Appendix A
Essential Fish Habitat
Final Scoping Report

Prepared by

National Marine Fisheries Service
and Tetra Tech EC

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CONTENTS

TABLES

ACRONYMS AND ABBREVIATIONS

ANCSA	Alaska Native Claims Settlement Act
BSAI	Bering Sea and Aleutian Islands
Council	North Pacific Fishery Management Council
CPUE	catch per unit effort
DPSEIS	Draft Programmatic Supplemental Environmental Impact Statement
EAs	environmental assessments
EFH	essential fish habitat
FCMA	Fishery Conservation and Management Act
FMP	Fishery Management Plan
GOA	Gulf of Alaska
HAPC	habitat areas of particular concern
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MPA	marine protected area
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
OP	Observer Program
SCA	Sea lion conservation area

1.0 INTRODUCTION

In the 1996 Magnuson-Stevens Act Fishery Conservation and Management Act (Magnuson-Stevens Act) reauthorization, Congress recognized that one of the most significant long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. To ensure that habitat considerations receive increased attention for the conservation and management of fishery resources, the amended Magnuson-Stevens Act included new essential fish habitat (EFH) requirements. As such, each fishery management plan (FMP) must describe and identify EFH for the fishery, minimize adverse effects on EFH caused by fishing to the extent practicable, and identify other actions to encourage the conservation and enhancement of EFH. EFH is defined in the Magnuson-Stevens Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

In June 1998, the North Pacific Fishery Management Council (Council) adopted Amendments 55/55/8/5/5 to the Bering Sea and Aleutian Islands (BSAI) Groundfish FMP, the Gulf of Alaska (GOA) Groundfish FMP, the BSAI Crab FMP, the Scallop FMP, and the Salmon FMP, respectively, and submitted them for review by the Secretary. These amendments were approved by the Secretary on January 20, 1999 (64 FR 20216; April 26, 1999), in accordance with Section 304(a) of the Magnuson-Stevens Act.

In 1999, a coalition of several environmental groups brought suit challenging the agency's approval of the EFH FMP amendments prepared by the Gulf of Mexico, Caribbean, New England, North Pacific, and Pacific Fishery Management Councils (*American Oceans Campaign [AOC] et al. v. Daley et al.*, Civil Action No. 99-982(GK)(D.D.C. September 14, 2000). The court found that the agency's decisions on the EFH amendments were in accordance with the Magnuson-Stevens Act, but held that the environmental assessments (EAs) on the amendments were in violation of the National Environmental Policy Act (NEPA) and ordered the National Marine Fisheries Service (NMFS) to complete new, more thorough NEPA analyses for each EFH amendment in question. Because the court did not limit its criticism of the EAs only to efforts to minimize adverse fishing effects on EFH, NMFS decided that the scope of these new analyses should address all required EFH components as described in Section 303(a)(7) of the Magnuson-Stevens Act. Further, NMFS determined that the agency's prior actions regarding EFH should not predetermine any conclusions in the EIS.

This action is designed to determine whether and how to amend the Council FMPs pursuant to Section 303(a)(7) of the Magnuson-Stevens Act and based on the EFH Final Rule in 50 CFR, part 600 subpart J. More specifically, the three-part purpose of this action is to analyze a range of potential alternatives for each fishery to 1) describe and identify EFH for the fishery, 2) identify other actions to encourage the conservation and enhancement of EFH, and 3) identify measures to minimize the adverse effects of fishing on EFH to the extent practicable. In addition to these three actions, the scope of the EIS will cover all of the required EFH components of FMPs described in the Final Rule, as well as a description of a process to identify habitat areas of particular concern (HAPCs).

2.0 SCOPING PERIOD, PUBLIC SCOPING MEETINGS, AND ISSUES

On June 6, 2001, NMFS published in the Federal Register a Notice of Intent (NOI) to prepare this EIS. The NOI solicited written comments to determine the issues of concern and the appropriate range of management alternatives to be addressed in the EIS and included notification regarding noticed seven scoping meetings in six communities in Alaska and Washington State (66 FR 30396).

2.1 Summary of Scoping Meetings

The public scoping meeting were held as follows:

Kodiak, AK – Monday, June 4, 2001 - Kodiak - from 7:00 to 9:00 p.m., at the Fishery Industrial Technology Center, 118 Trident Way, Kodiak, AK.

The members of the public in attendance included Gordon Blue, Al Burch, Wayne Donaldson, Ben Enticknap, John Gauvin, Albert Geiser, Dave Fraser, Erin Harrington, John Henderschedt, Terry Leitzell, Paul MacGregor, Trevor McCabe, Brent Paine, Alan Parks, Glenn Reed, Michelle Ridgway, Scott Smiley, Beth Stewart, and Jay Stinson.

The NMFS staff members in attendance included Steve Davis (Analytical Team), Matthew Eagleton (Habitat Conservation Division [HCD]), Cindy Hartmann (HCD), and Michael Payne (HCD).

The Kodiak scoping meeting was held in conjunction with a Council meeting that was scheduled from June 4 to 11, 2001. The EFH scoping meeting was included on the Council's meeting agenda. Special efforts were made to contact Native community leaders in Kodiak and give them notice of the meeting. Native organizations that were contacted included Koniag, Inc., Afognak Native Corporation, Natives of Kodiak, Inc., Kodiak Area Native Association, and Kodiak Tribal Council. In addition, EFH materials available at the meeting were sent to all these organizations.

Unalaska, AK – Friday, June 8, 2001 - Unalaska - City Hall, Council Chambers, 245 Raven Way, 4:00 to 8:00 p.m., Unalaska, AK.

The members of the public in attendance included Emil Berikeff Sr., Gregg Hanson, Aimee Kniaziowski, Rick Kniaziowski, Mark Lashua, Greg Moyer, and Dave Willmore.

The NMFS staff members in attendance included Cindy Hartmann (HCD), Mike Mchaffey (Enforcement), Troy Martin (Observer Program [OP]), Ernie Soper (Enforcement), and Chuck Raterman (Enforcement).

Anchorage, AK – Monday, June 11, 2001 - Anchorage - Z. J. Loussac Library, public conference room, level 1, 3600 Denali Street, 2:30 to 6:30 p.m., Anchorage, AK.

The members of the public in attendance included Dave Cline, Diana Evans, Brian Fedorko, Jon Isaacs, Wesley Loy (Anchorage Daily News), Charles Edison McKee, Dana Olson, Bob Pawlowski, Carl Portman, Russell Seither, and Jennifer Watson.

The NMFS staff members in attendance included Matthew Eagleton (HCD), Jeanne Hanson (HCD), Cindy Hartmann (HCD), Pete Risse (OP), Russell Seither (OP), and Jennifer Watson (OP).

Seattle, WA – Tuesday, June 19, 2001 - Seattle - Alaska Fisheries Science Center, room 2079, 7600 Sand Point Way NE, 1:30 to 5:30 p.m., Seattle, WA.

The members of the public in attendance included Dave Benson, William P. Chace, Jr., Christian Gebhardt, Paul H. Burney Hill, MacGregor, Donna Parker, Glenn Reed, Susan Robinson, and Thorn Smith.

The NMFS staff members in attendance included Cindy Hartmann (NMFS, HCD).

Juneau, AK – Wednesday, June 20, 2001 - Juneau - Federal Building, room 445, 709 W. 9th Street, 2 to 5:30 p.m. and Centennial Hall Convention Center, Egan Room, 101 Egan Drive, 7 to 9 p.m., Juneau, AK.

The members of the public in attendance included the following:

- Afternoon Meeting: Randy Bates, Clancy DeSmet, Tom Gemmell, Heather McCarty, Janet Hall Schempf, and Bob Tkacz (Alaska Fishermans Journal).
- Evening Meeting: Beverly Agler, Tom Gemmell, Dale Kelley, Heather McCarty, Michelle Ridgway, Janet Smoker, and Paula Terrel.

The agency staff members in attendance included Cindy Hartmann (HCD) and Michael Payne (HCD)**.**

Sitka, AK – Thursday, June 21, 2001 - Sitka - Harrigan Centennial Hall, Maksoutoff Room, 330 Harbor Drive, 2 to 5:30 and 7 to 9 p.m., Sitka, AK.

The members of the public in attendance included Molly Ahlgren, Linda Behnken, Liz Brown, Page Else, Jay Erie, Shannon Haugland (Daily Sitka Sentinel), Pat Veessart, and Steve Will.

The agency staff members in attendance included Cindy Hartmann (HCD).

2.2 Format of Scoping Meetings and Information Presented and Available

NMFS staff presented a Power Point® presentation with relevant overview information including the following:

- Magnuson-Stevens Act EFH provisions overview
- EFH FMP amendments review
- EFH litigation brief
- NEPA overview
- EFH EIS relationship to the Programmatic Groundfish EIS
- Scoping process overview
- EFH EIS process, including alternatives for EFH description and identification HAPC identification, and minimizing the effects of fishing
- Public involvement and public input
- EIS time line
- Scoping meeting schedule
- Where to go for further information

The Power Point® presentation was given and NMFS staff answered questions. The public attendees were asked to sign in. Comment forms were available so that people could write their comments at the meeting or send them in at a later date. Reference materials available at the meetings included the EFH EA, dated January 1999, and the EFH Habitat Assessment Reports. Handouts available for the public provided relevant information and background information.

Available handouts included the following:

- Paper copies of the Power Point® presentation.
- Comment form with NMFS mailing address and contact numbers
- Federal Register Notice with the Notice of Intent (66 FR 30396, June 6, 2001)
- EFH Interim Final Rule (50 CFR Part 600) (62 FR 66531, December 19, 1997)

- Memorandum from William T. Hogarth to Regional Administrators, dated January 22, 2001, "Guidance for Developing Environmental Impact Statements for Essential Fish Habitat per the *AOC v. Daley* Court Order"
- U.S. District Court for the District of Columbia, Opinion by Gladys Kessler, Decided September 13, 2000
- Copies of a litigation summary Power Point® presentation
- Draft time line for the EFH EIS
- Alaska Region EFH web sites and NOAA Fisheries/Headquarters EFH seb sites

2.3 Comment Letters and Issues

Written comments were accepted from June 6 to July 21, 2001. NMFS received letters from 27 commenters (Table A-1). Individual comments were delineated within the letters and grouped into similar issue categories, resulting in 147 unique comments and 236 total comments (Table A-2). This report provides a summary of public scoping comments for the EIS and identifies significant and non-significant issues.

Table A-1. Comment Letters Received During the Scoping Period

Letter Number	Source
1	Minerals Management Service; John Goll, Regional Director
2	Arctic Storm, Inc.; Donna Parker
3	Perkins Cole, LLP; Guy Martin
4	Alaska Longline Fishermen's Association; Linda Behnken
5	A. Geiser, F/V Hazel Lorraine; Albert Geiser (2 Letters)
6	Alaska Marine Conservation Council; Nancy Lord
7	Resource Development Council; Carl Portman, Deputy Director
8	Alaska Miners Association, Inc.; Steve Borell, Executive Director
9	Lynden, Inc.; David Haugen, Vice President
10	Bill Rotecki
11	Raven Environmental Services; Paul C. Rusanowski
12	Pacific Fishing, Inc.; Patricia Phillips
13	Trisha Herminghaus
14	Word Wildlife Fund; David Cline, Director
15	Alaska Marine Conservation Council; Ben Enticknap, Fisheries Project Coordinator
16	Kodiak Fish Company; Nancy Hillstrand
17	Alaska Forest Association; Owen Graham, Executive Director
18	Coal Point Seafood Co.; Nancy Hillstrand
19	Chugach Alaska Corporation; Rick Rogers, Vice President
20	Sealaska; Ronald Wolfe, Corporate Forester
21	Marine Conservation Alliance; Heather McCarty for the Board of Directors
22	High Seas Catcher's Co-op; Dave Fraser
23	American Oceans Campaign; Chris Zeman and Phil Kline
24	Dana Olson
25	J.M. Erie
26	Groundfish Forum; John Gauvin, Director (No comments, endorsement of Letter 21)
27	North Pacific Longline Association; Thorn Smith

Table A-2. Summary Count of Comments within Comment Categories

Issue	Number of Comments	Number of Unique Comments
Significant Issues That Suggest Alternative Actions		
Criteria for Description and Identification of EFH	24	15
Suggested Alternative for Salmon EFH	4	1
Alternatives to Minimize the Adverse Effects of Fishing on EFH	36	30
HAPC	7	6
Scientific Information, Research, and Uncertainty	13	7
Significant Issues to be Analyzed in the EIS		
Effects on Non-fishing Interests of EFH Definition and Identification	19	5
Effects of Fishing on EFH and Need for Mitigation Measures	13	11
Economics/Socioeconomics	16	6
Ecosystem, Wildlife, and Other Non-targeted Marine Species	13	13
Regulatory Compliance	8	3
Other Issues to be Considered in the EIS		
General Comments	13	13
NEPA Document and Process	20	10
Scientific Information/Research	11	11
Issues Not Considered in the EIS		
Regulatory Compliance and Duplication	11	2
General Comments	6	4
NEPA Document and Process	18	6
Scientific Information/Research	2	2
Economics/Socioeconomics	2	2
Total	**236**	**147**

A principal objective of the scoping and public involvement process is to identify a reasonable range of management alternatives that, with adequate analysis, will delineate critical issues and provide a clear basis for distinguishing between those alternatives and selecting a preferred alternative.

NEPA requires that only significant issues need to be analyzed in depth for environmental effects, formulating alternatives, and prescribing mitigation measures. The term "significance," has a different meaning under NEPA than statistical "significance" as generally used in scientific documents. Following guidance by the Council on Environmental Quality implementing regulations for NEPA, determinations of significance require consideration of both the context and the intensity of the issue (40 CFR 1508.27).

This scoping report describes issues in three subsections. The first subsection describes significant issues that suggest alternative actions. The second subsection describes significant issues that require in-depth analysis within the EIS, but that do not drive development of alternatives. The final subsection describes non-significant issues. Table A-3 at the end of this appendix is a matrix that identifies which comments were used in the development of specific issue statements.

3.0 SIGNIFICANT ISSUES THAT SUGGEST ALTERNATIVE ACTIONS

The following significant issues provided guidance in formulating the alternatives in the EIS.

3.1 Criteria for Description and Identification of Essential Fish Habitat

One action to be addressed in the EIS is to "identify and describe EFH." Commenters were concerned about how the description and identification of EFH would affect the balance between fish and non-fish interests and achieve an appropriate level of protection for fish habitat. Many commenters were concerned about what criteria would be used to define "essential." They wanted only truly essential components of fish habitat to be considered.

Several commenters were concerned about the level of economic and environmental risk that would be acceptable when designating EFH, especially considering the quantity and quality of available scientific information. One commenter suggested that any approach that includes zero risk of adversely affecting fish habitat is inappropriate. Other commenters suggested taking a precautionary approach that would preserve a diverse marine environment and EFH.

Many commenters were concerned about the scope of EFH description and identification. Some commenters suggested that EFH should be specific locations. In contrast, other commenters suggested that EFH should be broadly defined and might include both the general distribution and the core habitat areas for managed species. Others suggested that broad EFH descriptions should be further refined to include more specific habitat types within EFH so that management strategies might be more appropriately applied.

Suggested habitat types included the following:

- Nurseries and rearing grounds
- Spawning beds
- Feeding areas
- Freshwater tributaries and estuaries
- Kelp beds
- Upwelling zones
- Prey habitat

One commenter suggested that EFH defined as the geographic location where a species is merely known to occur is too broad. Several commenters suggested that the current EFH definitions are adequate and should not be changed without supporting scientific information and analysis.

Many commenters suggested considering an ecosystem approach within the EIS. Some commenters were primarily concerned with diverse fish communities beyond those targeted by the fishing industry, while others were concerned with a broad ecosystem approach that would also include non-fish species. One commenter suggested that a precautionary approach be taken to protect marine ecosystems. One commenter suggested that bycatch be considered in the determination of EFH. One commenter suggested that water quality be considered in developing EFH description and identification.

3.2 Suggested Alternative for Salmon EFH

Commenters were concerned about how inclusion of freshwater as EFH for salmon would affect non-fishing interests. Several commenters with non-fishing interests suggested that EFH for salmon be limited to marine and estuarine waters within the Exclusive Economic Zone (EEZ).

3.3 Alternatives to Minimize the Adverse Effects of Fishing on EFH

Another action to be addressed in the EIS is to "minimize, to the extent practicable, adverse effects on EFH caused by fishing." The EIS identifies and analyzes several alternative approaches to minimize adverse effects. Thus, comments recommending various EFH fishing impact minimization measures are addressed as alternative actions or minimization alternatives.

Several commenters suggested that marine protected areas (MPAs) and reserves should be used as EFH fishing impact minimization measures to protect EFH, biological diversity, and sustainable fisheries. Some commenters suggested that these include major representative habitats in coastal and offshore areas, including pelagic habitats. Several commenters recommended specific areas for added protection, including the World Wildlife Fund's priority areas for biodiversity conservation in the Bering Sea, the Council's Southeast Alaska trawl closure area, and the Sitka pinnacles.

Some commenters suggested that artificial reefs be considered for habitat enhancement. One commenter recommended habitat restoration as a EFH fishing impact minimization measure.

Many commenters suggested that EFH fishing impact minimization measures include monitoring, gear restrictions and modifications, and partial-to-complete area and timing restrictions. Another commenter suggested specific modifications to trawl gear to reduce adverse effects to habitat (e.g., size limits on rockhopper and roller gear). Some commenters suggested that low-impact fishing gears replace high-impact fishing gears. One commenter suggested that incentives be investigated for voluntary switching from high- to low-impact gear types. Several commenters wanted few gear modifications and asked that timing restrictions and year-round area closures be considered actions of last resort. Another commenter suggested an aggressive implementation of EFH fishing impact minimization measures. One commenter suggested a reduction in the trawl fleet, targeting the large and powerful trawlers.

Several commenters suggested that one alternative include no additional EFH fishing impact minimization measures. Other commenters implied that adequate scientific information is not currently available to support implementation of additional EFH fishing impact minimization measures. One commenter suggested that the alternatives should range from a reduction in the amount of area currently closed to trawling to maintaining the status quo (i.e., no increase in areas closed to trawling). Several commenters suggested that if the distribution of areas closed to trawling was redefined, the total area should not exceed 20 percent of the GOA and BSAI fishing grounds. One commenter suggested that areas currently closed to trawling be analyzed for fish habitat (depth and environment).

One commenter suggested that "a reasonable and fair standard of precaution" be used when assessing options for minimizing the effects of fishing on habitat and stated that the analysis should be focused on habitat protection rather than on gear allocation issues. Another commenter cautioned that poorly conceived EFH fishing impact minimization measures might have an adverse effect on EFH, rather than providing the intended protection.

3.4 Habitat Areas of Particular Concern

A third action to be addressed in the EIS is to identify HAPC within EFH. The EFH Final Rule, 50 CFR, part 600.815(a)(8), encourages identification of HAPCs, but does not require identification of HAPCs. The Final Rule states the following:

> "FMPs should identify specific types or areas of habitat within EFH as habitat areas of particular concern based on one or more of the following considerations: (I) The importance of the ecological function provided by the habitat. (ii) The extent to which the

habitat is sensitive to human-induced environmental degradation. (iii) Whether, and to what extent, development activities are, or will be, stressing the habitat type. (iv) The rarity of the habitat type."

Scoping comments did not provide a sharp definition of HAPC-related issues. Several commenters suggested specific areas to be considered as HAPC or criteria for considering areas as HAPC. The comments concerning HAPC suggest the major issue is how HAPC identification may affect fishing restrictions.

Several commenters were concerned that pelagic habitat be included in HAPC identifications. Some commenters recommended that specific areas be included as HAPCs, including the World Wildlife Fund's priority areas for biodiversity conservation in the Bering Sea, the Council's Southeast Alaska trawl closure area, and Sitka pinnacles. These areas were also suggested for consideration as mitigation measures. Another commenter suggested that a HAPC be identified near Knik, Alaska, to protect existing fisheries threatened by proposed and existing activities. Several commenters suggested that some HAPCs be designated as MPAs.

One commenter suggested that HAPCs be used as tools for the protection of EFH.

One commenter suggested that HAPCs be identified as areas that contained the highest historical abundance of a particular stock. Another commenter suggested that HAPC identification consider vulnerability and resilience to disturbance, as well as ecological function and rarity or uniqueness.

3.5 Scientific Information, Research, and Uncertainty

Many letters included comments about the uncertainty of existing scientific information and the need for additional research. These comments reflected a concern about how scientific uncertainty would affect description and identification of EFH and HAPC, assessment of the effects of fishing on EFH, and the selection of measures to minimize the effects of fishing on EFH. Although not explicitly stated, these comments suggest an approach commonly termed "adaptive management."

One commenter suggested that the EIS address the limitations of the available data and indicate if and when such data may be available. Several commenters suggested that additional EFH fishing impact minimization measures that could have an adverse effect on fishery economics should not be implemented until scientific research has been completed that shows that such measures are necessary.

Several commenters suggested that additional research is needed. Suggested areas of research included the following:

- Improvement of stock assessment techniques
- Understanding of fish habitat and behavior
- General fisheries management
- Effects of fishing on EFH
- Measures to minimize the effects of fishing

One commenter suggested that scientific information is adequate for justifying the development of marine reserves as a way to preserve EFH. Another commenter suggested that a network of habitat research areas should be developed.

Several commenters suggested that measures to minimize the adverse effects of fishing on EFH incorporate experimental designs and controls that would increase scientific understanding of fishery management.

4.0 OTHER SIGNIFICANT ISSUES TO BE ANALYZED IN THE EIS

The following issues are considered significant, but do not suggest alternative actions. These issues are addressed by analysis within the EIS.

4.1 Effects on Non-fishing Interests of EFH Description and Identification

Many commenters were concerned about how the description and identification of EFH would affect non-fishing interests. They suggested that all non-fishing activities that might be affected by description and identification of EFH be identified in the EIS. They also suggested that only non-fishing activities that have significant effects on EFH be analyzed in the EIS.

4.2 Effects of Fishing on EFH and Need for Mitigation Measures

Several commenters were concerned about the uncertainty of scientific information related to the effects of fishing on fish habitat and species diversity. They suggested that uncertainty should be quantified and that thresholds should be developed for weighing the tradeoffs between economic and ecological costs. Several commenters suggested that fixed-gear impacts have not been adequately researched. Two commenters were concerned about the scientific information available to determine the relative adverse effects of fixed and mobile fishing gear. They stated that limited information should not be used to assume low adverse effects from one gear type, but high adverse effects from another. One commenter said that it is important to consider both differences between various gear types and the intensity of fishing effort.

Two commenters suggested that the analysis of gear effects include direct, indirect, and cumulative adverse effects of physical, biological, and chemical disturbances. One commenter suggested that adverse effects from foreign fleet fishing be included in the cumulative effects analysis.

Many commenters were concerned about the level of precaution needed for the protection of EFH. One commenter was concerned about how the concept of "adequate precaution" would be used in the analysis of fishing effects on EFH. Several commenters suggested that the level of precaution needed to protect EFH must be reasonable and warranted based upon the available scientific information and that mitigation measures not be overly precautionary.

4.3 Effects on Economics and Socioeconomics

Many commenters were concerned about the tradeoffs between economic costs and EFH protection. Also, many commenters were concerned that mitigation measures would result in reallocation of catch among gear types.

Many commenters were concerned about the potential adverse effects of the alternative actions on the human relationship to the fishery resource. Several commenters suggested that all alternatives analyzed in the EIS should minimize the potential adverse effects on the human relationship to the fishery resource. One commenter suggested that these effects be evaluated in the EIS.

Many commenters suggested that the cost of conducting EFH consultations be included in the economic analysis.

4.4 Effects on Ecosystems, Wildlife, and Other Non-targeted Marine Species

Several commenters were concerned about a variety of non-targeted species potentially affected by fisheries. These included Steller sea lions, northern fur seals, whales, albatross and other seabirds, herring, kelp beds, sea grasses, and gorgonian coral.

4.5 Regulatory Compliance

Several commenters were concerned that EFH amendments comply with requirements in the Magnuson-Stevens Act and other federal laws such as the Alaska Native Claims Settlement Act (ANCSA). Several commenters suggested that the preferred alternative in the EIS should meet the national standards identified in Section 301 of the Magnuson-Stevens Act.

One commenter was concerned that EFH description and identification could have an adverse effect on energy supply. It was suggested that a "Statement of Energy Effects" be prepared, as required by Presidential Executive Order (May 18, 2001).

5.0 OTHER ISSUES

Several commenters did not suggest an alternative, an effects analysis, or EFH fishing impact minimization measure. Their comments, therefore, are considered non-significant according to the NEPA definition of significance. Some of the following non-significant issues are, however, incorporated into the EIS (Section 5.1), whereas others are not (Section 5.2).

5.1 Other Issues to be Considered in the EIS

Several commenters did not suggest an alternative, an effects analysis, or a measure to minimize the effects of fishing, but their comments are, nevertheless, reflected in the EIS.

5.1.1 General Comments

Several commenters suggested that a full range of alternatives be considered in the EIS.

Several commenters suggested that specific types of information such as observer data, habitat data, gear impact information, ecosystem health, socioeconomic information, and specific reports or theses be included in the EIS.

One commenter requested that Senator Frank Murkowski's testimony to Congress on May 4, 2001, and a five-part series, from the Sacramento Bee, beginning April 22, 2001, be included as scoping comments. The series from the Sacramento Bee, which was quoted in Senator Murkowki's testimony, suggested that environmental advocacy groups slow down legitimate conservation efforts by focusing agency resources on litigation rather than biology.

5.1.2 NEPA Document and Process

Several commenters expressed a preference for either NMFS or the Council to lead the EIS process. Several commenters suggested that objective and unbiased scientists prepare the EIS analysis and management options. One commenter suggested that the following specific fields of expertise be included: biology, ecology, oceanography, and fisheries biology. Another commenter suggested that the EIS analysis not rely heavily on prior EFH and NEPA analyses and that conclusions be based upon the best scientific information available.

Several commenters wanted knowledge and experience from fishermen and local area managers to be included in the EIS. Several commenters were also concerned that all potentially affected parties, including both direct and indirect stakeholders, be provided with an opportunity to participate in the NEPA process.

5.1.3 Scientific Information/Research

One commenter suggested that the definition of EFH be backed with good science. Several commenters expressed concern about the data used for developing EFH descriptions. One commenter suggested that catch per unit effort (CPUE) data are inappropriate to use for developing EFH descriptions because the data may be confounded by regulations, bottom characteristics, and temporary aggregations that might not reflect essential habitat characteristics. Another commenter suggested that catch data from foreign fleets be used in the analysis. One other commenter suggested that bycatch data be considered in the determination of EFH.

5.2 Issues Not Considered in the EIS

The following issues are not considered within the EIS for one or more of the following reasons:

- The issue is outside the scope of the proposed action.
- The issue is irrelevant to the decision to be made.
- The issue suggests analysis at an inappropriate level of detail.
- The issue is conjectural and is not supported by scientific evidence.
- The issue suggests an approach that would be contrary to federal regulations.
- The issue is already decided by law, regulation, or a higher level decision.

5.2.1 Regulatory Compliance and Duplication

Several commenters were concerned that EFH descriptions would duplicate current laws and regulations, such as the following:

- The Endangered Species Act
- Clean Water Act
- State and local forest practices
- Mining, land use, and agricultural laws and regulations
- The Coastal Zone Management Act

Various laws and regulations (including the above) may be interrelated with requirements of the Magnuson-Stevens Act, and are discussed in the EIS insofar as they are relevant to the actions covered. Several commenters suggested that EFH descriptions should be made only to supplement existing regulations. Describing and identifying EFH is required by law, however, and potential duplication of laws was considered an issue that would not be addressed in the EIS.

5.2.2 General Comments

One commenter suggested that alternatives be limited to past actions considered by the Council. This approach would be contrary to federal regulations.

5.2.3 NEPA Document and Process

Many commenters were concerned about the type of NEPA document to be prepared and the process used to prepare the document and analysis. Several commenters suggested that the proposed EIS document was inappropriate. Several commenters suggested that an EA should be adequate and that the previously prepared EA could be used as the basis for preparing a new EA. One commenter suggested that an EIS was the appropriate document to prepare.

Several commenters suggested that the NEPA process should be delayed until the EFH guidelines are finalized.

Several commenters were concerned that NMFS was conducting private negotiations with the plaintiffs and circumventing the public NEPA process. Several commenters were concerned that the public and specific stakeholders and communities be included in the NEPA process. Several commenters were concerned about what roles the Council and NMFS would play in guiding the NEPA process.

5.2.4 Scientific Information/Research

One commenter suggested that the observer program and coverage be modified to include habitat monitoring. The structure of the observer program is outside the scope of this analysis, although habitat monitoring is discussed in the EIS.

5.2.5 Economic/Socioeconomics

One commenter suggested that subsistence use continue in MPAs.

One commenter suggested that the analysis specifically include the community of Knik, Alaska.

6.0 DETAILED SUMMARY OF COMMENTS AND ISSUES ADDRESSED IN WRITTEN COMMENTS RECEIVED DURING SCOPING

On August 13 and 14, 2001, the Council's EFH EIS Committee met to analyze and review the comments received on the scoping process for developing alternatives for the determination of EFH and the effects of fishing analyses on EFH. The Committee reviewed all the comments received and identified the key issues raised in each of the comments. In some cases the committee made a call as to whether they thought the issue was significant (yes/no).

Significant issues are used to formulate alternatives, develop measures to minimize the adverse effects of fishing on EFH, or analyze environmental effects. Issues are considered significant based on the extent, duration, magnitude, or intensity of the effect. The extent is the geographic distribution of the effects. The duration is the length of time the effect is likely to occur. The magnitude or intensity is the value of the effect relative to acceptable values and/or the intensity of interest or resource conflict.

In this section of the report the public comments are grouped into somewhat different categories than in Table A-2. The comments are grouped into the following four areas: comments regarding the identification, description, and characterization of EFH (Section 6.1); comments on the effects of fishing on EFH and measures to be considered to protect EFH and HAPC (Section 6.2); comments on the process by which NMFS is reconsidering EFH and conducting a NEPA analysis to examine the effects of fishing on EFH (Section 6.3); and summary of suggested alternatives that were received in scoping comments (Section 6.4). Public comments are described in detail within these four areas.

6.1 Comments Regarding the Identification, Description, and Characterization of Essential Fish Habitat

6.1.1 General Comments

Several commenters stated that the identification and protection of EFH should be focused on promoting ecosystem health and enhancing sustainable fisheries. They believe that these two objectives are fundamental to the Magnuson-Stevens Act and specific to the EFH provisions of the Sustainable Fisheries Act.

Several commenters referred back to the amendments to the Magnuson-Stevens Act in 1996. They cited the integral link between habitat, healthy fish populations, and sustainable fisheries, and indicated that Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." In addition to laying the congressional framework for EFH, the Magnuson-Stevens Act also mandates that the regional councils take action to ensure the conservation and enhancement of EFH. They further stated that the EIS must advance the description and identification of EFH as well as examine options to minimize the deleterious effects of fishing on EFH.

Many commenters agreed that the EIS should also include existing information on habitat types in the North Pacific and Bering Sea; gear impact assessments from published literature; the status of ecosystem health in various Gulf, Bering Sea, and Aleutian Island regions; and socioeconomic data on industry sectors and fishing communities

Several commenters believed that the support and enhancement of sustainable fisheries and the promotion of ecosystem health should be fundamental to the EFH process. They further stated that the Agency [NMFS] should focus on identifying a broad range of alternatives for protecting habitat, determining the need for additional fishing restrictions by evaluating the health and diversity of the surrounding ecosystem. The EIS for EFH should incorporate all existing information on habitat types and fishing gear habitat impacts (differentiating between various gear types and including information from the Groundfish DPSEIS). Additionally, the EIS management alternatives should be designed to accomplish specific objectives with a meaningful resolution of scale and at minimum cost to the industry. Finally, they continued to support the active involvement of fishermen and fishery managers in the HAPC/EFH process to ensure that management actions are well informed by local knowledge.

Some commenters specifically favored a stakeholder process whereby local input was provided throughout the development of the EIS.

Other commenters supported an ecosystem approach to the identification of EFH to further the scientific knowledge of managed fish species, benthic and pelagic habitats, and their ecological relationships.

The precautionary principle was mentioned many times. Most commenters indicated that NMFS must evaluate the effects of fishing on habitat, and take precautionary measures to protect sensitive habitat areas. They further stated that NMFS should move beyond single species management by looking at whole ecological marine communities and their long-term benefits for productive and diverse fisheries.

Many commenters thought NMFS should consider a management approach that uses tools such as MPAs, HAPCs, gear conversion, and spatial and temporal fishing closures, in conjunction with good science and community input.

6.1.2 The EFH Definition is Too Broad

Many commenters believed that the criteria for description and identification of EFH is overly broad. They recommended that, whatever criteria is used for identification of EFH, recognition be given to habitat that plays a "truly essential" role in fish populations and that sufficient scientific justification exists to allow meaningful analysis.

One commenter believed that the most important issue is the definition of EFH and urged the agency to adopt a definition of EFH that can be applied to specific geographic locations that are critical to the survival and reproduction of a target species.

Several commenters expressed concern regarding modifications to or "working definitions" of the current definition of EFH. Recognizing the broad language in the section of the Magnuson-Stevens Act that defines EFH, the commenters stated that there will undoubtedly be consideration of the establishment of a working definition of EFH. This was, in part, already attempted when the Council and NMFS developed a plan amendment to consider protection for certain areas referred to as "habitat areas of particular concern" (hereafter HAPC). While there may be a legitimate need to create a working definition of EFH, and some of the existing work on HAPC may be useful, commenters are concerned that proceeding down this path is not without significant pitfalls that should be recognized up front. While impractical to some extent, the current broad definition of EFH accurately reflects the lack of scientific data and information of how fish use habitat and how to prioritize habitat types and features in terms of meaningful concepts such as productivity, etc.

Given the existing Magnuson-Stevens Act definition of EFH, many commenters indicated that it is difficult to dismiss any marine habitat from the description and identification of EFH. They continued that "quite likely, every part of the ocean contributes to the spawning, rearing, or feeding of marine fish species." They further stated that clearly other strategies for designating EFH could be entertained (such as a habitat-based, rather than a fishery-based approach), but the actual description seems less important than the management decisions made in response to the description.

Several commenters indicated that, given the broad interpretation of EFH by NMFS (i.e, if all habitat is considered "essential"), then further criteria must be developed to discriminate between various habitat types to dictate appropriate management strategies. Although this level of discrimination may be more appropriate at the HAPC level, considering habitat categories as an alternative to the existing EFH description could provide a useful exercise and result in a more meaningful use of the EFH term.

Many commenters focused on the issue of limiting EFH to those areas that are "truly essential" to fish stocks and to activities that directly affect marine or estuarine environments within the purview of the FMPs. Land-based development, wetlands dredge and fill permits, upstream discharges governed by the Clean Water Act, and all other non-marine and estuarine activities should be excluded from NMFS' review. These commenters further stated that Congress intended this program to be a streamlined, voluntary, information-sharing process focused only on the most important fish habitat. Instead, it has evolved into a confusing, prescriptive regulatory program that encompasses all marine, coastal, estuarine, and significant inland waters.

Similarly, one commenter stated that each alternative should include explanations of why each area has been identified as EFH. This would include a detailed evaluation of marine habitat within the EEZ to see if it meets a test of being truly essential.

Several other commenters stated that the description of EFH should include the identification of all managed species' general distribution and core habitat areas.

Several commenters stated that areas should be ranked according to importance and priority [for protection] in the identification of EFH. However, these areas should not be exceed 20 percent of the fishing grounds.

6.1.3 EFH Should Focus on Marine Habitats Only

Many commenters representing non-fishing concerns stated that the EIS must identify and describe EFH through specific criteria that limit its extent to offshore marine or estuarine environments that are truly essential for fish the interim final regulations consider all habitat capable of sustaining fish as EFH, including inland waters far from the ocean). They further stated that the EIS must identify and describe EFH through specific criteria that limit the extent of the program to marine or estuarine environments within the EEZ. An overly broad approach on EFH unnecessarily impacts a wide range of fishing and non-fishing entities and activities with NMFS consultation.

6.1.4 Do Not Rely Solely on CPUE Data as Description and Identification Criteria

Many comments focused on the sole use of CPUE data to identify EFH. Generally, they agreed with the comments of the SSC (June 2001, Council meeting) that "using fishery dependent CPUE data to define which habitats constitute EFH is inappropriate because areas of high CPUE may reflect regulations, availability, fishable bottom, temporary aggregations, etc., rather than habitat critical to particular life stages." The commenters concurred with the SSC that "technical and scientific expertise is needed in developing new concepts for defining EFH and defining what habitats are essential to each species and in determining the effects of fishing on these habitats, including effects of gear types other than bottom trawls."

6.1.5 Alternatives for Describing and Identifying EFH and Mitigating Impacts Should be Non-allocative

Several commenters indicated that only non-allocative alternatives should be considered. They further stated that there is a very public effort by some to favor some fishing gears over others. The commenters believed that alternatives should be designed to minimize reallocative gains to existing participants. The most effective and fair way to accomplish this is to consider reallocation in the context of a rights-based fishery where an individual's historical catch rights would be retained, and would be able to be fished by vessels with allowable gear. This would make consideration of alternatives more allocation-neutral and would allow for fair treatment for those forced to exit or reduce participation in the fishery because of gear specific closures.

Another comment also emphasized that only "non-allocative" alternatives should be considered when determining alternatives for minimizing impacts to EFH or for designating EFH.

One commenter stated that "the EFH EIS process is an open invitation to gear wars in which the industry will attempt to reallocate access to the resource through claimed environmental salubrity, real or imagined."

6.1.6 Status Quo EFH Description is Adequate

One commenter supported the status quo, Council approach in designating EFH for its groundfish species. They suggested that this is a precautionary approach that is consistent with the EFH Interim Final Rule and has been approved by NMFS. Existing EFH descriptions should not be significantly modified unless the best scientific information available supports such a modification. Presently, it is unclear whether NMFS and the Council have obtained additional data to refine these EFH descriptions,

consistent with the process outlined in the EFH Interim Final Rule. They further stated that significant modification of EFH would take considerable time and resources and would divert the Council from addressing the primary reason for the preparation of these EISs—to assess the effects of fishing on fish habitat and the marine environment and identify and implement measures to minimize these effects.

Another commenter favored the status quo on any EFH description until impacts of and changes can be considered.

A couple of commenters believed that we should remain at status quo until we have better management tools, or a research program that would direct us to a different description of EFH than that already in place.

Several commenters recommended a range of alternatives based on a different interpretation of the scientific baseline about what is known about trawling and the applicability of existing information to the trawl fisheries off Alaska than the one used for Section 3.2 of the draft groundfish Programmatic Supplemental Environmental Impact Statement (DPSEIS). We [commenters] feel that there is no deficiency in the status quo measures to protect EFH off Alaska.

Another commenter took a different approach and disagreed with previous commenters on "status quo" stating that "in the past [i.e., status quo], NMFS and the Council have not taken a precautionary approach in its management of these fisheries toward protection of the marine environment or the protection of fish habitat. Instead, both NMFS and the Council have repeatedly delayed taking anticipatory conservation action claiming inadequate science of a casual relationship between fishing practices, habitat damage or destruction, and effects on a commercially-managed fish species." The commenter continued also stated that the Council and NMFS failed to properly analyze and fully disclose known and predictable environmental effects of proposed actions and reasonable alternatives, in both required environmental analyses under NEPA or in FMP amendments. Rarely, has NMFS or the Council properly considered or implemented measures for the primary purpose of habitat protection. They further stated that management measures, like harvest incentives to low-impact gears, gear modifications to reduce the ability of gears to access sensitive habitats, and area-based gear management to protect important habitats from other gears, seem intuitive, but, as yet, still remain to be implemented. Such an approach, combined with the present policy of allowing fishing to occur throughout state and federal waters (with the exception of effort and bycatch limitations), is the antithesis of precautionary and poses a serious risk to EFH and the marine environment.

6.1.7 Ecosystem Approach to Describing and Identifying EFH

Many commenters advocated an ecosystem approach to describing and identifying EFH. One commenter recommended that NMFS examine the document entitled "Ecoregion-Based Conservation in the Bering Sea: Identifying Important Areas for Biodiversity Conservation" and consider protecting the areas cited in that document as unique ecoregions within the region.

These commenters continued by stating their belief that humans have to be included in the Ecosystem Formula Genuine ecosystem-based management must incorporate people as a legitimate part of the ecosystem. As required under NEPA, the environmental impacts on the relationship of humans to the resource must be included in the EIS. Neither NMFS nor the Council may simply ignore issues such as sustained participation of fishing communities or the goal of achieving optimal yield. After all, one of the purposes of the Magnuson-Stevens Act's conservation mandate is to sustain long-term harvests of fisheries resources. The commenter(s) support the inclusion of the "human relationship to the resource" as part of the EIS.

Several comments focused on ecosystem links and the protection of food webs. One commenter stated that "sealions are linked to a stable and growing herring stock. All efforts must be quickly organized to sustain and enhance this vital link of the ocean ecosystem." NMFS assumes that the comment supports the analyses of a ecosystem-food web approach to protecting EFH.

Several commenters generally did not support the inclusion of alternatives that, on their face, do not seek to minimize the potential adverse effects on the human relationship to the resource as required under NEPA and the Magnuson-Stevens Act. They further stated that alternatives that do not meet this test are a waste of time for both the analysts and the public.

Many commenters favored an ecosystem approach to defining EFH that identified habitat associations, species distribution and ecosystem mechanics, accounting for the species' various life stages and habitat requirements for reproduction, growth, dispersal, adult distribution, and trophic interactions. However, they recognized that, in many cases, present scientific knowledge is not advanced enough to detail all these components. This is not a minimum standard to ascertain before EFH description and identification, but a goal to strive toward. It is necessary to further biological research while using the best current information to identify EFH. As the scientific understanding of habitat associations and species distributions progresses, EFH can be reassessed.

6.1.8 Zero-Risk Approach to EFH Description and Identification and Managing Effects of Fisheries on EFH

Several commenters did not support a zero-risk approach to EFH description and identification or to fisheries management. They stated that under that approach, the burden of proof would shift to the fisheries management system to prove that fishing activities do not have adverse impacts on the resource or the ecosystem before they could be authorized.

6.2 Comments on the Effects of Fishing on EFH and Measures to be Considered to Protect Essential Fish Habitat and HAPC

6.2.1 General Comments

Several comments focused on general recommendations for a gear impact assessment on EFH stating that the Magnuson-Stevens Act and the EFH Interim Final Rule require that fishery management councils and NMFS minimize adverse effects on EFH from fishing activities to the extent practicable. The commenter stated that according to the EFH Interim Final Rule, "adverse effect" means "any impact which reduces quality and/or quantity of EFH. Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions." They continued that it states that "fishing activities that adversely affect EFH may include "physical, chemical, or biological alterations of the substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other components of the ecosystem." The commenter concluded by stating that the Councils should minimize adverse effects if there is evidence that a fishing practice is having an identifiable adverse effect on the EFH.

One commenter stated that "in no way will an EFH assessment alone address the requirements of NEPA, as NEPA requires a much broader analysis of the effects of fishing on the marine environment." Consistent with these requirements, the commenters urged NMFS and the Council to include a full analysis of the effects of fishing on EFH and the environment and not rely heavily on prior EFH analyses and NEPA analyses. They stated that prior environmental and EFH analyses are inadequate. This assessment must include a full and objective analysis of both environmental and EFH impacts for each

gear used in these fisheries and must be based on the best scientific information available. Most important, the analysis should focus mainly on applying existing scientific data to predict the short- and long-term effects of each fishing gear on EFH in the affected area of each fishery. Where data are limited, the EIS must evaluate whether that information can be obtained and how long it may take to obtain necessary information. More important, the EIS must evaluate the risk of environmental harm caused by continuing existing fishing practices until that information is available.

6.2.2 Effects of Specific Gear Types on EFH and Gear Conversion, Gear Modification, and Gear Incentives as Means to Minimize the Effects of Gear on EFH

Several commenters focused on gear modification or conversion as a means to reduce effects of gears on habitat. They suggested that rockhopper and roller maximum-diameter size restrictions be evaluated by NMFS and the Council gear and a maximum-diameter size limit on rockhopper and roller gear in the groundfish fisheries be implemented to prevent trawling in the most complex habitats.

Parallel components to the identification of EFH are research on the effects of fishing gear on habitat and mitigation of those effects in sensitive habitat areas. Several comments focused on the mitigation of the effects of fishing gear. They stated that this should include habitat restoration and protection, but emphasized that habitat protection does not require a prohibition on all fishing. Rather, it means a prohibition or modification of fishing practices that harm EFH.

Several commenters suggested that once EFH and HAPCs are identified, steps should be taken to protect these sites from damaging fishing practices. In areas identified to exhibit ecosystem stress or direct and lasting damage to EFH from fishing practices, measures must be taken to alleviate these effects. Alternatives to consider for the protection of EFH are status quo or no net increase in fishing effort, gear modification, gear restrictions/allocations to promote gear conversion, closures to all or a significant amount of bottom fishing (for the protection of benthic habitat), or full area closures (for the protection of pelagic and benthic habitats).

One commenter referenced Alternative 5 in the DPSEIS which focuses explicitly on reducing the adverse effects of bottom trawling on benthic habitats through the use of area restrictions, gear allocations, gear restrictions, and gear modifications. The DPSEIS predicts dramatic declines in the catch of coral and sponges under Alternative 5, but an increase in the catch of anemones, sea pens, and sea whips, due primarily to increased effort by the use of longline gear (DPSEIS 4.7 to 14; 4.7 to 24).

One commenter recommended that NMFS develop an alternative in the EFH EIS, similar to Alternative 5 in the DPSEIS; i.e., the agency should weigh the potential benefits of increasing gear conversion to pots. This may alleviate some unintended increases of the bycatch of HAPC biota as predicted with longline gear. They stated that a shift to pelagic trawls may alleviate damage to benthic habitats, but it is important to consider that pelagic trawls often contact the seafloor, damaging habitat with dragging footropes. They also stated that unobserved habitat damage and species mortality have to be considered when assessing gear impacts. For example, gear impact analysis should evaluate practices that reduce habitat complexity, unobserved mortality of both commercially viable species and other marine life valuable to the ecosystem, and damage to habitat and epifaunal species from sediment suspension and distribution.

Several commenters recognized that it is important to delineate between various gear types and intensity of effort. This includes consideration of the degrees of impact within a gear type (fishing methods and gear modifications) and the impacts of different gear types, from jigs and trolling to bottom trawling and dredging. Several commenters suggested that some habitat areas cannot sustain healthy fish populations with certain fishing practices and intensities, but can sustain gear types that have less impact.

One commenter was particularly concerned about the adverse effects of mobile gear on sea floor habitats and stated that the effects of bottom trawling include direct damage to sensitive habitat areas by crushing corals and sponges, overturning boulders, or introducing suspended sediments, toxins, and nutrients into the water column by plowing and scraping the sea floor. Commenters stated that the protection of EFH from fishing impacts must consider the direct and indirect impacts on marine communities by both benthic and pelagic trawls.

One commenter stated that NMFS should analyze the impact that foreign longlining and trawling had on all identified EFH and HAPC in the GOA and BSAI.

Several commenters stated that the trawl fleet has to be reduced and more controlled. The comment(s) targeted a reduction of the larger, more powerful, vessels.

One commenter focused on crab populations stating that it is important to recognize that major crab populations in the EBS and GOA have collapsed (red king crab, bairdi tanner, and opilio crab). Therefore, the EFH EIS must look closely at the effects of bottom trawling on crab habitat. The commenter continued on by stating that the Bristol Bay pot sanctuary was closed to trawling from 1959 until the early 1980s. This sanctuary protected important habitat for red king crab, as well as halibut. The development of the domestic trawl fleet for cod and other bottomfish may have played a role in the inability of red king crab to recover to precollapse levels. The EFH EIS must look at near-term, long-term, direct, indirect, and cumulative effects of bottom trawling on crab habitat.

Another commenter stated that both fisheries [groundfish fisheries] continue to rely predominately on bottom-tending mobile gears that dramatically disturb and alter tens of thousands of square nautical miles of seafloor habitats annually off the coast of Alaska. Certain EFH, like Pacific cod EFH and rockfish EFH, is clearly being adversely affected. Allowing such fishing practices throughout federal and state waters exposes many other EFH to adverse effects by these fishing practices. This commenter continued by stating that "as required by both NEPA and the Magnuson-Stevens Act, NMFS must identify a full range of alternatives to minimize the effects of these fisheries on EFH and the environment. NMFS and the Council must identify and implement a full range of measures to sufficiently protect EFH from the effects of fishing gears."

One commenter focused on harvest incentives for low-impact gear use, emphasizing the distinction between mobile gears (high-impact) and fixed gears (low-impact). Commenters believe that NMFS and the Council must reexamine their dependence on bottom-tending mobile gears and use existing fishing practices that have low impacts on EFH and the environment. For species like rockfish and Pacific cod where fixed fishing gear is an alternative to bottom-tending mobile gear, trawl gear should be prohibited from targeting those species. In cases where there are no alternatives to using trawl gear, trawl gear must not be permitted to use rockhopper gear, large roller gear, or chafing gear, as these gear modifications allow trawlers to target and destroy important complex habitats. The commenter also believed that the Council should analyze the use of incentives such as allowing exemptions in sensitive habitat areas if a particular fishing practice or gear type is shown not to be detrimental to habitat. Further, the Council should create incentives for fishermen to switch voluntarily from habitat-disrupting gears to more low-impact gears, such as hook and line and pots.

Other commenters also recommended a conversion from bottom trawling to lower impact gears to lessen the footprint on the ecosystem.

One commenter stated that, given the size of the Bering Sea pollock fishery and importance of squid to protected marine mammals (northern fur seal, sperm whale), as well as the endangered short-tailed albatross and other non-breeding albatrosses that forage in these waters, a year-round pelagic trawl

closure area would provide effective protection to squid and benefit other pollock predators that converge on these variable but predictable "hotspots" of high productivity in areas of strong, persistent upwelling over the continental slope or shelf break, at the boundaries of different water masses, and at the heads of marine canyons or edges of gullies.

6.2.3 Habitat Areas of Particular Concern

Many comments focused on the identification of HAPCs. One commenter stated that in categorizing habitat and identifying HAPCs, the following factors have to be taken into consideration: vulnerability or resilience to disturbance, ecological function, and rarity or uniqueness. The commenter further stated that these three categories follow the HAPC guidelines currently under development by the Council. Examples of each habitat type include gorgonian corals (recognized as highly vulnerable to disturbance), the EBS ice edge (an ecologically productive area critical to the productivity of a large geographic region), and the Sitka Sound Pinnacles.

Two commenters offered opinions on approaches to managing HAPCs by stating that once an area is identified as a HAPC, management alternatives should be evaluated in the context of ecosystem health and diversity under current fishing practices. If the ecosystem within and immediately surrounding a HAPC is robust, management alternatives should be limited to status quo or a policy of no net increase in impacts (from fishing gear or other sources) until additional information indicates the need for more precautionary measures. If signs of ecosystem stress are apparent, either in targeted fish species or other ecosystem components, then alternatives should include gear modifications (e.g., limits on pot lifts, net size and longline sets, reduced frequency of impact, prohibition of on-bottom trawling, etc.), gear zones (e.g., Alternative 5, DPSEIS: restricting high impact gear to less vulnerable habitat), and closures to all groundfish or bottom fishing. Where negative impacts of a certain gear type are known, and alternative gear types are available to harvest a given species in a HAPC, management measures should mandate either an immediate or a phased-in transition to the lower-impact gear.

Several comments supported the creation of a systematic and effective HAPC identification process. They stated that it is likely that habitats exist in each region that meet at least one of the criteria for HAPC identification: 1) the habitat provides an important ecological function; 2) the habitat is sensitive to human-induced environmental degradation; 3) development activities are, or will be, stressing the habitat type; or 4) the type of habitat is rare. The commenter further stated that the Councils should be required to identify HAPCs in its EFH amendment or, at least, provide proposed research measures that the Council will take that are necessary to identify areas as HAPC.

One commenter suggested that designating a habitat type as HAPC will call attention to the important properties and functions of such habitats and will also include a minimum set of protections to protect these sensitive habitat types. Commenters stated that the Council should identify HAPCs for all groundfish, even though many EFH descriptions remain based on Level 1 data—distribution and abundance. They stated that one approach the Council can take is to identify those areas within a species' EFH that have historically contained the highest abundance levels of a particular stock as HAPCs. High abundance of fish in these areas provides sufficient evidence to meet the first HAPC criteria on: these habitats provide some important ecological benefits. Such areas likely represent core range areas for a particular species and likely contain those habitat characteristics that provide maximum value for a fish species.

One commenter supported efforts to identify HAPC in a precautionary manner. Of course, adequate measures must be implemented along with the HAPC identification to ensure they actually protect the sensitive habitat within the HAPC.

One commenter recommended that HAPCs be used as an additional tool for the protection and identification of EFH. HAPCs are areas of EFH that require added protection from deleterious effects. The commenter emphasized that HAPCs are not stand-alone measures to protect habitat and species associations, but a component of a much larger area that is carefully managed for EFH and a healthy, diverse ecosystem.

One commenter emphasized that HAPCs should be subsets of the total essential habitat needed to support healthy fish populations and should not be considered all that is required for EFH.

One commenter requested HAPC identification for the Knik area, stating that proposed activities in the upper inlet pose risks greater than can be accommodated with mitigation measures.

One commenter indicated that one issue of concern that had to be brought to the attention of NMFS was the resolution of scale in designing HAPC areas and management measures appropriate to those areas. The technology exists to define habitat areas in very specific terms, outlining canyons or pinnacles where corals exist, or specific shell hash beds essential to juvenile crab. The commenter and others stated that they cannot accept closing 20 nautical mile blocks because a corner of that block contains coral when the technology exists to accomplish habitat protection with far less disruption to the industry. Facilitating enforcement is poor rationale for imposing unnecessary costs on the industry. HAPC areas should be designed to accomplish clearly defined habitat objectives with the least disruption to local fishing fleets.

6.2.4 The Use of the Precautionary Principle and Uncertainty in Habitat Management

Many comments focused on the issue of precautionary management. One general comment indicated that fisheries managers in the North Pacific face the obstacle of uncertainty when assessing stock biomass and assigning catch limits. The use of precautionary management has generally been applied to reducing fishing mortality. Now fisheries managers must expand precautionary management to incorporate the uncertainties of managing for the ecological relationships of target species and their habitat requirements. This will entail incorporating the biological requirements of not only target species, but those of associated species as well, including upper and lower trophic animals. Precautionary habitat management should be viewed in an ecosystem context that considers species interactions, environmental changes, and scientific uncertainty.

One commenter stated that to develop a means for assessing habitat in the face of uncertainty, it will be wise to use inferential information regarding habitat value. Habitat value can be inferred from species diversity, abundance or rarity, physical structures, sediment types, depth and temperature gradients, and physical processes such as ocean currents, gyres, and upwelling. EFH must be analyzed beyond presence/absence data from trawl surveys and catch data.

One commenter stated that it is clear that a precautionary strategy for habitat management is needed as researchers study the effects of fishing on EFH. The commenter stated that "to avoid making errors that may cause long-term damage to habitat or a decline in species abundance and diversity, managers must take heightened precaution to ensure protection of habitat and species assemblages. To do this, quantitative thresholds of uncertainty should be implemented that weigh potential economic and ecological costs against present understanding of the effects of fishing on habitat and species diversity." For example, when considering a fisheries plan to allow trawling for flatfish in the Bering Sea, managers have to consider lost economic opportunities that may occur due to the breakdown of ecological functions of damaged habitat, or future regulations that would limit fishing due to the decline of another target species, such as tanner crab. The impact of one fishery may adversely affect other fisheries by damaging habitat or endangering other target species.

With regard to uncertainty, one commenter stated that determining the levels of uncertainty should not be arbitrary, but should have clear and quantifiable standards for assessing fishing impacts, current scientific knowledge of the target species, and knowledge of other ecosystem components that may be affected by the fishery.

One comment stated that the Council should develop a precautionary management approach to protecting EFH in Groundfish Amendment 10 and Scallop Amendment 13.

One comment stated that a precautionary management approach to protecting EFH in both groundfish fishery management plans is consistent with the prevalent themes of sustainability and risk-averse management in the Magnuson-Stevens Act in protecting EFH, preventing overfishing, and achieving optimum yield. The commenter also stated that "it is consistent with the requirements of the EFH Interim Final Rule. As NMFS has stated in its response to comments on the Interim Final Rule, "care should be exercised in the face of inadequate information or overfished stocks to guard against habitat losses or alterations that may prove significant to the long-term productivity of the species."

One comment stated that a precautionary approach is also consistent with sound conservation principles adopted by the United States in signing the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea (U.N. Agreement) relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

One commenter stated that a precautionary approach should include the following four components: (1) preventative action to protect habitats should be taken in advance of scientific proof of causality; (2) the proponent of an activity, rather than the public, should bear the burden of proof of showing that a fishing practice or gear will not result in environmental harm; (3) a reasonable range of alternatives, including a no-action alternative (for new activities) should be considered when there may be evidence of harm caused by an activity (required already under NEPA); and (4) for decision-making to be precautionary, it must be open, informed, and democratic and must include all potentially affected parties, including indirect stakeholders. The commenter stated that such an approach has been adopted by the U.S. and numerous individual states in their regulation of practices where data are limited as to effects on the environment.

One commenter stated that the Council should also adopt a precautionary management approach toward EFH management in both the groundfish and scallop FMPs.

Several commenters indicated that the precautionary approach would 1) minimize adverse effects to EFH and the environment via timely implementation of protective measures rather than exacerbate environmental harm by delaying necessary conservation measures, 2) reduce the risk of serious or irreversible harm to certain habitats, and 3) foster innovation among resource users which would likely lead toward lower-impact fishing practices and reduced waste.

One commenter stated that the draft groundfish DPSEIS admits there is currently a lack of scientific information on the link between potential or observed habitat effects off Alaska and ecosystem function and fisheries productivity. Page 4.7-39 of the DPSEIS states as follows:

> "In conclusion, the linkage between fishing and habitat characteristics is not known with great precision for Alaskan fisheries. The absence of fish stocks below their minimum stock size thresholds (Section 4.4) implies that the status quo fishery has not had significant impacts on the productivity of stocks in the BSAI and GOA (SPEIS page 4.7-39)."

The commenter suggests that this admission reflects the fact that there is no real evidence that there is a problem with the current measures in place to protect EFH in the North Pacific. It is undoubtedly true that all fishing gears that tend bottom somehow modify benthic habitat, and in some cases the effects have been described. That some sorts of changes associated with fishing can be detected off Alaska does not mean the changes are necessarily "big" or "bad" for the ecosystem. For example, it is not clear whether the observed small differences between unfished and heavily fished areas in the EBS (as cited in McConnaughey et al. 2000) are ecologically significant. Furthermore, it may ultimately be more important to estimate effect sizes and use these to determine the levels of fishing intensity that may be sustainable for a given habitat. For this reason, we [commenters] are concerned about taking steps that may not be warranted. Further, we are concerned that there is no scientifically credible way to correlate observed or hypothetical effects with the resulting potential downstream reduction in ecosystem function or fishery productivity. The commenters recommended that NMFS proceed cautiously with the process of considering changes in the existing management regime to protect EFH off Alaska. This caution is also recognized in the Magnuson-Stevens Act's requirement to minimize effects of fishing on EFH "to the extent practicable." Poorly conceived measures may actually concentrate fishing effort, possibly creating problems that did not exist before. This precaution has to be explicitly built into proposed management measures, particularly where the health of fish stocks does not suggest any deficiency in the existing habitat protections in the groundfish fisheries off Alaska. Further, if it is deemed that additional measures must be considered for implementation and experimental designs and controls should be incorporated to gain information on the efficacy of such measures, therein avoiding some of the problems encountered in dealing with the sea lion issue.

Similarly, a commenter stated that "due to the absence of scientific research off Alaska or anywhere else, comparative studies of effects of different fishing gears on fish habitat are not available." This fact is clearly acknowledged in the draft groundfish DPSEIS. Despite this, some environmental groups and a few industry groups are likely to recommend analysis of proposals based on the supposed "differential impacts" of fixed gears relative to mobile fishing gears. If such differential impacts have not been evaluated scientifically, this analytical process has to employ safeguards to prevent arbitrary determinations and unjustified actions. This matter is of great concern because we have observed a double standard in the DPSEIS when it comes to application of a precautionary approach. For instance, the DPSEIS proposes options to greatly restrict trawling, and much of the rationale for taking this action revolves around what may or may not be known about trawl effects. In this situation, the precautionary approach is used as an argument to impose extensive restrictions on trawling in order to be "risk averse." By comparison, the DPSEIS openly admits that scientific studies on the effects of fixed gears are not available and no studies of comparative effects have ever been undertaken. Despite this, the DPSEIS somewhat arbitrarily proposes options to increase fishing allocations to fixed gears with virtually no recognition of the unknowns or adherence to the need to be precautionary in face of limitations in scientific information. In consideration of available evidence, we feel that a reasonable and fair standard has to be applied for the use of the precautionary approach regarding effects of all types of fishing gear. Given the path taken in the DPSEIS, we would like to avoid making the same mistakes for this action. Commenters further recommended that "until a better scientific foundation is available, a reasonable and fair standard of precaution should be adopted to evaluate effects of all options and all bottom tending fishing gears. Such a standard promotes fairness in this process, keeps the process focused on habitat protection rather than allocation, and is the most scientifically defensible course of action. Further, the mandate to minimize habitat effects of fishing gear to the extent practicable implies that a balance between economic and social concerns and habitat benefits must be made in the application of an approach to being precautionary. The practicable test is particularly important for the fisheries off Alaska because fish stocks are healthy and there is no evidence of a habitat problem."

6.2.5 NMFS Should Review and Analyze Existing Measures Taken to Protect Habitat

One commenter was concerned that once-productive and diverse marine habitat areas are now so altered that the original species complex no longer exists in its former abundance. This emphasizes the need for a baseline when considering an effects analyses.

Several commenters indicated that the Council has had a comprehensive policy on habitat protection since 1988, long before passage of EFH requirements. The objectives of this policy are to maintain the current quantity and productive capability of habitats and to restore and rehabilitate habitats previously degraded. Consistent with that policy the Council has taken several measures to protect habitat, including measures to protect crab habitat and other habitat protections that have resulted in the year-round closure of approximately 20 percent of the BSAI and GOA fishing grounds to trawling. Some of these commenters further stated that, in addition, the Council has implemented seasonal fishing restrictions to protect herring, crab, and salmon and has prohibited the commercial sale of sponges and coral and closed the Cape Edgecomb pinnacles to all fishing.

Another commenter reemphasized this point by stating that several comments stated that the Council, in conjunction with NMFS, has taken a number of actions over the years to protect habitat, for example, the implementation in 1998 of a no trawl zone east of long. 140º W. The Southeast Alaska trawl closure was enacted 1) to protect sensitive habitat from the impact of trawling and, 2) to protect and enhance fishing opportunities for the community-based fisheries of Southeast Alaska. The commenter maintained that the health of the Southeast ecosystem and the socioeconomic health of the southeast fisheries bear testimony to the effectiveness of this closure. A second closure to all bottom fishing on the Sitka Pinnacles was also designed to achieve a very specific objective and excluded only those gear types necessary to achieve the management objective. Of perhaps most importance was the statement that, in the above cases, the management actions were successful because they both relied on clearly defined objectives, good data, appropriate resolution of scale, involvement of local stakeholders, and differentiation between gear types. The commenter strongly recommended that these guidelines be adopted by NMFS for future HAPC actions.

One commenter stated that for purposes of mitigation [NMFS should] identify all current areas that are closed to trawling, to be analyzed [as actions already taken to protect EFH].

Several commenters recommended that NMFS include all protective measures now in place when determining whether more measures have to be taken to protect habitat.

One commenter suggested that existing protected areas were developed for a variety of purposes. They protect some species some of the time and by default protect some habitat types. Scientific analysis and peer review are needed to determine the extent and effectiveness of current protection.

Another commenter stated that status quo and past management efforts focused on effort reductions and protected species bycatch, not on habitat protection. While effort controls implemented during this time may have some incidental benefit to habitat, it is unlikely to expect that they "minimize EFH impacts" because existing management measures were neither designed for habitat protection, nor for minimizing a particular threat to habitat. The commenter continued by stating that the lack of a focused management effort to reduce impacts by fishing to habitat is seen in both fishery management plans by 1) no comprehensive approach to protect adequate portions of all marine habitat types, 2) minimal use of area-based gear restrictions and restriction on gear modifications for the purpose of protecting fish habitat, 3) minimal use of incentives to promote low-impact fixed gears, 4) a continued "open-ocean" policy for trawling in areas known to contain complex habitats and/or sensitive benthic megafauna like sponges and deep-sea corals, and 5) a lack of any protections to offshore marine habitats and deep-sea canyons.

The commenter continued by stating that, in passing the 1996 Sustainable Fisheries Act, Congress agreed that fishery managers must make protecting marine habitats from fishing and non-fishing activities a priority in their management of fisheries nationwide. The commenter continued by stating that both NMFS and the Council have continued to take minimal steps to protect EFH in the North Pacific from fishing practices occurring in both groundfish fisheries. The commenter continued to state that NMFS, therefore, must take sufficient action in both of its groundfish fisheries to ensure that these fisheries are managed properly to minimize their potential negative effects on EFH and the marine environment. NMFS must take an aggressive approach to protect EFH and the marine environment by implementing measures including no-take marine reserves, area-based gear restrictions, and other gear modifications to effectively accomplish this goal. The commenter continued by stating that the Council has taken numerous actions in the past that promoted expansion of bottom trawling into areas that were previously closed prior to the 1980s. These actions, while promoting the growth of American fleets, had significant impacts on sensitive habitats, known to be essential to crab, salmon, and other groundfish species. Furthermore, the Council has continuously postponed taking action based on existing scientific evidence of significant disturbance to habitats by bottom-tending mobile gears with claims that more scientific research was necessary. When new technologies developed that potentially threatened marine habitats, i.e., rockhopper gear, chafing gear, or rock chains, the Council took little to no action to restrict these developments.

Several commenters believed that relying solely on existing measures [measures in place] is unlikely to minimize fishing effects to EFH. They urged NMFS and the Council to identify and analyze the environmental benefits of a broad range of alternatives to minimize the effects of fishing gears on EFH.

6.2.6 Marine Protected Areas, Marine Reserves and Marine Refugia as a Means to Protect EFH

One commenter stated that marine protected areas (MPAs) are becoming increasingly mentioned as a valuable management tool to protect marine areas from damaging fishing practices, pollution, or development. In addition to protecting species and habitat within the designated area, MPAs can have positive ecological effects outside of their boundaries by acting as productive nurseries and fueling species distribution at juvenile and larval life stages. Permitted activities within the MPA may also benefit from ecological conservation measures.

One commenter stated that the identification of MPAs should be considered both as a means to protect EFH and HAPCs from damaging fishing practices and as a way to sustain commercial fishing. They further stated that the waters off the coast of Alaska already have a number of places that meet the definition of an MPA. The places range from the Bristol Bay Red King Crab Savings Area to the large Southeast Alaska trawl closure, the Sitka Pinnacles, and Steller sea lion critical habitat areas. With the exception of the Southeast Alaska trawl closure, current year round closures do not include a wide range of habitat types and depths necessary to protect the range of managed species. Proposed MPAs for the conservation of EFH and HAPCs should be established with explicit objectives on an appropriate scale, using the best available data.

Another commenter believed that there is strong scientific justification for protecting key EFH in a network of marine reserves. The commenter paraphrased a 1998 report to Congress [the Ecosystem Principles Advisory Panel to NMFS] recommending that fishery managers consider and evaluate the potential benefits of marine protected areas for promoting ecosystem-based management. The panel pointed out that such protected areas can range in size and degrees of protection. Prohibitions in some areas may remain in effect year-round, while in others they could restrict activity only during certain times, for example, when fish are spawning.

The same commenter stated that there "is compelling scientific evidence that marine reserves conserve both biodiversity and fisheries, and could help replenish the seas" and "marine reserves work and they work fast. It is no longer a question of whether to set aside fully protected areas in the ocean, but where to establish them." They cited the results of a 3-year study which underscored the effectiveness of marine reserves in protecting not only fish, but also fisheries. The study showed that after just 2 years of protection, marine reserves produced results that were both startling and consistent. Among the findings are the following: fish population densities were an average 91 percent higher; biomass was 192 percent higher; average size of organisms was 31 percent higher; and species diversity was 23 percent higher. Furthermore, the size and abundance of exploited species increased in areas adjacent to the reserves because "reserves serve as natural hatcheries, replenishing populations regionally by larval spillover beyond reserve boundaries."

One commenter recommended that NMFS establish a timely process for identification of a network of marine reserves in the EBS. The same commenter stated that, unfortunately, fully protected marine reserves are often perceived by the fishing community as locking up the seas and limiting fishing opportunities. Thus, they are often vigorously resisted. The commenter concluded, however, by stating that "protection of EFH in a network of marine reserves will be essential to achievement of the most worthy goal in marine conservation."

One commenter stated that the only pelagic areas in the North Pacific currently afforded some level of protection from groundfish fisheries are portions of the designated Steller sea lion at-sea foraging habitats in the Shelikof Strait and parts of the sea lion conservation area (SCA) off the eastern Aleutian Islands. Both areas are major pollock spawning grounds. The commenter further states that NMFS' current DPSEIS acknowledges that existing trawl closure areas do not encompass pelagic habitats. The commenter states that there are generally no area restrictions in the deeper waters that encompass the outer continental shelf and upper slope of the central and western GOA and BSAI.

One commenter stated that the "Horseshoe" area near Unimak Pass, Pribilof Canyon (south of St. George Island), and Zhemchug Canyon (northwest of St. Paul Island) would make ideal pelagic MPAs. The productive upwelling zones contain shelf-break bathymetry and are major fishery target areas, as well as areas of high squid bycatch. These are also foraging areas for albatross, murres, kittiwakes, puffins, auklets, etc. They further stated that the area encompassing the Horseshoe near Unimak Pass is also in designated Steller sea lion aquatic foraging habitat and is a major migratory route and foraging ground for many species of marine mammals and birds. Pribilof Canyon, south and west of the Pribilof Islands, is prime northern fur seal and seabird foraging habitat. The commenter concluded by stating that pelagic protection zones would accomplish multiple goals for mammal, seabird, and fish habitat conservation and would reduce bycatch of species such as squid which occur primarily in these areas.

One commenter supported the development of marine wilderness areas. As described, the commenter would support the identification of a network of marine refuges that encompass the major representative habitats found in coastal and offshore areas off the North Pacific coast. The commenter stated that presently, no such extensive network of marine reserves exist in the North Pacific or nationwide; they are long overdue, and managers should quickly proceed to develop them in all major habitat types. Such areas are necessary for the protection of overexploited rockfish stocks, sensitive habitats, and marine diversity and regional ecosystem processes, as well as acting as a buffer against significant environmental damage due to commercial fishing and other fishing practices. Marine refuges can also be used for baseline areas for comparative habitat and marine diversity studies.

One commenter cited a study that noted that concentration[s] of fishing fleets in patchy, relatively discrete areas of enhanced productivity concentrates the associated ecological impacts of fishing; e.g., localized depletion, bycatch, lost gear, discard wastes, disturbance, and ship strikes. Given the persistent and

predictable features of upwelling zones over shelf breaks, submarine canyons, seamounts, gullies, boundaries of water masses, etc., the commenter, therefore, supported creation of pelagic no-fishing marine reserves for these areas as a tool to ensure conservation of pelagic species and fishery resources.

One commenter suggested designing artificial reefs to enhance habitat.

One commenter indicated that "the strong concordance between nekton species assemblages and water column properties provides an effective foundation for the design of large-scale dynamic MPAs defined by water column properties."

Several commenters stated that year-round closures should be considered actions of last resort.

Concerns were expressed in at least two comments regarding the ecosystem effects of harvesting of kelp and herring on trophic webs and prey availability, especially salmon.

6.2.7 The Need for Better and More Complete Observer Coverage

One commenter stated that nearly 1,000 species are caught as bycatch in the North Pacific, many of which are poorly documented, and their ecological value is poorly understood. Observer coverage could be modified to more closely monitor habitat identification. It is, however, crucial to recognize that although bycatch may be a strong indicator of habitat damage, many other fishing gear effects are not observed from the deck of a ship.

6.3 Comments on the Process by which NMFS is Reconsidering EFH and Conducting a NEPA Analysis to Examine the Effects of Fishing on EFH

6.3.1 Involve Stakeholders in the Process

Some commenters supported an active involvement of coastal community stakeholders to identify measures that have a direct economic benefit to individuals and businesses that are dependent on the fishing fleet. They further stated that community-based involvement recognizes the diverse interests and high expectations of all participants, such as harvesters, processors, residents, and consumers.

Hold stakeholder meetings when designating EFH.

EFH regulations should encourage the Council to continue stakeholder meetings to identify HAPCs. The commenter recommended that conservation efforts in localized areas involve open discussion between fisheries managers, scientists, and community citizens. We [commenter] support the continuation of stakeholder meetings as described in the Council discussion paper, "The Stakeholder Process and Identification of Habitat Areas of Particular Concern" (dated May 31, 2001).

One commenter stated that the EIS should incorporate the knowledge and experience of both fishermen and local area managers, establishing a process to ensure that local stakeholders participate fully in the identification and design of management alternatives for EFH and HAPC.

6.3.2 Research Recommendations and the Need for an Expanded Research Effort

Several commenters simply stated that better research is needed to provide and improve stock assessments, fish habitat, and behavior research.

One commenter was also concerned with the use of survey trawls for assessing species composition and abundance. Although this sampling methodology has proven successful for determining species presence, it inadvertently damages sensitive habitats. They encouraged greater use of alternative methods to identify habitat such as research submersibles, sonar, and benthic sleds.

One commenter recommended the establishment of habitat research areas. The commenter supported efforts to implement a system of habitat research areas to further knowledge of the effects of fishing on EFH. Habitat research areas can facilitate research necessary for 1) quantifying the value of protected areas to recovering fish stocks, 2) assessing the benefits of protected areas for fish and fisheries, 3) identifying other ecosystem functions, and 4) establishing baselines for fished and unfished areas. Habitat research areas can also provide information on recovery rates of various benthic habitats from mobile fishing gear. The commenter cited the EFH IFR which specifically recognized the benefits of research areas and suggested that Councils consider creating such research areas to provide necessary information for habitat protection. Also, the EFH Interim Final Rule recommends the creation of research closure areas and other measures to assess the effects of fishing equipment on EFH. The commenter conclude by stating that it is essential that the environmental effects of a network of habitat research areas are fully evaluated in this proposed EIS, and immediate measures are taken to implement such areas in both groundfish FMPs.

Another commenter stated that, given that there is a lack of data for Alaska fisheries, the EIS should include recommendations to increase scientific research/data in support of the fishery management requirements of the Fishery Conservation Management Act (FCMA).

Many general comments indicated that conservation measures must be based on the best scientific information.

Other commenters also supported the idea that the EIS should include recommendations to increase scientific research/data in support of the fishery management requirements of the FCMA. There are numerous problems associated with attempting to prioritize protections for certain types of habitat without guidance based on a body of scientific information to help apply systematic criteria for which types of protections to prioritize and what form protections should take. The Council's SSC has attempted to point out the potential problems here in their February 2000 minutes which state "The SSC is concerned that the current document is focusing on isolated habitat concerns without any strong connections drawn to resultant fish productivity." They go on to stress, among other concerns, the need for "process oriented research that establishes the connections between habitat and fish production." We [the commenters] would like to echo these concerns and make sure that the analysis properly addresses the lack of an established scientific foundation regarding the ways in which fish use habitat, how much habitat is needed, the degree to which it can be modified before productivity is affected, and what types of protections make the most sense. Lacking this information, we certainly run the risk of protecting the substrates and fauna that we like the most or feel the most connection to when the productivity of fish species may not be best addressed by that approach.

The process should be required to incorporate experimental designs and controls into any measures to protect EFH that may flow from a redefinition of EFH, or into any further measures to minimize, to the extent practicable, effects of fishing gear on EFH. If such measures had been explicitly incorporated into the existing fish habitat protections by the Council, we would probably be a lot closer to knowing what types of measures are beneficial and what measures have little or no effect and why.

6.3.3 The EIS Should Look at Impacts from Non-fishing Entities when Examining Effects of Action

One commenter stated that the EIS should examine the direct and indirect economic and social effects of EFH description and identification on non-fishing entities as well as on the fishing industry and Alaska Natives and should specifically ensure conformity with ANSCA Section 2(b) which requires maximum participation of Alaska Natives in decision-making affecting their rights and property.

The EIS must limit conservation measures recommended for fishing and non-fishing entities to those truly necessary to supplement stipulations already in place under existing regulatory controls to protect EFH. The EIS must list all existing regulatory mechanisms that are already available to protect habitat and explain in detail why EFH regulations do not duplicate each.

Several commenters stated that habitat needed protection from chemical, physical, and biological alteration of water quality from land-based industry; dissolved oxygen depletion; physical obstructions; impediments due to chemical or mineral nutrient movement (like silica); cases of excessive siltation, or scouring; concentrated dumping of organic or inorganic substances causing putrification, suffocation, or toxicity; and damaging fishing methods or equipment like benthic trawling.

One commenter stated that the EIS must limit identification of non-fishing activities to those with direct and significant effects on EFH. The commenter stated that the current approach considers a universe of activities throughout a broad spectrum of inland areas that may threaten EFH, and that this approach goes beyond the original intent of Congress.

The EIS must identify and evaluate in detail all non-fishing activities that may be affected by EFH. Only activities with significant and direct identifiable effects on EFH should fall under scrutiny. The current approach identifies a broad spectrum of inland areas as EFH and considers a wide range of activities in those areas as actions that may threaten EFH. This approach oversteps the bounds of reasonable regulation and is inconsistent with the intent of Congress.

The EIS must limit conservation measures recommended for fishing and non-fishing activities to those truly necessary to supplement requirements already in place under existing regulatory controls to protect EFH.

One commenter focused on the impact EFH regulations could have on non-fishing entities, given their application to inland areas far from the ocean and an overly broad definition that considers all habitat capable of sustaining fish as EFH. All activities in the vicinity of such waters could be impacted by the broad scope of the emerging EFH program. However, we are looking to the EIS process to address our concerns and refocus the program on marine waters and habitat that is truly "essential."

6.3.4 Questions Regarding NEPA Process, EIS v. EA, and Transparency of Process

Many commenters focused on their concerns regarding the process of development of an analysis for this action. One commenter stated the following:

> "Just as in the Steller sea lion legal debacle, NMFS is once again trying to reach a settlement with the plaintiffs while at the same time trying to conduct a public process and analysis that complies with the Magnuson-Stevens Act and NEPA. This seriously undermines the legitimacy of the process for development of the analysis. At a minimum, ongoing private negotiation between NMFS and the plaintiffs creates an uneven playing field for the public who deserve a thorough, scientifically balanced, and

> equitable process for an analysis. In the worst case scenario, it jeopardizes an industry, which is dependent on the resource for its livelihood. As NMFS has demonstrated with sea lions, the agency sometimes appears willing to propose just about any solution to settle a lawsuit, even if the scientific foundation is weak and even though it may involve near total economic destruction of the fishing industry."

The commenters recommended that NMFS discontinue all negotiations with plaintiffs, deal directly with the judge on all issues (including timing for completion of the analysis), and concentrate solely on addressing the NEPA deficiencies in the analysis for its original EFH plan.

Regarding the NEPA process and the development of an EIS versus an EA for EFH, several commenters believe that NMFS is overreacting to the decision in *AOC v. Daley*. NMFS should revise the EA and not draft an EIS. According to the commenter, great amounts of scientific data are lacking and unlikely to become available in near future.

One commenter supported the idea that NMFS should reconsider its NEPA process. Because no draft or final EIS was prepared by NMFS before the proposed EIS, the commenter believed that NMFS should first prepare a draft EIS, followed by a final EIS.

One commenter asked the following:

> "Why is NMFS setting out to do an EIS in lieu of an EA?"

Other commenters' understanding is that, at the direction of headquarters, NMFS has opted to prepare an EIS. This decision was apparently based on criteria relating to the significance of the action and the anticipation that it would be controversial. We [the commenters] think this is ill advised. The judge's opinion merely establishes that the original EFH EA was deficient in terms of NEPA standards of analysis. NMFS appears to be bargaining away the public process in an effort to try to satisfy plaintiffs. The commenter recommended that the original EA analysis should be revamped to address NEPA requirements. The relative significance and degree of controversy associated with the action should be no greater than before when an EA was sufficient—the EA analysis just has to be more comprehensive. If the original plan amendment had been rejected on the grounds that it did not meet Magnuson-Stevens Act standards, then perhaps an EIS would be justified, but that was not the case. Further, if a new EA analysis leads to a conclusion that the preferred measures to protect EFH are not adequate (in the original plan, these were status quo measures), and the new measures involve impacts of greater significance or controversy, then the new EA analysis could be expanded into an EIS.

Commenters did not understand why an EIS is required based on a court decision that concluded that the EAs prepared for the EFH amendments were inadequate to determine whether an EIS was necessary. Many stated the following:

> "Nowhere in the decision does the judge conclude that an EIS is necessary."

They further stated that this is reminiscent of the agencies decision to write a new biological opinion with a whole new suite of restrictions instead of simply justifying the restrictions it had in place as requested by the judge (in Greenpeace v. Daley). They asked that the decision to proceed with an EIS be reconsidered.

Several commenters believe that the decision to proceed with an EIS versus an EA may be the direct result of secret talks [with the plaintiffs] and a subversion of the public process. They asked that all confidential negotiations with plaintiffs cease.

Not all comments concerning the type of NEPA document were in opposition to an EIS. Some commenters supported the more detailed analysis that would result by doing an EIS. For example, the Alaska Marine Conservation council stated the following:

> "We look forward to the development of the EFH EIS, and further participation with NMFS in the future."

6.3.5 Council Staff Should Complete the NEPA Process – Not NMFS Staff

Several commenters believed that NMFS staff members were not objective and should not complete the EIS. They suggested that steps should be taken to ensure the objectivity of NMFS staff involved with the development of the EFH EIS. They believed that NMFS' DPSEIS suffers from a failure to incorporate a scientifically balanced assessment of what is known about the effects of trawling off Alaska. The DPSEIS fails to incorporate the best available data and scientific information; this may bode poorly for getting a sound and objective analysis for the EFH action. By the nature of its "programmatic" reach, the baseline in the DPSEIS is supposed to supply a foundation of the best available scientific information for management actions. The recent DPSEIS adopted an approach that is not generally supported by scientific studies or other reviews of the general effects of trawling and, particularly, the effects of trawling off Alaska. Further, the relevance of the scientific baseline adopted for the DPSEIS to trawling off Alaska is very questionable given the relative intensity of trawling, the types of substrates fished, the depths at which trawling occurs, and the specific types of trawl gears (otter trawls) used. The commenters were concerned that a similar unbalanced approach would pervade the development of the EFH EIS.

Consideration should be given to tasking the staff of the Council with the lead role in the preparation of the analysis for this EFH action. The Council staff has great familiarity with the measures already in place to protect EFH, and its staff has expertise in fisheries biology and benthic ecology as it relates to EFH. Furthermore, Council staffers are knowledgeable about competing management objectives and mandates (such as bycatch reduction and sea lion protections) that affect the practicability of further actions to restrict fishing to protect EFH. Last, the Council staff has a proven track record for producing comprehensive and scientifically balanced analyses. They ask that the responsibility for development of the EFH alternatives and analysis be removed from the agency and turned over to Council staff, as has been done in other regions.

The same commenters as above, however, also recommended that NMFS directly involve the agency's scientists who are researching habitat and habitat effects in the analytical team used for this action.

Several commenters recommended that the full involvement of the Council's Science and Statistical Committee in all phases of the development of the EFH EIS and deemed it indispensable.

Another comment was that NMFS should engage a team of objective and allocationally neutral scientists for the preparation of the EFH EIS analysis and the development of management options. They stated that would also be a good way to proceed. Members for such a team could be selected from the list of university researchers who are engaged in the publication of peer-reviewed scientific research on EFH and the effects of fishing thereon.

Many people were concerned regarding the process NMFS will take to develop management alternatives to "minimize, to the extent practicable, effects of fishing gears on EFH."

6.3.6 Consideration of all Other Applicable Laws and Regulations

Several comments emphasized the need for NMFS to consider other appropriate laws when examining mitigation to impacts on EFH. One commenter specifically referred to the E.O. dated May 18, 2001, entitled 'Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution or Use." That EO requires agencies promulgating regulations to prepare a statement of energy effects relating to any action that may have "any adverse effects on energy supply...," for submission to the Office of Management and Budget. The commenter recommended that NMFS prepare this analysis based on the most recent outer continental shelf oil and gas leasing program document.

The EIS must list all existing regulatory controls that are already available to protect essential habitat and explain in detail why EFH regulations do not duplicate each. Existing regulatory mechanisms include the Clean Water Act, Coastal Zone Management Act, Endangered Species Act, and state and local forest practices, mining, and land use laws and regulations. The approach of identifying a broad range of conservation measures to a wide array of fishing and non-fishing activities largely duplicates existing regulatory requirements.

A comment reemphasized that all of the alternatives and the effects of specific recommendations are required to comply with the Regulatory Flexibility Act, as well as NEPA requirements and the FCMA standards for fishery management plans. The FCMA standards require that conservation and management measures be based upon the best scientific information available and, where practicable, minimize costs and avoid unnecessary duplication.

6.3.7 The Completion of the EIS Should Await the Completion of the Interim Regulations

Several commenters stated that completion of the EIS should await revision of the NMFS EFH interim final regulations and guidelines by the new administration. Completing the EFH amendments to the fishery management plans in advance of that reform will likely require revisions to the process later and is likely to lead to further disagreement and confusion. Therefore, we [the commenters] urge NMFS not to proceed further with EFH amendments to FMPs or further implementation of the EFH program until after revised final regulations and guidelines are issued.

6.3.8 Questions on "What is an Adverse Effect?"

Several questions were asked on adverse effects: How is the Council defining an "adverse effect" to a particular type of EFH? What level of short- or long-term loss of these essential habitat components reaches the level of adverse effect? How is the Council's definition of adverse effect consistent with the Magnuson-Stevens Act and implementing regulations? Is the Council's definition sufficiently precautionary in terms of protecting EFH or are there other more protective definitions? Is fishing gear resulting in adverse effects to a particular EFH? If yes, then which EFHs are adversely affected and how so? What are the alternatives available to minimize this adverse effect? Which of these alternatives are practicable to implement? How is the Council determining whether an alternative is practical? How is this approach consistent with the Magnuson-Stevens Act and implementing regulations? If a measure is not presently practicable, would it be practicable if phased in, or implemented to occur at a set date in the future? If a gear may be resulting in an adverse effect to EFH, are there any precautionary measures that can be taken to minimize the risk of potential adverse effects to EFH? What information is necessary to determine the risk of an adverse effect to a particular EFH? When will research provide such information? Can that information ever be obtained? The commenters concluded by stating that clear answers to these questions will promote understanding among interested stakeholders as to the approach the Council has taken to protect EFH, consistent with the requirements of the Magnuson-Stevens Act and the EFH Interim Final Rule.

6.3.9 Economic and Cost Analyses

One commenter stated that the EIS must examine in detail the direct and indirect economic and social effects of EFH description and identification, as well as recommended conservation measures, on non-fishing entities, the fishing industry, and local communities. These effects may include additional delays, requests and costs resulting from EFH consultations. Costs include those borne by federal, state, and local agencies and private applicants required to conduct and/or pay for impact analysis and other requirements for obtaining federal authorization or funding.

Conservation measures must minimize costs and duplication.

The EIS must evaluate in detail the direct and indirect economic and social effects of describing and identifying EFH, as well as the effects of recommended conservation measures on non-fishing entities, the fishing industry, and local communities. These effects may include additional delays, requests, and costs resulting from EFH consultation. Costs include those incurred by federal, state, and local agencies and by private applicants required to conduct and/or pay for impact analysis and other requirements for obtaining federal authorization or funding.

Another comment stated that the Magnuson-Stevens Act and NEPA demand that managers balance economic and social considerations and the benefits of food production to consumers (along with additional considerations for the human environment) against the potential benefits of increased protection of EFH. The problem is how to do this when adverse habitat effects are not demonstrable in our region and scientific findings on effects elsewhere are often highly dependent on how the studies were conducted. Further, linkages between habitat effects and productivity are not established, and economic and social data to assess what is practicable are rather deficient. Some will insist that the potential benefits of protections always outweigh the costs, but this is difficult for our fisheries and is inconsistent with the requirements of the Magnuson-Stevens Act.

NMFS should establish a framework for standards of scientific and any "non-scientific" information that the public may want to insert into the analysis. Define how the concept of "adequate precaution" will be applied to information about the effects of all fishing gears in the analytical process.

Analyze for expected continued utilization to date and apply value (net benefit) to the continued use of identified grounds [protective areas].

6.4 Summary of Suggested Alternatives Included in Scoping Comments

These alternatives were not developed by NMFS or the Council or the EFH EIS Committee established by the Council. Instead, these alternatives or suggestions for features that should be considered when drafting alternatives were recommended to NMFS by the public during the comment period of the scoping process. They do not reflect a decision as to what alternatives would be evaluated in the EFH EIS, but they are suggestions that were considered in the development of those alternatives.

One commenter recommended that the EFH EIS should include the following alternatives:

- Status quo
- No net increase in impacts
- Appropriate gear modifications
- Elimination of high impact gear and transition to lower-impact gear
- Closures to all bottom fishing

One commenter recommended that NMFS develop an alternative in the EFH EIS, similar to Alternative 5 in the DPSEIS, and indicated that NMFS should weigh the potential benefits of increasing gear conversion to pots.

One commenter questioned how the EIS process can adequately evaluate the effects of fishing gear on EFH and minimize, to the extent practicable, the effects of fishing gears on EFH when very little information is currently available, especially on fixed gears. An alternative should be included that specifies that no additional protective measures will be taken until adequate scientific information is available.

One commenter stated that significant issues to consider relative to each alternative should include ecosystem health and diversity, the vulnerability of each HAPC to disturbance, and the socioeconomic impacts to fishing fleets and fishing communities.

One commenter recommended the status quo and suggested using existing alternatives. The commenter stated that the court did not ask that the agency develop an EIS; it asked only that it build a better rationale for what it did in the EA, including the expansion of the analysis to include options that were explored in the past when the Council and NMFS developed the existing set of management measures to protect fish and crab habitat. The commenter called for NMFS to limit alternatives in the analysis to include only exploration of past actions taken by the Council.

NMFS and the Council should reconsider existing closed areas. Currently, approximately 20 percent of the BSAI and GOA fishing grounds is closed to bottom trawling. A reasonable alternative would be to rank the importance of identified EFH and if additional areas are identified, give priority to the areas that are most essential, with a limit not to exceed 20 percent of the fishing grounds.

In order to meet the requirements of NEPA, one commenter strongly urged that NMFS develop a comprehensive conservation alternative in its DPSEIS based on an ecosystem approach to groundfish management. A major component of this alternative should be to examine all major options for protecting EFH. With less than 1 percent of our oceans provided permanent protection, the commenter believed this issue is of paramount importance if we are to achieve the desired balance between marine biodiversity conservation, economically viable fisheries, and thriving coastal communities.

One commenter proposed the following alternatives:

- Implementing a maximum-diameter size limit no greater than 4 inches for all ground gear used in the groundfish fishery on trawl nets.
- Implementing a maximum-diameter size limit no greater than 8 inches for all ground gear used in the groundfish fishery on trawl nets.

One commenter recommended that year-around closure of areas should be considered actions of last resort. Alternatives that include gear-modifications and seasonal closures such as are currently done with salmon and herring “savings areas” should be made as specific as possible. Broad-brush approaches to closing fishing grounds could unnecessarily limit the fishing community’s ability to meet other important management goals such as bycatch avoidance and reduction of interactions with Steller sea lions.

Several commenters recommended a range of alternatives for restricting areas open to trawling from something less restrictive than the current no-trawl areas to an option where trawling is limited to the total of the areas where it currently actually occurs. An adequate experimental design would be incorporated into the measures developed within this range.

For the purpose of managing EFH, one commenter proposed that an alternative incorporate the components of Alternative 5 from the Alaska Groundfish Fisheries DPSEIS. This alternative is specifically designed to "protect and restore EFH and accrue benefits to marine ecosystems, while providing for sustainable groundfish fisheries." The concepts and tools of this alternative could be extended to all FMPs for EFH.

One commenter recommended that NMFS take a reasonably precautionary approach based on a balanced interpretation of the existing scientific information on trawl effects as it applies to Alaska, the current health of groundfish stocks under the status quo management regime, and the proven ability of the current management regime to adjust to new peer-reviewed scientific findings in the future. The less restrictive end of the range of alternatives would incorporate a recognition that a portion of the areas currently closed to trawling for habitat protection and for crab protection are, in all probability, not all made up of substrates that are vulnerable to negative effects from trawling (e.g., parts of Bristol Bay currently included in the Bristol Bay Near shore Closure Area). The habitat protection benefit of this end of the range is that it would beneficially spread trawling over a larger area than currently occurs and thus reduce trawling intensity compared to the status quo. This is based on an interpretation of the scientific information on trawl effects as described above. The underlying principle is the recognition that trawl effects range from no observable effect to an observed effect that varies depending on factors such as type of substrate, degree of ambient natural disturbance, specific type of trawl gear used, and other factors. A decrease in the intensity of trawling in areas open to trawling could further ensure that trawling does not create adverse effects. Likewise, we [the commenters] feel that the more restrictive end of the range we suggest for the analysis is scientifically supportable and adequately precautionary given a reasonable interpretation of the science of effects of trawling as it applies to Alaska.

Table A-3. EFH Scoping Comments and Issue Matrix

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1-01	Because no draft or final EIS was prepared by NMFS before the proposed SEIS, we believe NMFS should first prepare a draft EIS, followed by a final EIS. A SEIS should be preceded by an EIS which has gone through the public review and comment process.																	1	
2-01, 16-02, 22-01	We are concerned that NMFS is conducting a public process at the same time that they are in negotiations with plaintiffs to reach a settlement. This makes us wary of the legitimacy of the scoping process and the analysis that it initiates.																	3	
6-01	Proceed with identifying and protecting both EFH and HAPCs through the EIS process, and involve fishermen and the public generally in the process.																	1	
3-05, 7-06, 9-07, 17-05, 19-09, 20-06	The completion of an SEIS should await revision of the NMFS interim final regulations and guidelines by the new Administration.																	6	
2-01, 16-01, 21-06, 21-07, 22-01, 27-01	The original EA analysis should be revamped to address NEPA requirements; concentrate solely on addressing the NEPA deficiencies in the analysis for its original EFH plan.																	6	
1-02	EFH designations should be evaluated in light of the Presidential Executive Order that requires agencies promulgating regulations to prepare a "Statement of Energy Effects:, relating to any action that may have "any adverse effects on energy supply..." for submission to the Office of Management and Budget (OMB).										1								

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

Comment ID (letter number-comment number)	Comment Summary	Signficant Issues that Suggest Alternative Actions					Significant Issues to be Analyzed in the EIS					Other Issues to be Considered in the EIS			Issues Not Considered in the EIS				
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1-03, 3-01, 17-01, 20-01	Evaluate in detail one or more alternatives that identify and describe EFH based on criteria that limit the extent of EFH to habitat that is a) truly necessary for Council managed fishery species; and b) within the Council's jurisdiction.	4																	
7-01, 8-01, 9-01, 19-02	The SEIS must identify and describe EFH through specific criteria that limits the extent of the program to marine or estuarine environments within the EEZ that are truly essential for fishery species. Each alternative should include explanations of why each area has been identified as EFH.	4	4				4												
2-02, 21-02, 21-08, 22-02	We ask that the responsibility for development the EFH alternatives and analysis be removed from agency and turned over to Council staff.													3					
2-04, 21-01, 22-04	The EFH preferred alternatives should be selected using the National Standards as required under federal law.										3								
4-06	The SEIS should also include existing information on habitat types in the North Pacific and Bering Sea, gear impact assessment from published literature, the status of ecosystem health in the various Gulf, Bering Sea and Aleutian Island regions, and socioeconomic data on industry sectors and fishing communities.											1							
4-07	The SEIS should incorporate the knowledge and experience of both fishermen and local area managers.													1					
21-15	Establish a framework for standards of scientific and any "non-scientific" information that the public may want to insert into the analysis.																	1	

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4-07, 12-02, 13-01, 13-02, 14-06, 15-05, 23-16	The SEIS should establishing a process to ensure that local stakeholders participate fully in the designation and design of management alternatives for EFH and HAPC. The active involvement of coastal community stakeholders is a valuable incentive for identifying protective measures. For decision making to be precautionary, it must be open, informed, and democratic and must include all potentially affected parties, including indirect stakeholders.													7					
23-16	AOC proposes that NMFS and the NPFMC specifically include a precautionary management approach to protecting EFH in both groundfish fishery management plans... Preventative action to protect habitats should be taken in advance of scientific proof of causality; the proponent of an activity, rather than the public, should bear the burden of proof of showing that a fishing practice or gear will not result in environmental harm.	1				1													
3-02, 7-02, 9-02, 17-02, 19-03, 20-02	The SEIS must identify and evaluate all nonfishing activities that may be affected by EFH. Only activities with significant and direct identifiable effects on EFH should fall under scrutiny.						6												
19-04, 20-03	Limit conservation measures recommended for fishing and nonfishing entities to those truly necessary to supplement stipulations already in place under existing local, State and Federal regulatory controls.														2				
8-03	Each SEIS alternative must identify and evaluate in detail all nonfishing activities that are effected by EFH.						1												

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

Comment ID (letter number-comment number)	Comment Summary	Signficant Issues that Suggest Alternative Actions					Significant Issues to be Analyzed in the EIS					Other Issues to be Considered in the EIS			Issues Not Considered in the EIS				
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3-03, 7-03, 8-04, 9-03, 9-05, 17-03, 19-01, 19-05, 20-05	Limit conservation measures recommended for fishing and nonfishing activities to those truly necessary to supplement those already in place under existing regulatory mechanisms… which include the Clean Water Act, Coastal Zone Management Act, Endangered Species Act, and state and local forest practices, mining, agricultural, and land use laws and regulations. The SEIS must list all existing regulatory controls that area already available and explain in detail why EFH regulations do not duplicate each.														9				
19-08	Conservation measures must be based on the best scientific information available while minimizing costs and duplication and include recommendations to increase scientific research/data in support of the fishery management requirements of the Fishery Conservation and Management Act.			1		1													
14-01	In order to meet the requirements of NEPA, we have strongly urged that NMFS develop a comprehensive conservation alternative in its PSEIS based on an ecosystem approach to groundfish management.	1								1									
14-05, 15-04	We recommend that NMFS establish a timely process for identification of a network of marine reserves in the Bering Sea. We would like to give special emphasis to the critical need for protecting pelagic EFH in this network of marine reserves. HAPCs should also be expanded to include pelagic habitats that meet the criteria of ecological importance, sensitivity to degradation, and stress from development.			1	2														

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

Comment ID (letter number-comment number)	Comment Summary	Signficant Issues that Suggest Alternative Actions					Significant Issues to be Analyzed in the EIS					Other Issues to be Considered in the EIS			Issues Not Considered in the EIS				
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14-06	Identify the need for the application of best available science and with meaningful community involvement in the protection and management of EFH (including MPAs).													1					
14-02	We feel it important to recognize that there is strong scientific justification for protecting key EFH in a network of marine reserves.			1		1													
15-06	AMCC feels that the designation of MPAs should be considered both as a means to protect EFH and HAPCs from damaging fishing practices and as a way to sustain commercial fishing.			1															
18-04	Design sanctuaries or refuges as pockets of biological diversity; management plans which sustain and maintain biological diversity; artificial reefs to enhance habitat.			1						1									
23-20	AOC supports the designation of a network of marine refuges that encompass the major representative habitats found in coastal and offshore areas off the North Pacific coast.			1															
23-17	It is essential that the environmental effects of a network of habitat research areas are fully evaluated in this proposed EIS and immediate measures are taken to implement such areas in both groundfish FMPs.			1		1													
25-01	Even though multiple programs will have to be tailored for each local ecosystem, small areas will have to be set aside as nonharvest zones (only subsistence use).			1															1
23-01	NMFS must take an aggressive approach to protect EFH and the marine environment by implementing measures, including no-take marine reserves, area-based gear restrictions, and other gear modifications.			1															

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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19-01, 19-07, 24-01, 24-03	Examine in detail the direct and indirect economic and social effects of EFH designations on Alaska Natives, and specifically ensure conformity with ANCSA section 2(b), which requires maximum participation of Alaska Natives in decision-making affecting their rights and property.										4								
7-05, 9-06, 15-08, 19-08, 21-10, 21-12	Conservation measures must ...include recommendations to increase scientific research/data in support of the fishery management requirements of the Fishery Conservation and Management Act. Incorporate experimental designs and controls into any measures to protect EFH that may flow from a redefinition of EFH, or into any further measures to minimize, to the extent practicable, effects of fishing gear on EFH.			4		6													
12-03	Research is needed to provide significant stock sustainability and abundance benefits for target species. Efforts are needed to improve the available stock assessment, fish habitat and behavior research.												1						
23-05	Where data is limited, the SEIS must evaluate whether that information can be obtained, and how long it may take to obtain necessary information.												1						

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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2-06, 21-09, 22-06	As part of the designation process the agency and Council should give high priority to seeking expert, unbiased advice and initiating research to correctly identify and rank the importance of EFH. Engaging a team of objective and allocationally neutral scientists (NMFS habitat scientists, NPFMC SSC, university researchers) for the preparation of the EFH EIS analysis and the development of management options would be a good way to proceed.													3					
2-05, 21-04, 22-05	We do not support the inclusion of alternatives that do not seek to minimize the potential adverse effects on the human relationship to the resource.								3										
15-02, 21-14	Quantitative thresholds of uncertainty should be implemented that weigh potential economic and ecological costs against present understanding of the effects of fishing on habitat and species diversity.							2											
21-03	The environmental impacts on the "relationship" of humans to their resource must be included in the EIS.								1										
23-03	The environmental effects of [bottom trawling] must be fully analyzed by appropriate experts in the fields of biology, ecology, oceanography, and fisheries biology, according with the requirements of NEPA.							1		1				1					
21-11	Proceed cautiously with the process of considering changes in the existing management regime to protect EFH off Alaska. Poorly conceived measures may actually concentrate fishing effort, possibly creating problems that did not exist before.			1															

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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21-13	Until a better scientific foundation is available, a reasonable and fair standard of precaution should be adopted to evaluate effects of all options an all bottom tending fishing gears.			1				1					1						
21-15	Define how the concept of "adequate precaution" will be applied to information about the effects of all fishing gears in the analytical process.							1											
4-03	the EFH SEIS should include a reasonable range of alternatives including: status quo; no net increase in impacts; appropriate gear modifications; elimination of high impact gear/transition to lower impact gear; and closures to all bottom fishing. a no-action alternative should be considered when there may be evidence of harm caused by an activity.			1															
6-02	Include among the alternatives a wide range of measures to protect specific habitat areas from the damaging effects of fisheries. These would include total closures at one end of the spectrum, to rotating or seasonal closures, to selective use of fishing gear and ways to encourage conversion to less damaging gear or technique, to perhaps just a monitoring program at the other end.			1															
13-03	Consider a spectrum of protective measures including conversion of bottom trawling to lower impact gears where appropriate, limiting areas open to bottom trawling to where their effects on seafloor habitats are minimal, and closures to all bottom fishing in areas carefully selected for their ecological significance.			1															

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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15-10	Alternatives to consider for the protection of EFH are: status quo; gear modification; gear restrictions/ allocations to promote gear conversion; closures to all or a significant amount of bottom fishing; full area closures.			1															
2-10, 21-18, 22-10	Year-around closure of areas should be considered actions of last resort. Alternatives that include gear-modifications and seasonal closures... should be made as specific as possible.			3															
23-01	NMFS must take an aggressive approach to protect EFH and the marine environment by implementing measures, including no-take marine reserves, area-based gear restrictions, and other gear modifications.			1						1									
23-16	A reasonable range of alternatives, including a no-action alternative should be considered when there may be evidence of harm caused by an activity.													1					
2-08, 22-08	Without additional research, will the agency assume that fixed gear has the same impact as trawl gear or that it has no impact at all?... An alternative should be included that specifies no additional protective measures will be taken until adequate scientific information is available.			2		2		2											
21-19	The range of options for the analysis for areas open to trawling should start from something less restrictive than the current no-trawl areas to an option where trawling is limited to the total of the areas where it currently actually occurs. An adequate experimental design would be incorporated into the measures developed within this range.			1															

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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23-19	NMFS and the NPFMC must reexamine its dependence on bottom-tending mobile gears and utilize existing fishing practices that have low-impacts to EFH and the environment. NPFMC should analyze the use of incentives such as allowing exemptions for gear shown not to be detrimental to habitat, and voluntarily switching to low impact gears such as hook-and-line and pots.			1															
2-07, 21-16, 22-07	Limit Alternatives in the analysis to include only exploration of past actions taken by the Council.															3			
4-01	Although this level of discrimination may be more appropriate at the HAPC level, considering habitat categories as an alternative to the existing EFH designation could provide a useful exercise and result in a more meaningful use of the EFH term.	1			1														
11-01	I urge the agency to adopt a definition of EFH that can be backed with good science on the importance of that habitat to a species, and that can be applied to specific geographic locations that are critical to the survival and reproduction of a target species. That definition should not be crafted to include any habitat or geographic location where a species is merely known to occur.	1											1						
21-05	Using fishery dependent CPUE data to define which habitats constitute EFH is inappropriate because areas of high CPUE may reflect regulations, availability, fishable bottom, temporary aggregations, etc. rather than habitat critical to particular life stages.												1						
13-05	Consider the impact of bycatch into the equation as you determine EFH.												1						

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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14-04	We strongly recommend that NMFS recognize U.S. coastal and marine waters in WWF's priority areas for biodiversity conservation in the Bering Sea as essential fish habitats.				1					1									
15-01	EFH designation must incorporate the biological requirement of not only target species, but those of associated species as well, including upper and lower trophic animals.	1								1									
15-07	The designation of EFH should include the identification of a managed species' general distribution and core habitat areas.	1																	
13-04	Habitat alternatives incorporate precautionary management to account for the biological requirements and ecological interactions of all species in a diverse marine community.	1								1									
15-03	AMCC recommends that HAPCs be used as an additional tool for the protection and designation of EFH. HAPCs are areas of significant value based on "ecological importance, sensitivity to human-induced environmental degradation, stress to the habitat from development activities, and rarity of the habitat."			1						1									
24-01	I am requesting HAPCs because of proposed and existing activities pose a threat to the existing fisheries in Knik, AK.			1															
23-18	FMPs should identify HAPC within EFH for all managed species. One approach the NPFMC can take is to designate, as HAPCs, those areas within a species' EFH that have historically contained the highest abundance levels of a particular stock.			1															

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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16-03	Any recommendations or alternatives that are developed without first reviewing the existing management and extensive scallop observer data would be flawed.											1							
16-04	We are concerned that you will not review the thesis of Teresa Turk (MS, University of Washington 2000).												1						
18-01	EFH regulations must be very precise in definition to include affects on all stages of life history of fish biological diversity.	1																	
2-09, 21-17, 22-09	Rank the importance of designated EFH, and if additional areas are identified, priority should be given to the areas that are most essential, with a limit not to exceed 20% of the fishing grounds.	3																	
23-02	Existing EFH designations should not be significantly modified - unless the best scientific information available supports such a modification.	1										1							
18-02	Provide protection for nurseries and rearing grounds; spawning beds; prime feeding areas; upland tributaries; estuaries; kelp beds; geologic formations which create upwelling of nutrients; littoral and supralittoral zones of the shore where forage fish, mollusks, crustaceans etc. spawn critical food web components.	1								1									
18-03	Provide protection from: chemical, physical, and biological alteration of water quality.	1																	
23-06	Gear assessment must include full analysis of the direct, indirect and cumulative adverse effects of physical disturbances, biological disturbances, and chemical disturbances.							1						1					

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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		Criteria for Description and Identification of EFH	Suggested Alternative for Salmon EFH	Mitigation Measures to Minimize the Adverse Effects of Fishing on EFH	HAPC	Scientific Information, Research, and Uncertainty	Effects on Non-fishing Interests of EFH Description and Identification	Effects of Fishing on EFH and Mitigation Measures	Economics/ Socioeconomics	Ecosystem, Wildlife and Other Non-targeted Marine Species	Regulatory Compliance	General Comments	Scientific Information/Research	NEPA Document and Process	Regulatory Compliance and Duplication	General Comments	Scientific Information/Research	NEPA Document and Process	Economics/ Socioeconomics
24-02	"I request status quo on any redesignation of lesser protection (EFH) until the impacts of such action can be considered, to the social, economic and environmental to my community of Knik."																		1
4-04	Significant issues to consider relative to each alternative should include the ecosystem health and diversity, the vulnerability of each HAPC to disturbance, and the socioeconomic impacts to fishing fleets and fishing communities.							1	1	1		1							
4-02	In categorizing habitat and identifying HAPC, we believe the following factors need to be taken into consideration: vulnerability or resilience to disturbance; ecological function; and rarity or uniqueness.				1														
4-05	HAPC areas should be designed to accomplish clearly defined habitat objectives with the least disruption to local fishing fleets.				1														
4-08	We recommend that the Agency consider officially designating the Southeast trawl closure area and Sitka Pinnacles as MPAs or HAPC, as appropriate.			1	1														
5-01	For purposes of mitigation identify all areas that are currently closed to trawling... to be analyzed by depth and environment.			1															
15-12	Observer coverage could be modified to more closely monitor habitat identification.																1		
15-09	Mitigation of the effects of fishing gear should include habitat restoration and protection.			1															
2-11, 21-19, 22-11	Alternatives should be designed to minimize reallocative gains to existing participants.								3										

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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12-01	The trawl fleet needs to be reduced and more reasonably controlled. A reduction in larger, more powerful vessels should be targeted. Protective measures to convert bottom trawling to lower impact gears to lessen the footprint on the ecosystem.			1						1									
15-11	AMCC recommends that an alternative in the EFH EIS should weigh the potential benefits of increasing gear conversion to pots. This may alleviate some unintended increases of the bycatch of HAPC biota as predicted with longline gear.			1															
15-13	It is important to delineate between various gear types and intensity of effort. This includes consideration of the degrees of impact within a gear type and the impact between different gear types.							1											
23-19	AOC proposes that NMFS and the NPFMC evaluate and implement a maximum diameter size limit on rockhopper and rollergear in the groundfisheries for the purpose of preventing trawling in the most complex habitats.			1															
23-04	We urge NMFS and the NPFMC to include a full analysis of the effects of fishing on EFH and the environment and not rely heavily on prior EFH analyses and NEPA analyses… This assessment must include a full and objective analysis of both environmental and EFH impacts for each gear used in these fisheries and must be based on the best scientific information available.													1					
8-06	Where activities adversely affect EFH, the SEIS must define recommended conservation measures necessary to address and mitigate the impacts.											1							
23-11	What are the alternatives available to minimize this adverse effect?											1							

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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23-12	Which of these alternatives are "practicable" to implement? How is the Council determining whether an alternative is "practical?" How is this approach consistent with the Magnuson-Stevens Act and implementing regulations?											1							
23-13	If a measure is not presently practicable, would it be practicable if phased in, or implemented to occur at a set date in the future?											1							
23-14, 23-15	If a gear may be resulting in an adverse effect to EFH, are there any precautionary measures that can be taken to minimize the risk of potential adverse effects to EFH? When will research provide such information?					1						1							
2-03, 22-03	HSCC does not support the inclusion of any EFH alternatives in which zero-risk is a goal or in which the fishery is assumed to cause adverse impacts unless it can be proven otherwise.	2																	
12-04	Sea lions are linked to a stable and growing herring stock. All efforts must be quickly organized to sustain and enhance this vital link of the ocean ecosystem of the Gulf of Alaska and Bering Sea.									1									
25-02	"The type of program I was looking at was kelp and herring restoration as a starting point."									1									

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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3-04, 7-04, 8-05, 9-04, 17-04, 19-06, 20-04	Evaluate in detail the direct and indirect economic and social effects on nonfishing entities, including small entities and local communities, of the designation of EFH, activities that adversely affect EFH, and recommended conservation measures. These impacts must include the cost of using consultants to meet EFH consultation requirements. It must also include the cost of processing and approval delays, and costs to federal, state and local agencies, as well as private applicants.						7		7										
5-02	Overlay all foreign fishing data for longlining and trawling (1965-1988) onto the matrix of current fishing areas of the Americanized fisheries.												1						
5-03	Analyze the impact that foreign longlining and trawling had on all identified EFH and HAPC in the Gulf of Alaska and Bering Sea/Aleutian Islands. Factor for gear size that was not under development for bycatch avoidance and unobserved data for both catch rates and area of operation.												1						
5-04	Analyze for expectable continued "utilization" year to date and apply value for the continued usage of all the identified grounds.												1						
5-05	Please place into the scoping comments for EFH SEIS the testimony of Senator Frank Murkowski read into the Congressional Record May 4, 2001.											1							
5-06	Also place the five part series "Environment, Inc." beginning April 22, 2001 in the Sacramento Bee, written by T. Knudson.											1							

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23-08	It is imperative that the assessment includes conclusions as to the spatial extent and level and type of disturbance occurring throughout state and federal waters and in each particular EFH.											1							
23-09	How is the council defining an "adverse effect"? How is the Council's definition consistent with the Magnuson-Stevens Act and implementing regulations?							1											
23-10	Is a fishing gear resulting in "adverse effects" to a particular EFH? If yes, then which EFHs are adversely affected and how so?											1							
24-04	Request you incorporate into FMP these dioxin studies: Trace amounts of dioxin readily enter the food chain, and area hazardous to human consumption (EPA water office). Interim report on data and methods for assessment for 2,3,7,8 Tetraclorodibenzo-P dioxin risks to aquatic organisms and associated wildlife (EPA Office of Research and Development). Human health risk report (National Technical Information Service Center, DOC).																1		
24-05	"I am requesting your cooperation in coordinating an assessment for Knik incinerator and Entech incinerator."															1			
24-07	"Suggest you put in FMP that responsibility for assessment lies with facility operator to get assessment."															1			
24-08	"Request a means to access fines for fertilizer and oil spills and pipelines discharges in FMP."															1			

Table A-3. EFH Scoping Comments and Issue Matrix (continued)

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10-1	Well designed and enforced EFH areas and refugia will result in a long-term increase of sustainable catch and allow populations to rebound after being subjected to stress.							1											
14-03	The EFH EIS should look closely at the effects of bottom trawling on crab habitat.							1											
27-02	There is insufficient scientific data available for the preparation of an EIS.												1	1					
27-03	The EIS process will invite attempts to reallocate the resources among participants in the fisheries.								1										
27-04	Fish stocks are currently in good condition. Any fishing impacts occurred long ago. There are no noticeable ongoing impacts.						1												
	Total Unique Comments	15	1	30	6	7	5	11	6	13	3	13	11	10	2	4	2	6	2
	Total Comments	24	4	36	7	13	19	13	16	13	8	13	11	20	11	6	2	18	2