

AMENDMENT 55
to the Fishery Management Plan for the
Groundfish Fishery of the Gulf of Alaska

Instruction 1

Appendix 5.1 “Biological and Environmental Characteristics of the Resource” is amended as follows:

The title of section 5.1.1 is amended to read “Habitat Requirements by Life History Stage” and the text of section 5.1.1 is replaced with the sentence “This section summarizes habitat requirements and life histories of the groundfish species managed by this FMP.”.

The text of section 5.1.1.1 “Walleye Pollock” is replaced with the text and tables on pages 27 - 32 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

The text of section 5.1.1.2 “Pacific cod” is replaced with the text and tables on pages 37 - 39 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Section 5.1.1.3 “Flounders” is removed.

Section 5.1.1.4 “Rockfish” is removed.

Section 5.1.1.5 “Sablefish” is renumbered as section 5.1.1.3 and the text is replaced with the text and tables on pages 63 - 66 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Section 5.1.1.6 “Pacific halibut” is removed.

Add a new section 5.1.1.4 entitled “Deep Water Flatfish” and insert the text and tables on pages 41 - 43 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.5 entitled “Shallow Water Flatfish” and insert the text and tables on pages 45 - 48 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.6 entitled “Rex Sole” and insert the text and tables on pages 51 - 53 from the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.7 entitled “Flathead Sole” and insert the text and tables on pages 55 - 57

of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.8 entitled “Arrowtooth Flounder” and insert the text and tables on pages 59 - 61 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.9 entitled “Pacific Ocean Perch” and insert the text and tables on pages 69 - 73 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.10 entitled “Shortraker Rockfish and Rougheye Rockfish” and insert the text and tables on pages 75 - 77 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.11 entitled “Northern Rockfish” and insert the text and tables on pages 79 - 82 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.12 entitled “Dusky Rockfish” and insert the text and tables on pages 85 - 88 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.13 entitled “Demersal Shelf Rockfish” and insert the text and tables on pages 91 - 94 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.14 entitled “Thornyhead Rockfish” and insert the text and tables on pages 97 - 99 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.15 entitled “Atka Mackerel” and insert the text and tables on pages 101 - 104 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.16 entitled “Capelin” and insert the text and tables on pages 107 - 110 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.17 entitled “Eulachon” and insert the text and tables on pages 111 - 113 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.18 entitled “Sculpins” and insert the information from pages 115 - 118

of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.19 entitled “Sharks” and insert the text and tables on pages 121 - 123 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.20 entitled “Skates” and insert the text and tables on pages 125 - 127 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.21 entitled “Squid” and insert the text and tables on pages 129 - 132 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Add a new section 5.1.1.22 entitled “Octopus” and insert the text and tables on pages 133 - 135 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Instruction 2

Add a new section 5.10 entitled “Essential Fish Habitat for GOA Groundfish” and insert the following paragraph:

Summaries and assessments of habitat information for GOA groundfish are provided in the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998. Habitat descriptions and life history information was reviewed and the levels of information available for each life history stage was determined. The approach set forth in regulations at 50 CFR 600.815(a)(2) for gathering and organizing the data necessary to identify EFH was applied. In evaluating the level of knowledge available, a level 0 was defined as a subset of level 1. For life stages of GOA groundfish, it was determined that information at levels 0, 1, and 2 was available.

Insert Table 3 “Levels of essential fish habitat information currently available for GOA groundfish, by life history stage” on page 11 of the “Environmental Assessment for Amendment 55 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area; Amendment 55 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area; Amendment 8 to the Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crabs; Amendment 5 to the Fishery Management Plan for the Scallop Fishery Off Alaska; Fishery Management Plan for the Salmon Fisheries in the EEZ Off the Coast of Alaska” dated [insert date EA is signed by Assistant Administrator for Fisheries] [hereinafter “**EFH EA**”].

Insert Table 1, Summary of habitat associations for groundfish in the BSAI and GOA, Table 2, Summary of biological associations for groundfish in the BSAI and GOA, and Table 3,

Summary of reproductive traits for groundfish in the BSAI and GOA located on 16 - 25 of the “Essential Fish Habitat Assessment Report for the Groundfish Resources of the Gulf of Alaska Region” dated April 1, 1998.

Instruction 3

Add a new section 5.10.1 entitled “EFH Determination” and insert the following EFH definitions from section 6.2 of the EFH EA:

- EFH Definition for GOA Walleye Pollock
- EFH Definition for GOA Pacific Cod
- EFH Definition for GOA Deep water flatfish, Dover Sole
- EFH Definition for GOA Shallow water complex, Yellowfin Sole
- EFH Definition for GOA Shallow water complex, Rock Sole
- EFH Definition for GOA Rex Sole
- EFH Definition for GOA Flathead Sole
- EFH Definition for GOA Arrowtooth Flounder
- EFH Definition for GOA Sablefish
- EFH Definition for GOA Slope Rockfish, Pacific Ocean Perch
- EFH Definition for GOA Slope Rockfish, Shortraker and Rougheye Rockfish
- EFH Definition for GOA Slope Rockfish, Northern rockfish
- EFH Definition for GOA Pelagic Shelf Rockfish, Dusky Rockfish
- EFH Definition for GOA Demersal Shelf Rockfish, Yelloweye Rockfish
- EFH Definition for GOA Thornyhead Rockfish
- EFH Definition for GOA Atka Mackerel
- EFH Definition for GOA Other Species - Sculpins
- EFH Definition for GOA Other Species - Skates
- EFH Definition for GOA Other Species - Sharks
- EFH Definition for GOA Other Species - Octopus
- EFH Definition for GOA Squid - Red Squid
- EFH Definition for GOA Forage fish complex, Eulachon
- EFH Definition for GOA Forage fish complex, Capelin
- EFH Definition for GOA Forage fish complex, Sand lance
- EFH Definition for GOA Forage fish complex, Myctophids and Bathylagids
- EFH Definition for GOA Forage fish complex, Sand fish
- EFH Definition for GOA Forage fish complex, Euphausiids
- EFH Definition for GOA Forage fish complex, Pholids and Stichaeids
- EFH Definition for GOA Forage fish complex, Gonostomatids

Instruction 4

Add a new section 5.10.2 entitled “EFH Maps” and insert the following maps from section 6.2 of the EFH EA:

- Walleye pollock (eggs)
- Walleye pollock (larvae)

Walleye pollock (juveniles)
Walleye pollock (Adults)
Pacific cod (Adults and late juveniles)
Dover sole (Adults & late juveniles)
Yellowfin sole (Adults and late juveniles)
Rock sole (Adults and late juveniles)
Rex sole (Adults and late juveniles)
Flathead sole (Adults and late juveniles)
Arrowtooth flounder (Adults & late juveniles)
Sablefish (Adults & late juveniles)
Pacific ocean perch (Adults & late juveniles)
Shortraker and Rougheye rockfish (Adults & late juveniles)
Northern rockfish (Adults & late juveniles)
Dusky rockfish (Adults & late juveniles)
Yelloweye rockfish (Adults and late juveniles)
Thornyhead rockfish (Adults & late juveniles)
Atka mackerel (Adults & late juveniles)
Sculpins spp. (Adults & late juveniles)
Skates spp. (Adults & late juveniles)

Instruction 5

Delete section 5.3.7.

Add a new section 5.10.3 entitled “Fishing activities that may adversely affect EFH”.

Add a new section 5.10.3.1 entitled “The indirect effects of fishing: An executive summary” and insert the text and tables from section 9.2.1.1 of the EFH EA.

Add a new section 5.10.3.2 entitled “The effects of fishing gear on benthic communities” and insert the text and tables from section 9.2.1.2 of the EFH EA.

Add a new section 5.10.3.3 entitled “Literature of Scientific Studies on Fishing Threats to Habitat” and insert the text and tables from section 9.2.3 of the EFH EA.

Instruction 6

Add a new section 5.10.4 entitled “Non-fishing related activities that may adversely affect EFH”.

Add a new section 5.10.4.1 entitled “Identification of non-fishing adverse impacts to EFH in Alaska” and insert the text and tables from section 9.1.2 of the EFH EA.

Add a new section 5.10.4.2 entitled “References” and insert the text and tables from section 9.1.4 of the EFH EA.

Instruction 7

Add a new section 5.10.5 entitled “Cumulative Effects on EFH from Fishing and Non-fishing Activities” and insert the following paragraph:

The NPFMC and the Secretary of Commerce have taken appropriate actions when threats to fish habitat have been identified. These include cumulative effects from fishing activities and non-fishing activities. Cumulative effects have been examined in the Stock Assessment and Fishery Evaluation (SAFE) reports, which are produced annually for the crab, scallop, and groundfish fisheries. In addition, an Ecosystem Considerations section to the SAFE reports is prepared which identifies specific ecosystem concerns that are considered by fishery managers in maintaining sustainable marine ecosystems.

Cumulative effects from non-fishing activities relate to the amount of habitat loss from human interaction and alteration or natural disturbances. Non-fishing activities are widespread and can have localized impacts to groundfish habitats such as accretion of sediments from at-sea disposal areas, oil and gas exploration, sea floor mining, ice scouring and significant storm events. In addition to EFH consultation guidelines mandated by the MSA, NMFS reviews these types of effects during the review process required by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for certain activities that are regulated by Federal, state, tribal or local authority. The jurisdiction of these activities is in "waters of the United States" and includes both riverine and marine habitats. To assist in understanding these widespread impacts, the development of a habitat and effect baseline database would accelerate the review process and outline areas of increased disturbance. Inter-agency coordination would prove beneficial to all.

Instruction 8

Add a new section 5.10.6 entitled “Habitat Conservation and Enhancement Recommendations for Non-fishing Threats to EFH” and insert the text and tables from section 9.1.3 of the EFH EA.

Instruction 9

Add a new section 5.10.7 entitled “Habitat Conservation and Enhancement Recommendations for Fishing Threats to EFH” and insert the following paragraph:

Area closures to trawling and dredging in the Bering Sea and Aleutian Islands area serve to protect EFH from potential adverse impacts caused by these gear types. Other management measures, such as the Pribilof Islands Habitat Conservation Area, the Bristol Bay Closure Area and the proposed Cape Edgecumbe pinnacle closure, are designed to reduce the impact of fishing on marine ecosystems. Catch quotas, bycatch limits and gear restrictions control removals of prey species. Studies that compare seafloor habitats in areas heavily trawled with areas that have had little trawl effort and

research efforts on Alaskan scallops as discussed in section 1.3.13 may reveal future habitat conservation and enhancement measures necessary to protect EFH. Additionally, the annual review of existing and new EFH information during the SAFE development process is expected to identify adverse effects to EFH from fishing and proposals to amend the FMP to minimize those adverse effects. Proposals can be submitted during the Council's plan amendment cycle.

Instruction 10

Add a new section 5.10.8 entitled "Prey species as a component of EFH" and insert the following paragraph:

Loss of prey is an adverse effect on EFH because one component of EFH is that it be necessary for feeding. Therefore, actions that reduce the availability of a major prey species, either through direct harm or capture, or through adverse impacts to prey species' habitat that are known to cause a reduction in the population of the prey species, may be considered adverse effects on a managed species and its EFH. Adverse effects on prey species and their habitats may result from fishing and non-fishing activities.

Section 5.1.1 contains tables that identify, if known, those prey species that comprise the diet of GOA groundfish managed under the FMP. Additional information on the habitat needs of prey species that are part of the Forage Fish species category can be found at section 5.10.1.

Instruction 11

Delete section 5.1.4.

Add a new section 5.10.9 to read "Habitat Areas of Particular Concern" and insert the text from section 11.4 of the EFH EA.

Add a new section 5.10.9.1 entitled "Living substrates in shallow waters" and insert the text from section 11.4.1 of the EFH EA.

Add a new section 5.10.9.2 entitled "Living substrates in deep waters" and insert the text from section 11.4.2 of the EFH EA.

Add a new section 5.10.9.3 entitled "Freshwater areas used by anadromous fish" and insert the text from section 11.4.3 of the EFH EA.

Instruction 12

Add a new section 5.10.10 entitled "Essential Fish Habitat Research and Information Needs" and insert the following paragraph:

Alaska leads the Nation in fish habitat area and in the value of fish harvested, yet the most basic information on distribution and habitat utilization for most early life stages of commercially valuable groundfish and shellfish is lacking. Systematic sampling exists only for targeted adults. A program is required to generate distributional data on which to determine EFH for the juvenile and larval stages of most of our marine fish. Additionally, Alaska fisheries are affected by anthropogenic impacts, including anthropogenic development that impacts watersheds, wetlands, estuaries, and nearshore benthic environment. Mapping and assessing impacted wetlands and eelgrass beds in an established GIS database with all salmonid producing streams (including riparian and upland land cover and use determinations) and escapements in the system is required to make necessary resource management decisions. Priority needs to be given to identifying, assessing and mapping habitat types such as offshore larval concentration areas (i.e. gyres), near shore nursery areas such as eel grass beds, rocky outcroppings, fine/mixed sediments, and productive bottom types for juveniles and adults. Functional value of high-priority habitats need to be established, and the linkages between fishery productivity and habitats need to be understood. Fishing impact studies are in their infancy in Alaska. Increased emphasis needs to be placed of fish ecology, and marine benthic habitat typing in conjunction with impact assessments of trawls, dredges, longlines, pot gear, and other fishing gear used in Alaska fisheries. Development of a standardized marine benthic habitat typing technology is a required precursor.

At the end of new section 5.10.10, insert the following paragraphs:

Specific Research Needs for the Gulf of Alaska are:

1. Surveys and studies of nearshore pelagic and benthic areas are needed to determine their use by a variety of species, including Atka mackerel, Pacific cod, pollock, rockfish, sablefish, octopus and flatfishes and juveniles and larvae of all species and forage species considered in NPFMC FMPs.
2. Information on habitat distribution, in conjunction with fish distribution, is needed to determine species' habitat requirements and utilization. Information on the extent and distribution of complex habitat types susceptible to bottom fishing will greatly improve the ability to evaluate the potential of a fishery to physically alter bottom habitat and evaluate proposed measures to minimize impacts on EFH. To attain this information, increased use of remote bottom typing technology is necessary, as well as, increased application of currently available technology such as multi-beam sonar, that can provide detailed topographic maps of the continental shelf and slope.
3. Research necessary to raise the level of information known on a species life stage from Level 0 or 1 to Level 2 or higher. To increase EFH tier levels and obtain valid measures of habitat utilization, systematic surveys must be conducted throughout the full-depth habitat range of each species.

Instruction 13

Add a new section 5.10.11 entitled “Review and Revision of EFH Components of FMPs” and insert the following paragraphs:

To incorporate the regulatory guidelines requirement for review and revision of EFH FMP components the NPFMC will conduct a complete review of all the EFH components of each FMP once every 5 years and will amend those EFH components to include new information.

In between each five-year comprehensive review, the NPFMC will utilize its annual FMP amendment cycle to solicit proposals on HAPCs and/or conservation and enhancement measures to minimize the potential adverse effects from fishing. Those proposals that the NPFMC endorses should be developed independent of the five-year comprehensive EFH review cycle.

An annual review of existing and new EFH information will be conducted and this information will be provided to the GOA Plan Team for their review during the annual SAFE report process. This information could be included in the “Ecosystems Considerations” chapter of the SAFE report.

Instruction 14

Add a new section 5.11 entitled “Information on Important Habitat for Non-FMP Species Pacific halibut and GOA crab species” and insert the following paragraph:

An FMP may include a description and identification of the habitat for a species that is not Federally managed by a Council FMP; however, such habitat may not be considered EFH. Pacific halibut and GOA crab species are not managed under this FMP. Nevertheless, these species are recognized as important components of the GOA ecosystem. Therefore, habitat assessments for these species were prepared and are appended to the GOA groundfish FMP. While this information may be used in the development of FMP management measures to protect these species, these habitat assessments are not considered EFH for the purposes of sections 303(a)(7) and 305(b) of the Magnuson-Stevens Act.

Insert the heading “**Habitat Assessment for Pacific Halibut**” followed by the text and tables from section 8.1 of the EFH EA.

Insert the heading “**Habitat Assessment for GOA Crab Species**” followed by the text and tables from section 8.3 of the EFH EA.

Instruction 15

Amend section 5.6.2.2 “Federal Programs Addressing Habitat of Gulf of Alaska Groundfish Stocks”, paragraph *(a), by inserting at the end of the paragraph the following sentence: “See section 5.10 for more information concerning essential fish habitat for FMP managed species.”.