*
Rosy rockfish - *Sebastes rosaceus*
Rougheye rockfish - *Sebastes aleutianus*
Sharpchin rockfish - *Sebastes zacentrus*
Shortraker rockfish - *Sebastes borealis*
Silvergrey rockfish - *Sebastes brevispinis*
Speckled rockfish - *Sebastes ovalis*
Splitnose rockfish - *Sebastes diploproa*
Squarespot rockfish - *Sebastes hopkinsi*
Starry rockfish - *Sebastes constellatus*
Stripetail rockfish - *Sebastes saxicola*
Tiger rockfish - *Sebastes nigrocinctus*
Treefish - *Sebastes serriceps*
Vermilion rockfish - *Sebastes miniatus*
Yelloweye rockfish - *Sebastes ruberrimus*
Yellowmouth rockfish - *Sebastes reedi*
Yellowtail rockfish - *Sebastes flavidus*
Longspine Thornyhead - *Sebastolobus altivelis*
Shortspine Thornyhead - *Sebastolobus alascanus*
Cabezon - *Scorpaenichthys marmoratus*
Kelp greenling - *Hexagrammos decagrammus*
Lingcod - *Ophiodon elongatus*
Pacific cod - *Gadus macrocephalus*
Pacific whiting - *Merluccius productus*
Sablefish - *Anoplopoma fimbria*

WESTERN PACIFIC REGION FISHERY MANAGEMENT COUNCIL

BOTTOMFISH FISHERY MANAGEMENT PLAN

Shallow water bottomfish species (0-100 M):

Uku - *Aprion virescens*
Thicklip trevally - *Pseudocaranx dentex*
Lunartail grouper - *Variola louti*
Blacktip grouper - *Epinephelus fasciatus*
Ambon emperor - *Lethrinus amboinensis*
Redgill emperor - *Lethrinus rubrioperculatus*
Giant trevally - *Caranx ignoblis*
Black trevally - *Caranx lugubris*
Amberjack - *Seriola dumerili*
Taape - *Lutjanus kasmira*

Deep water bottomfish species (100-400 m):

Ehu - *Etelis carbunculus*
Onaga - *Etelis coruscans*
Opakapaka - *Pristipomoides filamentosus*
Yellowtail Kalekale - *P. auricilla*
Yelloweye opakapaka - *P. flavipinnis*
Kalekale - *P. sieboldii*
Gindai - *P. zonatus*
Hapupuu - *Epinephelus quernus*
Lehi - *Aphareus rutilans*

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(*Table 1 continued*)

BOTTOMFISH FISHERY MANAGEMENT PLAN (cont.)

Seamount Groundfish (0-300 Fathom)
Armorhead - *Pseudopentaceros richardsoni*
Ratfish/butterfish - *Hyperoglyphe japonica*
Alfonsin - *Beryx splendens*

PELAGIC FISHERY MANAGEMENT PLAN

Marketable temperate species:
Striped Marlin - *Tetrapurus audax*
Bluefin Tuna - *Thunnus thynnus*
Swordfish - *Xiphias gladius*
Albacore - *Thunnus alalunga*
Mackeral - *Scomber* spp.
Bigeye -*Thunnus obesus*
Pomfret - family Bramidae

Marketable tropical species:
Yellowfin - *Thunnus albacares*
Kawakawa - *Euthynnus affinis*
Skipjack - *Katsuwonus pelamis*
Frigate and bullet tunas - *Auxis thazard, A. rochei*
Blue marlin - *Makaira nigricans*
Slender tunas -*Allothunnus fallai*
Black marlin - *Makaira indica*
Dogtooth tuna - *Gymnosarda unicolor*
Spearfish - *Tetrapturus spp*.
Sailfish - *Istiophorus platypterus*
Mahimahi - *Coryphaena hippurus, C. equiselas*
Ono - *Acanthocybium solandri*
Opah - *Lampris* sp.

Unmarketable:
Oilfish - family Gempylidae
Pomfret - family Bramidae
Crocodile shark

Sharks:
Requiem sharks (family Carcharinidae)
Thresher sharks (family Alopiidae)
Mackeral sharks (family Lamnidae)
Hammerheads sharks (family Sphyrnidae)

CRUSTACEANS FISHERY MANAGEMENT PLAN

Spiny and Slipper Lobster Complex:
Hawaiian spiny lobster - *Panulirus marginatus*
Spiny lobster - *P. penicillatus, P.* sp.
Ridgeback slipper lobster - *Scyllarides haanii*
Chinese slipper lobster - *Parribacus antarticus*

Kona Crab Complex:
Kona crab - *Ranina ranina*

PRECIOUS CORALS FISHERY MANAGEMENT PLAN

Deepwater Precious Coral (300-1500 M):
Pink coral - *Corallium secundum*
Red coral - *C. regale*
Pink coral - *C. laauense*
Midway deepsea coral - *C.* sp nov.
Gold coral - *Gerardia* sp.
Gold coral - *Callogorgia gilberti*
Gold coral - *Narella* spp.
Gold coral - *Calyptrophora* spp.
Bamboo coral - *Lepidisis olapa*
Bamboo coral - *Acanella* spp.

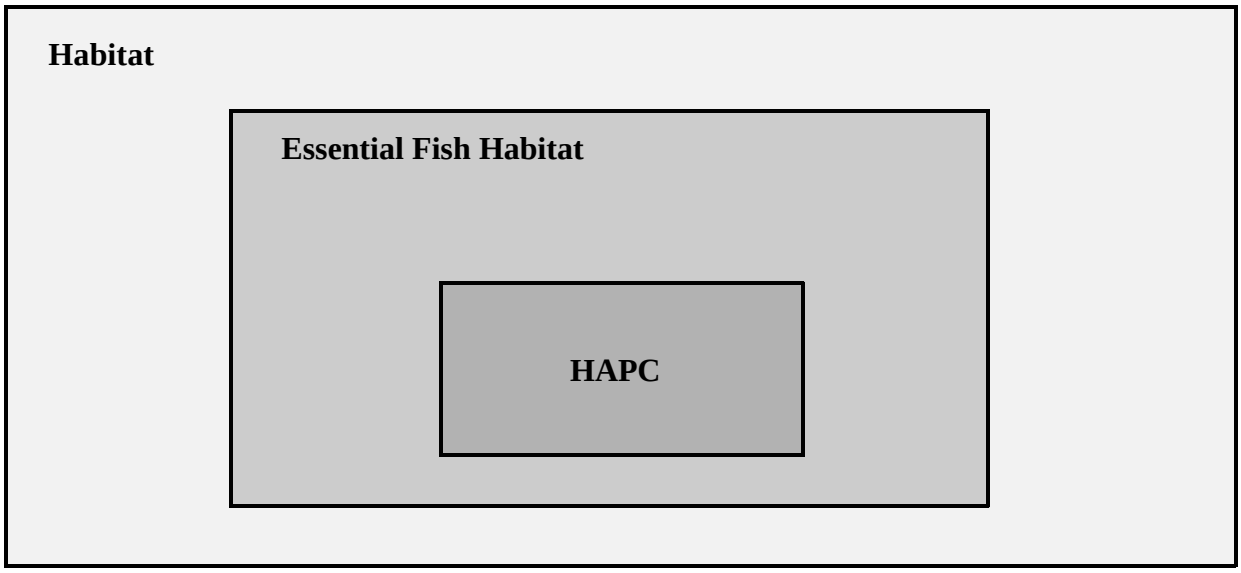
Shallow Water Precious Coral (20-100 M):
Black coral - *Antipathes dichotoma*
Black coral - *Antipathis grandis*
Black coral - *Antipathes ulex*

Essential fish habitat (EFH) is defined in the Magnuson-Stevens Act as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." As required by the Act, NMFS promulgated regulations to provide guidance to the Councils for EFH designation. The regulations further clarify EFH by defining "waters" to include 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" to include sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" to mean 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" to cover a species' full life cycle. EFH will be a subset of all areas occupied by a species (Figure 1). Acknowledging that the amount of information available for EFH determinations will vary for each species, the regulations direct the Councils to use the best information available, and to be increasingly specific and narrow in their delineations as more refined information is available.

The regulations also direct the Councils to consider a second, more limited habitat designation for each species in addition to Essential Fish Habitat. Habitat Areas of Particular Concern (HAPCs) are described in the regulations as subsets of EFH (Figure 1) which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPCs are not afforded any additional regulatory protection under the Act; however, federal projects with potential adverse impacts to HAPCs will be more carefully scrutinized during the consultation process.

Designating the boundaries of EFH has taken careful consideration by the Councils, which are required to identify and delineate EFH in their fishery management plans by the statutory deadline of October 11, 1998. These EFH designations are expected to go into effect by means of fishery management plan amendments under the Magnuson-Stevens Act in early to mid 1999.

Figure 1. Conceptual relationship of all habitats used by a species (habitat), essential fish habitat (EFH) and habitat areas of particular concern (HAPC).



Besides delineating EFH, FMPs or FMP amendments must also identify and describe potential threats to EFH, which includes threats from fishing or any other sources, and recommend EFH conservation and enhancement measures. Councils are required to implement management measures to minimize, to the extent practicable, any adverse impacts to EFH caused by fishing gears. Guidelines for development of EFH amendment sections for each of these issues are included in the EFH regulations.

EFH Consultations

In the regulatory context for conserving fish habitat, the most important provisions of the Act are those which require federal agencies to consult with NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may have adverse impacts on designated EFH. In fact, this provision has raised some concern among federal action agencies regarding potential increases in workload and regulatory requirements for the public. NMFS has addressed these concerns in the EFH regulations by emphasizing the use of existing environmental review processes. Provided the specifications outlined in the regulations are met, EFH consultations will 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.

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 regulations define an *adverse effect* 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 syunergistic consequences of actions.

Once NMFS learns of a federal or state project that may have an adverse effect on EFH, NMFS is required to develop EFH Conservation Recommendations for the project. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH. Federal agencies are required to respond to EFH Conservation Recommendations in writing within 30 days. The Act also authorizes Councils to comment on federal and state projects, and directs Councils to comment on any project which may substantially impact anadromous fish habitat. The EFH regulations developed to assist Councils in EFH designation also further clarify the consultation requirements set forth in the Act.

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

(1) The existing process must provide NMFS with timely notification of the action;

(2) The notification of the action provided to NMFS must include an assessment of the impacts of the proposed action on EFH as outlined in the requirements for "EFH Assessment;"

(3) NMFS must have completed a written finding that the existing process satisfies the requirements of the Act.

An "EFH Assessment" is a review of the proposed project and its potential impacts to EFH which is prepared by the Federal action agency. As set forth in the regulations, 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 affects; a literature review; an analysis of alternatives to the proposed action; and any other relevant information. The regulations require NMFS to provide EFH Conservation Recommendations in a timely manner.

Consultations may be conducted at either a programmatic or project specific level. Evaluation at a programmatic level is appropriate when sufficient information is available to develop EFH Conservation Recommendations and address all reasonably foreseeable adverse impacts under a particular generic topic. In these
situations, General Concurrences for categories of activities may be requested by the Federal agency. General Concurrences alleviate the need for individual project consultation in most cases because NMFS has determined that projects of this category will likely result in no more than minimal adverse effects, individually and cumulatively. For example, NMFS might grant a General Concurrence for the construction of docks or piers which are designed to minimize adverse effects on coastal 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. If existing processes are not used, then 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 substantial impacts to EFH are not expected. For example, the abbreviated consultation procedure would be

used when the adverse effect of an action or proposed action could be alleviated through minor modifications, such as seasonal restrictions or the use of modified construction techniques.

Expanded consultations allow NMFS and a federal action agency the maximum opportunity to work together in the review of the action's impact of 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. 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.

The Act mandates that a federal action agency must respond to NMFS proposed EFH Conservation Recommendations in writing within 30 days. The regulations 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. 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. If an agency decision is inconsistent with a NMFS Conservation Recommendation, the NMFS Director may request a meeting with the head of the agency to further discuss the project.

Conclusion

The EFH mandates of the Magnuson-Stevens Act represent a new effort to integrate fisheries management and habitat management by stressing the ecological relationships between fishery resources and the environments upon which they depend. 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 National Marine Fisheries Service is committed to working with federal and state agencies to implement these mandates effectively and efficiently, with the ultimate goal of providing for the sustainability of the Nation's fishery resources.

EFH Contacts for the Pacific and Western Pacific Regions

Mark Helvey
National Marine Fisheries Service
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802
(562) 980-4046
mark.helvey@noaa.gov

John Naughton
National Marine Fisheries Service
Pacific Islands Area Office
2570 Dole Stree, Room 106
Honolulu, HI 96822-2396
(808) 973-2940
john.naughton@noaa.gov