

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver *CO*  
Executive Director

DATE: November 27, 2006

SUBJECT: Receive report on summary of comments for EIS

ESTIMATED TIME 8 HOURS (for all D-1 items)
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**ACTION REQUIRED**

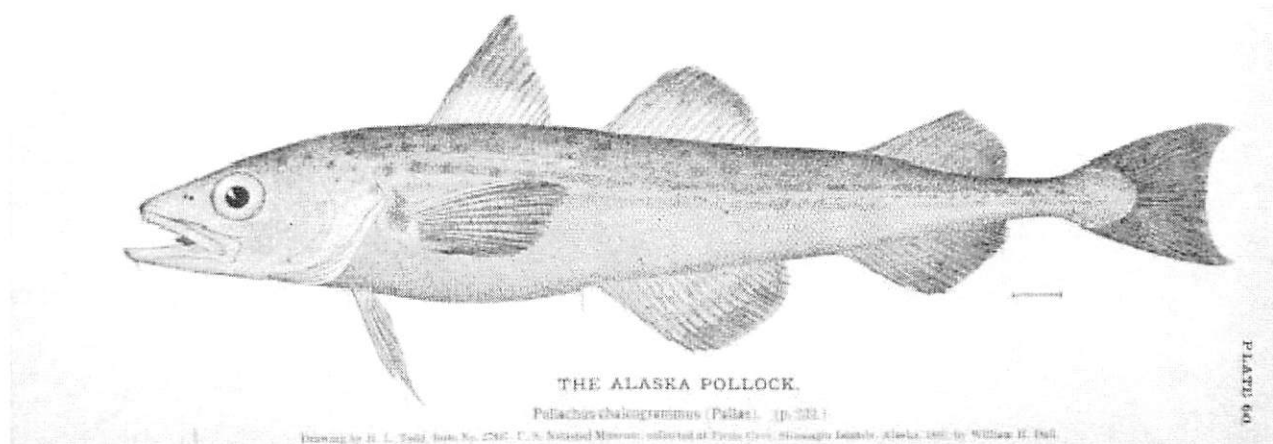
Receive report on summary of comments for Alaska Groundfish Harvest Specifications DEIS for BSAI and GOA groundfish fisheries

**BACKGROUND**

In September 2006, the National Marine Fisheries Service (NMFS) issued the Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement (DEIS). This DEIS provided an evaluation of the environmental, social and economic effects of alternative harvest strategies. The DEIS is intended to serve as the central decision-making document for management measures developed by NMFS and the Council to implement provisions of the proposed action.

In conformance with NEPA requirements, NMFS solicited public comment on the DEIS. This comment period closed October 26, 2006. The draft Comment Analysis Report (CAR) provides the public comments received during this comment period, summarizes the comments, and presents the agency's response. The CAR provides this information prior to the publication of the Final EIS and is also used as a tool by EIS authors to revise the EIS and respond to each statement of concern. The CAR was mailed to you on November 17<sup>th</sup>. Dr. Ben Muse (NMFS) will provide an overview of the CAR at this meeting.

# Alaska Groundfish Harvest Specifications Environmental Impact Statement Draft Comment Analysis Report



**United States Department of Commerce**

National Oceanic and Atmospheric Administration  
National Marine Fisheries Service, Alaska Region

**November 2006**

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# Introduction

In September 2006, the National Marine Fisheries Service (NMFS) issued the *Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement* (DEIS). This DEIS provides decision-makers and the public with an evaluation of the environmental, social, and economic effects of alternative harvest strategies. The DEIS is intended to serve as the central decision-making document for management measures developed by the NMFS and the North Pacific Fishery Management Council (Council) to implement the provisions of the proposed action. NMFS decided to prepare an EIS under the provisions of 40 CFR 1501.3(b) in order to assist agency planning and decision-making.

In conformance with the National Environmental Policy Act (NEPA) requirements, NMFS solicited public comment on the DEIS. NMFS accepted public comments on the DEIS during the 45-day public comment period from September 8 to October 23, 2006. NMFS received five letters of comment.

This draft Comment Analysis Report (CAR) provides the public comments received during the comment period, summarizes them, and presents the agency's response. This CAR provides this information to the decision-makers prior to the publication of the final EIS. This CAR is also a tool for the EIS authors to revise the EIS and respond to each statement of concern. Changes to the EIS from draft to final as a result of public comment are noted in this report.

## The Role of Public Comment

NEPA is a procedural law intended to facilitate better government decisions concerning the management of our lands and oceans. The law has an environmental emphasis. Drafters of the law believed that by requiring a process designed to provide decision makers with the best information available about a proposed action and its various alternatives, fewer adverse environmental impacts would occur. NEPA does not dictate protection of the environment, but instead assumes that common sense and good judgment, based on a thorough analysis of impacts of various alternatives, will result in the development of the Nation's resources in a way that minimizes adverse impacts to our environment. This is achieved by requiring an open public process whereby the responsible government agency, combined with the stakeholders associated with a particular natural resource and development project, pull together and present relevant information for use in making decisions.

## What is the Response to Public Comments?

NEPA requires government agencies to include in a Final EIS all the comments received on the Draft. The Final EIS must include responses to the comments, and must describe any changes made to the DEIS as a result of those comments.

According to the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR §1503.4), an agency preparing a final EIS shall assess and consider comments both individually and collectively and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses include the following:

1. Modify alternatives including the proposed action.
2. Develop and evaluate alternatives not previously given serious consideration by the agency.
3. Supplement, improve, or modify its analysis.
4. Make factual corrections.
5. Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

NMFS has undertaken a careful and deliberate approach to ensure that all substantive public comments are reviewed, considered, and responded to. This CAR also serves as an intermediate document that will inform NMFS, the Council, and the public of the issues that need to be addressed in the final EIS. This CAR will become Chapter 14 in the final EIS.

### **Analysis of Public Comments**

The analysis of public comment on the DEIS was a multi-stage process that included reviewing and summarizing the comments within each submission, preparing responses, and reviewing the responses. The process is explained in detail below.

The NMFS Alaska Region staff copied and logged all incoming comments, maintaining a comprehensive list of all public comments. Staff assigned each letter or email a unique submission ID#. Each submission was reviewed by the preparers. The preparers divided each submission by its individual comments, each of which was assigned a Comment ID#. The goal was to capture each sentence and paragraph in a comment letter containing substantive content pertinent to the DEIS. Substantive content included assertions, suggested alternatives or actions, data, background information or clarifications relating to the DEIS document or its preparation. Within the five letters received by NMFS, the preparers identified 53 specific substantive comments. The preparers then wrote the response for each comment within the submission.

The comment letters and summaries and responses are presented in this report in the order in which they were received. During the process of identifying statements of concern, all comments were treated equally. The emphasis is on the content of the comments. They were not weighted by organizational affiliation or other status of commenters. No effort has been made to tabulate the number of people for or against a specific aspect of the DEIS. In the interests of producing a final EIS that both meets the mission of NMFS and best serves all stakeholders, all comments will be considered equally on their merits.

### **Quality Control and Review**

All comments and responses were reviewed by the preparers and NOAA General Counsel-Alaska Region. Additionally, various procedures were established in the analysis process to prevent a submission or comment from being inadvertently omitted. Communication and cross-checking between the submissions and the comments has ensured that all submissions received during the comment period are included in the report.

# Response to Comments

## **Response to Christine Reichgott, Manager, NEPA Review Unit, Environmental Protection Agency (EPA)**

**Comment 1.** EPA assigned a rating of EC-2 (Environmental Concerns – Insufficient Information) to the DEIS.

**Response:** NMFS acknowledges the comment.

**Comment 2.** EPA is concerned with the impacts of the preferred alternative on stocks approaching their minimum stock size threshold (MSST); Pacific ocean perch, Pacific cod, sablefish, and Greenland turbot in the Bering Sea and Aleutian Islands (BSAI), and pollock, sablefish, and Pacific ocean perch in the Gulf of Alaska (GOA).

**Response:** These stocks are not approaching their MSST and are not identified as such in the DEIS. We assume EPA misinterpreted Figures 4-1 and 4-2, on pages 4-4 and 4-5. These figures show all but one of these stocks to be above their  $B_{MSY}$ ; the remaining stock is close to  $B_{MSY}$ .  $B_{MSY}$  is the biomass level associated with producing a maximum sustainable yield over the long term. MSST is equal to one half of the  $B_{MSY}$ . Therefore, the biomass of each of these stocks is approximately double the MSST specified for that stock. NMFS will add clarifying language to the figures and associated text in the final EIS to avoid confusion.

**Comment 3.** The DEIS states that it is currently impossible to evaluate the status of stocks in tiers 4 through 6 with respect to MSST, and expresses concerns about the inability to determine MSST for tiers 4 to 6. In the absence of MSST estimates, it is impossible to evaluate the roles of genetic structure and reproductive success in meeting MSST.

**Response:** Species are assigned to tiers 4, 5, and 6 when information that would make it possible to assign these species to a lower-numbered tier is unavailable. Evaluation of stock status with respect to the MSST requires reliable point estimates of the biomass, information to estimate an equilibrium level of spawners per recruit (SPR), and estimates of recruitment. This is, by definition, unavailable for tiers 4, 5, and 6, thus MSST cannot be calculated for these stocks. For non-rockfish species in these tiers, compliance with OFL constraints was used as an indicator of success in protecting genetic integrity and reproductive success. Additional sources of information were used to evaluate rockfish, given the special concerns with these species (DEIS, pages 4-17 to 4-22).

Limited information is available for species in tiers 4, 5, and 6. However, the management approach for the species in these tiers includes numerous precautionary elements. Species are assigned to tier 4 when reliable point estimates of current biomass ( $B$ ),  $F_{35\%}$ , and  $F_{40\%}$  are available<sup>1</sup>. In tier 4,  $F_{ABC}$  ( $F$  at the acceptable biological catch (ABC) rate) is set less than or equal to  $F_{40\%}$ . In this case, the upper end of the

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<sup>1</sup>  $F$  stands for the fishing mortality rate for a stock (a ratio between fishing mortality and biomass size). Fishing mortality includes both retained and discarded catch.



range of acceptable target fishing rates is set below the rate associated with the overfishing level (OFL,  $F_{35\%}$ ). Moreover, the ABC based on  $F_{40\%}$  is an upper limit to the range of acceptable catches, and is not applied automatically. Analysts, the plan teams, and the Scientific and Statistical Committee (SSC) evaluate other available evidence and considerations for each species or species complex, and may recommend that the ABC be set below the maximum possible ABC.

Species are assigned to tier 5 when only reliable point estimates of  $B$ , and natural mortality ( $M$ ) are available. The OFL is equal to  $M \times B$ , while the maximum permissible ABC is set equal to  $0.75 \times M \times B$ . These fishing mortalities are precautionary in that they are often at least 25 percent below an equivalent  $F_{40\%}$  value because in most tier 3 species,  $F_{40\%}$  is near natural mortality. As noted above, the calculated ABC is the maximum permissible ABC, that is, the largest that may be adopted. Assessment authors, plan teams, and the SSC review the projections for each species, and retain the option of recommending an actual ABC that falls below the maximum permissible ABC, to take account of special species- or year-specific considerations.

Only three species or species complexes fell in tier 6 in 2006; BSAI squid, GOA Atka mackerel, and the GOA deep water flatfish complex, not including Dover sole. The biology for BSAI squid does not lend itself to SPR related biomass and fishing rate determinations. The GOA Atka mackerel fishery is treated as an incidental catch fishery. In the past, ABCs have been set below the maximum permissible ABC. More recently, higher ABCs have been combined with low total allowable catches (TACs). For example, in 2006, the ABC was set at its maximum permissible level, 4,700 mt, but the SSC recommended a 1,500 mt TAC, which was adopted by the Council. In both cases, the Council acted more conservatively than warranted by the tier system, to take account of uncertainties about the species and to address an ecological concern (potential impacts on Steller sea lions). The deep water flatfish catches are routinely constrained by halibut prohibited species catch (PSC) limits, and are normally far below the ABC (for example, in 2005 the ABC was 6,820 mt and the catch was 406 mt). GOA "other species" (shark, octopus, sculpin and squid) fell outside the tier system in 2006. The Council controls harvest of these species with a TAC that was set equal to five percent of the sum of other target TACs in the GOA. In 2006, Amendment 69 to the GOA FMP was approved and implemented. Amendment 69 allowed the Council to set this TAC less than or equal to five percent.

The precautionary elements for tier 4 and 5 species were described briefly in the DEIS on pages 4-5 and 4-16. The final EIS will be revised to incorporate additional detail reflected in this response.

**Comment 4. EPA believes that the considerations noted in comment 3 are a particular concern for tier 5 rockfish.**

**Response:** As noted in the response to Comment 3, limited information is available for species in tiers 4, 5, and 6. However, as noted, the tier system for these species incorporates precautionary elements. As discussed in the Section 4.1.2 of the DEIS, when calculating the OFL and ABC for tier 5 rockfish, the highly variable biomass estimates used for the tier 5 survey-based models are stabilized by using a three-year moving average. Maximum permissible ABC is equal to  $0.75 \times M \times B$ . As noted, these fishing mortalities are precautionary in that they are often at least 25 percent below what an equivalent  $F_{40\%}$  value might be because in tier 3 rockfish,  $F_{40\%}$  is slightly greater than natural mortality (DEIS, page 4-16). Moreover, the values of  $M$  used in tier 5 are believed to be conservative (0.02 to 0.07), since they are based on the maximum observed ages for the rockfish species (71 FR 10894; March 3, 2006). Again, as noted above, the Council retains the option of setting actual ABC or TAC below the maximum permissible ABC calculated through the tier system.

Although the comment focuses on tier 5 rockfish, similar considerations apply to tiers 4 and 6. Sufficient research has been performed on rockfish stocks so that none of them fall in tier 6. In tier 4,  $F_{ABC}$  is less than or equal to  $F_{40\%}$ . There has been no evidence that Alaskan rockfish need to have a more conservative SPR fishing rate than other species (although Goodman et al. argued that this might be appropriate, based on less productive West Coast rockfish). The fishing mortality derived from an  $F_{40\%}$  strategy is much lower for rockfish with their sensitive life history characteristics than the fishing mortalities derived from the same harvest strategy for other species. This is due to the late maturity, slow growth, and low natural mortality of rockfish. For example, the fishing mortality rate for rougheye rockfish is about one tenth the fishing mortality rate for Pacific cod. Several analyses for Pacific ocean perch (a tier 3 species) show  $F_{40\%}$  to be relatively conservative for that species. Moreover, the ABC based on  $F_{40\%}$  is an upper limit to the range of acceptable catches, and is not applied automatically. Analysts, the plan teams, and the SSC evaluate other available evidence and considerations for each species or species complex, and may recommend that the ABC be set below the maximum possible ABC. Using GOA demersal shelf rockfish (DSR) as an example, in 2005 an  $F=0.02$  was adopted for 2006, in preference to an  $F_{40\%}$  value of 0.026, out of consideration for stock vulnerabilities (Council 2005a, page 26).

The precautionary elements for rockfish in higher tier species were described briefly in the DEIS at pages 4-5 and 4-16. The final EIS will be revised to incorporate additional detail reflected in this response.

**Comment 5. EPA recommends that a more protective alternative be selected than the status quo (Alternative 2) to provide additional protection to those stocks where information is lacking such as those in tiers 4 through 6 and those stocks whose biomass is approaching MSST.**

**Response:** NMFS acknowledges the comment and notes that no stocks are approaching MSST (see response to EPA's comment 2). The responses to EPA's comments 3 and 4 discuss the precautionary elements incorporated into the determination of ABCs for species in tiers 4, 5, and 6.

**Comment 6. The DEIS does not discuss the actions taken to assure that low income and minority communities had an opportunity to provide meaningful input into the decisions being made about the proposed action.**

**Response:** NMFS disagrees. NMFS has involved tribal governments and local communities in the development of the EIS. The DEIS discusses and documents the many actions taken to involve low income and minority communities in the decision-making process, both through the NEPA process and through the Council process. Chapter 1 of the DEIS contains a thorough description of the scoping process. NMFS took extra steps to involve Alaskan communities in the EIS process beyond publishing the notice of intent in the *Federal Register*, issuing press releases, and creating an EIS web page on the NMFS Alaska Region web page at [www.fakr.noaa.gov](http://www.fakr.noaa.gov). NMFS sent letters to 114 tribal governments providing information about the EIS and soliciting consultation and coordination with interested tribal governments. These 114 tribal governments represent the communities neighboring the Bering Sea, Aleutian Islands, and Gulf of Alaska. Of the nine comments received during scoping, all but one was from an Alaskan community. Letters were received from the tribal governments of Gambell, Saint George, Saint Paul, and Ouzinkie. These letters were included in the Scoping Report provided to the Council in June 2006 and posted on the EIS web page.

The input from Alaskan communities was used in the decisions that were made regarding the proposed action. As discussed in Chapters 1 and 2 of the DEIS, the comment letters were instrumental in the development of Alternative 4. As identified in Chapter 1, section 1.5.2, the comments received during scoping identified many of the key environmental and social issues analyzed in the DEIS, including impacts on marine mammals, subsistence, environmental justice, and food web interactions. When NMFS and the Council identified the preferred alternative, they based their decision on the range of alternatives and the analysis of environmental consequences in the DEIS that were shaped in part by the comments received from individuals and tribal government representatives in Alaska.

The final EIS will document that, after the publication of the DEIS, NMFS sent letters to the same 114 tribal governments informing them that the DEIS was available and providing instructions on how to request a copy. NMFS posted an EIS request form on the EIS web page so that a person anywhere in the world could request a hard copy of the DEIS and final EIS. Additionally, the entire DEIS was posted on the internet and available for download. As documented in Chapter 14, NMFS sent hardcopies of the DEIS to 17 public libraries in Alaska, including libraries in Unalaska, Saint Paul, Kodiak, and Homer. NMFS also sent hard copies of the DEIS to individuals and tribal organizations in 13 Alaskan communities with low income and minority populations, including Saint Paul, Saint George, Ouzinkie, Gambell, and Unalaska. Additionally, the newspaper the *Kodiak Daily Mirror*, interviewed the EIS project leader, Ben Muse, and published an article on the DEIS.

Chapter 1, in section 1.5.3, explains the public participation in the annual harvest specifications process. This section provides interested members of the public with an understanding of the Council's specification process so that they can participate annually in that public process. As explained in this section, public involvement occurs at a number of stages during the annual specifications process. Additionally, at the October 2006 Council meeting in Dutch Harbor/Unalaska, the Council reviewed the DEIS and unanimously recommended Alternative 2 as the preferred alternative. An Alaska native representative has a seat on the Council.

The DEIS is readable, well organized, a manageable size, and focuses on the important issues. This is a point made by review comments from the EPA and the North Pacific Fishery Management Council (see the following comments). Because of this attention to making the document reader-friendly, and because of its ready availability over the web, NMFS is not currently planning to produce additional supplementary materials.

## **Response to Chris Oliver, Executive Director, North Pacific Fishery Management Council**

**Comment 1.** Alternative 2 represents the best harvest strategy for management of the groundfish fisheries. It provides maximum flexibility for the Council to set harvest levels to account for the most recent scientific information. The DEIS analysis also demonstrates that the Alternative 2 harvest strategy does not result in overfishing or overfished fisheries, nor in adverse effects to the environment.

**Response:** NMFS acknowledges the comment.

**Comment 2.** The authors produced a very readable and well structured document with stand-alone chapters and tables in each chapter that contain brief and useful summaries of anticipated impacts under the different alternatives.

**Response:** NMFS acknowledges the comment.

**Comment 3.** The authors have been responsive to previous SSC comments, in particular the inclusion of an appendix that details the projection methodology and efforts to compute confidence bounds for estimates of gross revenues. However, including a discussion of unsuccessful efforts to compute such confidence intervals in the DEIS may be premature. Estimates of gross revenue are not a very useful measure of revenue without cost information.

**Response:** This comment refers to a section in Appendix F that discusses efforts to use Monte Carlo simulations to prepare confidence intervals for gross revenue projections. Problems identified in the simulation approach, and discussed in the appendix, prevented NMFS from using this method. NMFS agrees that this discussion is premature, and will take it out of Appendix F in the final EIS. NMFS agrees that net revenue estimates, taking account of cost information, would be preferable over the use of gross revenue estimates. However, NMFS believes that the gross revenues estimates do have value as an index of impacts, and notes that the use of gross revenues information is a common methodology in the Alaska Region.

**Comment 4.** Sections on “reasonable foreseeable future actions” within each chapter repeat much of the same information and the authors may wish to consider combining the discussion of “reasonable foreseeable future actions” and their impacts on the different components of the ecosystem into a single chapter.

**Response:** Discussions of “reasonably foreseeable future actions” have been included to provide the reader with an understanding of the changes in the impacts of the alternatives on each resource component when we take into account the reasonable foreseeable future actions. The discussions relevant to each resource component have been included in each chapter (1) to help each chapter stand alone as a self-contained analysis, for the convenience of the reader, and (2) as a methodological tool to ensure that the threads of each discussion for each resource component remain distinct, and do not become confused. Because of the potential interest of the forecasts, a summary of the reasonably foreseeable future actions has been included as a stand-alone section in Chapter 3. NMFS recognizes that this inevitably introduces

repetition into the document. NMFS believes that the benefits of this organization outweigh the costs. In light of this comment from the Council, NMFS has reviewed the reasonably foreseeable future action sections in the document. In the final EIS, NMFS will make edits to Chapter 12 on social and economic impacts to remove unnecessary duplication.

**Comment 5.** Add a single summary table at the beginning of each chapter that indicates for each component examined in the chapter and for each alternative whether anticipated impacts are unknown, of no concern, or of potential concern.

**Response:** One-table summaries exist for some chapters in the DEIS, but not for all. NMFS agrees to add a single summary table to each chapter of the final EIS. These tables will provide a quick reference to key issues of concern and to important unknown impacts. These tables will be highly aggregated quick reference tables, organized by resource component and alternative.

**Comment 6.** In the Executive Summary, remove the strong statement on Page v under Essential Fish Habitat, "...the assessment concludes no action is needed to further conserve EFH". This determination cannot be made based on this DEIS.

**Response:** NMFS agrees and will modify the Essential Fish Habitat section of the Executive Summary to coincide with the Essential Fish Habitat assessment in Chapter 10. The new sentence will read "Due to the numerous existing and proposed actions to protect habitat, this EFH assessment concludes that no additional mitigation measures are needed at this time with this action."

**Comment 7.** In Chapter 7, drop the decimal points in Table 7-2 because they suggest unreasonable precision or may be in error.

**Response:** NMFS checked the accuracy of the numbers in Table 7-2 and will modify this table in the final EIS by deleting the decimal points.

**Comment 8.** In Chapter 13, move the clarification from footnote 33 to the text of the large contradiction between the first paragraph on page 13-6 and the numbers of unemployed Akutan residents in Table 13-2.

**Response:** NMFS agrees and will make this change in Chapter 13 of the final EIS.

**Comment 9.** In Chapter 9, consider separating the discussion of albatross from those of shearwaters because albatross are much rarer and have a very different life history and life expectancy. For example, on page 9-5 it is stated that the takes of other albatross and shearwaters are less than 1 percent of the populations at risk. A take of one percent of the albatross population may reflect a substantial increase in total mortality of these species, which may experience natural mortality rates on the order of 5 to 10 percent.

**Response:** NMFS agrees. NMFS initially grouped the short-tailed albatross separately because of its extremely small population numbers and listing under the Endangered Species Act (ESA). NMFS initially grouped other albatross and shearwaters together since the different species are migratory birds, breeding outside of the action area. However, albatross numbers and conservation concerns differ from those associated with shearwaters. The populations of the two shearwater species are on the order of 20

and 30 million birds (NMFS 2005). The populations of the two albatross species are much lower. The population of the Black-footed albatross may be 300,000, while the population of the Laysan albatross may be 2.4 million (NMFS 2005). Moreover, while neither albatross species is listed under the ESA, conservation concerns have been identified for both species. NMFS will therefore revise Chapter 9 in the final EIS to provide separate discussions for “other albatrosses” and “shearwaters.”

**Comment 10.** In Chapter 9, modify the sentence in the first paragraph under ‘Incidental take’ on page 9-4, to read “average *annual* longline bycatch” instead of “average longline bycatch”

**Response:** NMFS agrees and will make this change in the final EIS.

## **Response to Shirley Marquardt, Mayor, City of Unalaska**

**Comment 1.** Utilize the best available science in the process of setting the BSAI Pacific cod TAC. BSAI Pacific cod abundance may be far greater than estimated by the model because empirical data suggest that the catch per unit effort numbers are in significant conflict with the stock assessment model. Conduct a peer review of the Pacific cod stock assessment model. Use all of the data in the 42 archival Pacific cod tags collected in the summer groundfish survey in the specification process.

**Response:** The DEIS assumes that under the Alternative 2 harvest strategy, which is the preferred alternative, the Council will recommend a BSAI Pacific cod TAC equal to ABC minus a three percent deduction for a new State waters Pacific cod fishery. The DEIS projects declining TACs in 2007 and 2008 under the preferred alternative, because ABCs are expected to decline over that period, and constrain potential TACs. Large ABC declines were anticipated for Pacific cod in the 2005 BSAI Stock Assessment and Fishery Evaluation Report (SAFE) in November 2005.

The Pacific cod stock assessment model has historically estimated a higher biomass of Pacific cod than that estimated from bottom trawl surveys. This has been a source of concern and is one of the reasons the Alaska Fisheries Science Center (AFSC) initiated tagging studies of cod to better understand their spatial movements and off-bottom distribution. The initial results from these studies are promising and provide more confidence that the model estimates of biomass on which the ABCs are presently based are more appropriate than an ABC that is based on the survey biomass alone. The AFSC is analyzing the information from these tags to better understand the movement patterns of cod. However, these analyses are time-consuming and require validation before scientists can be confident that they are correctly estimating the off-bottom distances of cod. As noted, the tagging data seen to date are useful and will give the plan teams and SSC more confidence in using the stock assessment model's higher estimate of biomass on which to base the ABC instead of the survey biomass. The model currently estimates a survey selectivity of much less than 100 percent for large portions of the size range of cod. The AFSC is working as hard as it can to get the tagging information analyzed in a way that can provide useful and reliable estimates. At the time of the September 2006 Joint Plan Team meetings, scientists had made progress on developing a methodology for evaluating the tag data, and on reading and compiling the data contained in the tags. The analysis, however, was not complete, and AFSC scientists indicated that there might be insufficient time to process all tag data and apply the proposed methodology to this year's Pacific cod assessment. Until this analysis is completed, it is not clear whether the model needs revision, and it is not clear what the nature of the revision must be. The existing Pacific cod models, which were used in the preparation of the DEIS, remain the best available scientific information. NMFS will revise Section 4.1 of the final EIS to incorporate additional detail reflected in this response.

**Comment 2.** The City of Unalaska is very concerned about the proposed 45 percent reduction in the BSAI Pacific cod TACs over the 2007 and 2008 fishing seasons.

**Response:** NMFS notes this concern. The projected TAC reduction under Alternative 2 between 2006 and 2008 appears to be 37 percent rather than 45 percent; however, in either case the change is large. As noted above, the TAC reductions are driven by projections of decreasing ABCs over this time period. The Alternative 2 harvest strategy, the preferred alternative, bases the Pacific cod projection on the assumption that the Council will chose to recommend a Pacific cod TAC equal to the difference

between the ABC and a small amount of Pacific cod set aside for a state waters Pacific cod fishery. Under the FMPs, the TAC cannot be greater than the ABC. The ABC is not a part of the harvest strategy, but a scientifically determined constraint on that strategy. As noted in the response to comment 1 from the City of Unalaska, the decline in projected Pacific cod ABCs and TACs is not new information in this DEIS. Similar declines were projected for Pacific cod in the 2005 BSAI SAFE.

**Comment 3.** The BSAI Pacific cod fishery is Unalaska's second most important species in revenue dollars, after the BSAI pollock fishery. The proposed Pacific cod reduction would significantly and negatively impact four of the City's most important revenue streams – the 2 percent landing tax, the 3 percent local sales tax, the State-shared fisheries business tax, and the State-shared fisheries resource tax. A reduction in this revenue would affect the future of City programs and services offered to the public. Many local support sector businesses, which depend on the Pacific cod fleet, would face a significant loss of revenue and uncertainty.

**Response:** NMFS acknowledges the comment and agrees that the reduction in the Pacific cod TACs currently projected for 2007 and 2008 in the EIS may have adverse impacts to the communities where Pacific cod is landed and processed. In Chapter 12, the gross revenues section of the EIS provides estimates of changes in Pacific cod first wholesale gross revenues in the BSAI, and shows that these are expected to decline in 2007 and 2008 under the TAC projections. The discussion on communities in Chapter 12 notes that revenues are expected to decline under Alternative 2 and points to adverse revenue and impacts and potential income and employment multiplier effects, while the Environmental Justice analysis in Chapter 13 points to potential adverse onshore impacts to revenue, employment, and taxes. Existing models do not permit detailed community specific or regional projections, although ongoing work on regional impact models at the AFSC, and on gross revenue projections in the NMFS Alaska Region, may make these possible in the future.



## **Response to Susan Murray, Acting Director, Oceana**

**Comment 1.** NMFS has never evaluated the effects of, and alternatives to, implementing the groundfish FMPs.

**Response:** NMFS disagrees. In 2004, NMFS evaluated the current BSAI and GOA groundfish FMPs, and alternatives to those FMPs, in a Programmatic Supplemental Environmental Impact Statement (PSEIS, NMFS 2004). The PSEIS analyzed comprehensive policy-level FMP alternatives that examine all of the major components of the BSAI and GOA FMPs at a programmatic level, consistent with the requirements of NEPA. Each alternative contains a policy statement, goals and objectives for that policy statement, and except for Alternative 1 (status quo), a pair of FMP “bookends” that illustrate and frame the range of implementing management measures for the alternative’s policy. The PSEIS analyzed five policy-level FMP alternatives for the BSAI and GOA groundfish fisheries. Chapters 2 and 4 of the PSEIS describe the alternatives considered. Alternative 1 represented the status quo BSAI and GOA FMPs. Alternative 2 was a policy to maximize fishery production and included two FMPs with management measures that reduced restrictions on fishing. Alternative 3 was status quo revised by recent Council actions that had yet to be approved by the Secretary. Alternative 3 included two FMPs that modified management measures to continue to balance fishery production with ecosystem protection. Alternative 4 was a policy to restrict fishing to the extent necessary to provide the least impacts on the marine environment. The preferred alternative was a combination of elements from Alternatives 3 and 4. NMFS will revise Chapter 1 of the final EIS to incorporate additional detail reflected in this response.

**Comment 2.** **The North Pacific needs to move to an ecosystem-based management approach that will protect and maintain healthy, productive, and resilient marine ecosystems while providing for ecologically sustainable fisheries and vibrant coastal communities. Implicit in such an approach is the maintenance of biological diversity, healthy populations of apex predators and prey, local population structure (including gender ratio, size, and age structure), healthy and intact habitats, and ecologically sustainable fisheries and vibrant coastal communities.**

**Response:** NMFS agrees that fisheries management should seek to accomplish these objectives, and believes that the current management regime incorporates numerous ecosystem considerations. This EIS describes the impacts of alternative harvest strategies on a wide range of ecosystem components, including other fish species, marine mammals, seabirds, habitat, ecosystem issues, and the social and economic environment. While this comment doesn’t directly address any specific element of the DEIS, it may be worthwhile to describe some of the ways in which ecosystem concerns shape fisheries management in the Alaska Region.

Under the harvest strategies in Alternatives 1, 2, 3, and 4, the determination of fishing harvest levels incorporates ecosystem considerations in the following ways. Perhaps the most significant ecosystem consideration adopted in recent years is the upper end of the optimum yield (OY) range in the BSAI, which imposes a constraint on overall biomass removal. Other ecosystem features of the harvest specifications include the determination of a species’ OFL as a harvest limit rather than a target and the use of ABCs that are below OFLs. The tier system sets maximum ABCs and managers can set actual ABCs lower to take account of special circumstances, including ecosystem considerations. TACs never exceed ABCs and are frequently set at lower levels. TACs are adjusted to take account of ecosystem

considerations. Harvest control rules for pollock, Pacific cod, and Atka mackerel have been established so that fishing rates drop abruptly at low biomass levels, in order to account for Steller sea lion prey needs. TACs and harvests, especially in the GOA, are often set lower than they would be otherwise, in order to protect other species, especially halibut, that may be taken as bycatch. Directed fishing for many species is frequently restricted before TACs are reached, in order to comply with PSC limits. Inseason management closes directed fisheries when TACs are harvested, and restricts fishing in other fisheries taking the species as bycatch when OFLs are approached. The analysis supporting specifications determination includes the preparation of a special Ecosystem Considerations report. The SAFE reports for each species include ecosystem considerations sections that describe the role of the species in the ecosystem.

The existing regulatory framework imposes many constraints on fishing activity, including time, area, and gear restrictions, in order to mitigate or control ecosystem impacts created by fishing activity. Regulations impose maximum retainable amount (MRA) restriction limits on the volumes of bycatch a vessel may deliver or have on board. Prohibited species catch regulations impose limits on harvests of crab, salmon, herring, and halibut, and can limit fishing activity once those limits are taken (halibut restrictions were mentioned above). Important restrictions have been imposed on key fisheries to limit competition for Steller sea lion prey and to protect sea lion critical habitat. The Pribilof Islands habitat conservation area protects ecosystem components in the vicinity of those islands. The Council and NMFS have adopted numerous measures to limit bycatch and control the discards of low valued fish by-products. ESA-listed seabirds are protected by critical habitat measures and incidental take limits. Seabirds attracted to longlines are protected by mandatory gear requirements, such as streamers, meant to reduce incidental takes. Essential fish habitat (EFH) and habitat areas of particular concern in the AI and in the GOA are protected by an extensive system of closed areas.

As explained in Chapter 3, section 3.3.1, NMFS and the Council are continuing to develop their ecosystem management measures for the fisheries in the exclusive economic zone (EEZ) off Alaska. The Council has created a committee to inform the Council of ecosystem developments and to assist in formulating positions with respect to ecosystem-based management. The Council has initiated work on a fisheries ecosystem plan for the Aleutian Islands. The Council and the State of Alaska have created a staff-level interagency AI Ecosystem Team to support this effort. It has taken the lead in the establishment of the interagency Alaska Marine Ecosystem Forum to improve inter-agency coordination and communication on marine ecosystem issues. The SSC has begun to hold annual ecosystem scientific meetings at the February Council meetings. In addition to these efforts to explore how to develop its ecosystem management efforts, the Council and NMFS continue to initiate efforts to take account of ecosystem impacts of fishing activity. For example, the Council has initiated work on an analysis of designating EFH protection areas and habitat areas of particular concern for the eastern BS, has initiated analysis to address potential impacts of shifts in fishing activity to the north, and has begun reconsultation under the ESA for Steller sea lions. Ecosystem protection is supported by an extensive program of research into ecosystem components and the integrated functioning of ecosystems, carried out at the AFSC. Exempted fishing permits (EFPs) currently support investigation of new management approaches for the control of salmon bycatch in the BSAI, and research into salmon and halibut excluder devices.

**Comment 3. There is a great deal of uncertainty in measuring or modeling the ecosystem effects of TAC amounts. This uncertainty, and the risk of impacting ecosystem components such as seabirds, marine mammals, and habitat, demands that NMFS take a precautionary approach in setting harvest levels. This means that when or**

where information is insufficient, take precautionary management measures that minimize risk to ecosystem health.

**Response:** NMFS agrees that uncertainty exists in assessing the ecosystem effects of alternative harvest strategies. Identifying these uncertainties is one of the functions of an EIS. This EIS identifies potential adverse impacts of the alternatives on the ecosystem and points to areas of uncertainty about those impacts. NMFS is actively taking steps to reduce uncertainty and better understand the environment through ongoing scientific research.

As explained in the response to Oceana's comment 2, precautions built into the current harvest strategy and management regime provide a buffer against the possibility of adverse impacts to the ecosystem and ecosystem components. These include (1) setting the upper bounds of the OY ranges in the FMPs at levels below estimated baseline multi-species maximum sustainable yield (MSY), (2) setting OFLs that are limits rather than targets, (3) setting maximum ABCs below OFLs, (4) implementing the specifications procedures to determine if actual ABCs should be less than maximum ABCs, (5) setting TACs below ABCs, (6) applying PSC constraints that frequently constrain harvests below TACs, (7) using conservative assumptions in choosing parameter values for age structured population dynamics models, (8) modifying harvest control rules for certain species to truncate fishing rates to zero below threshold biomass levels, (9) improving bycatch and incidental catch management, (10) avoiding impacts to habitat, seabirds, and marine mammals, and (11) continuing monitoring and research efforts to improve the available data.

**Comment 4.** The DEIS unreasonably constrains alternative harvest strategies by only considering those that result in TAC levels within the OY ranges. Consider additional alternatives that set the sum of all TACs below the BSAI and GOA OY ranges by (1) setting catch rates for important prey species, pollock, Pacific cod, and Atka mackerel, at  $F_{75\%}$ , (2) using frequency distributions to set ecosystem and single-species harvest levels within the normal range of natural variation (Fowler and Perez 1999), or (3) using multi-species surplus production models (Mueter and Megrey 2006). The Mueter and Megrey approach is promising, although it does not take account of the prey needs of marine mammals, or the effects of the spatial and temporal concentration of catch.

**Response:** NMFS acknowledges the comment. As explained in Chapter 1 of the EIS, alternatives that set the sum of the TACs below the established OY ranges are outside the scope of the action because they do not meet the action's purpose and need statement (the reader is referred to comment 2 from Trustees for Alaska). The OY ranges are defined in the FMPs. The proposed action is to set a harvest strategy consistent with the FMPs and regulations. Alternative methods to set OY ranges were analyzed in the PSEIS. This action falls within the OY range in the preferred alternative in the PSEIS.

Additionally, NMFS has technical concerns about the methods the comment proposes for setting the OY range. Singling out pollock, Pacific cod, and Atka mackerel as prey species is inappropriate when TACs for numerous other prey species also are established under the annual harvest specifications. No research or analysis conducted to date justifies reducing the harvest rate for these three species to  $F_{75\%}$ . Setting harvest rates for these species at  $F_{75\%}$  would greatly reduce the TACs for those species, causing a large reduction in revenue from those fisheries. Please see response to Oceana's comment 13 for more information on this alternative.

Additionally, the role of Pollock, Pacific cod, and Atka mackerel as prey for Steller sea lions and potential adjustments to the harvest strategy globally, temporarily, and spatially, is being assessed under the ongoing ESA consultation that has been initiated for the groundfish FMPs. At this time, NMFS anticipates that a draft Biological Opinion (BiOp) will be available by June 2007. Under Alternative 2, management measures resulting from that BiOp will then be incorporated into the setting of future TACs.

Chapter 2, section 2.5.2, discusses the reasons why using frequency distributions to set ecosystem and single-species harvest levels within the normal range of natural variation is not a viable method at this time. As noted in the EIS, the details of this method have not been worked out for the species and ecosystems of the North Pacific. Moreover, the logic of the method and approach to specifications determination in the FMPs suggest that it would be most appropriate to use the method to make determinations of ABCs, rather than of the TACs. ABC determination is not part of this action.

Mueter and Megrey used multi-species surplus production models to estimate maximum multi-species surplus production (MMSP) for groundfish in the BSAI and GOA (GOA groundfish was defined to include GOA halibut and BSAI sablefish). They saw MMSP as a measure of multi-species MSY (page 190). Their point estimate of MMSP for the BSAI was  $2.47 \times 10^6$  mt. They provided two point estimates for the GOA, associated with different models: 286 and  $332 \times 10^3$  mt. (page 196). Further analysis indicated that the existing upper end of the FMP OY range for the BSAI,  $2 \times 10^6$  mt, approximated an OY that would result from a policy decision (a) to set OY using their MMSP estimates, and (b) to keep the probability of actual catches exceeding the MMSP at 20 percent or less. The authors describe this as a "risk averse" approach, compared to a "risk neutral" approach under which yield would not exceed MMSP more than 50% of the time. If a similar rule was used with their "best" estimate of GOA MMSP, the resulting OY would be  $246 \times 10^3$  mt. Note that this includes GOA halibut and BSAI sablefish. This would be far below the existing upper OY limit of  $800 \times 10^3$  mt. (page 198). The OY calculations described here do not represent recommendations or estimates by Mueter and Megrey. They used their model to determine the level of risk aversion implied by the current harvest strategy in the BSAI, and examined the implications of this policy choice for the GOA. A GOA OY at this level would have been exceeded by actual catches in 12 of the last 30 years (Mueter, pers. comm.), although Mueter and Megrey also note that current biomass is higher than the biomass at which maximum surplus production occurs, suggesting that average historic levels of removals have been less than the MMSP (page 198). The Mueter and Megrey paper does not contain an explicit deduction for the predation needs of ecosystem components not included as fish species in the MMSP calculation or the effects of spatial and temporal restrictions, except as these are implicitly reflected in their estimates of model parameters. Mueter and Megrey provided evidence that MMSP varies with environmental conditions, and that therefore an upper OY limit may vary with environmental conditions. NMFS will revise Chapter 11 of the final EIS to incorporate the additional details from the Mueter and Megrey paper reflected in this response.

**Comment 5. The DEIS analysis does not reflect the true impact of historical and status quo fishing policies on rockfish. Evaluate the status quo fishing policy on rockfish considering the species' vulnerability to fishing pressure, habitat loss, and the uncertainty surrounding their status. North Pacific rockfishes have biological, physical, and life-history characteristics that make them especially vulnerable to fishing pressure. Given the sensitivity of rockfish to fishing pressure and the many unknown impacts of the current harvest strategy on the majority of North Pacific rockfish species, a more precautionary approach is needed.**

**Response:** The EIS recognizes the special concerns that many people have about rockfish harvests. These were expressed in several comments during the scoping process. The EIS addresses these concerns in two ways. First, Alternative 4 includes relatively low harvest rates for rockfish species. Rockfish harvest rates for tier 3 species are set at  $F_{75\%}$  for Alternative 4. Similarly conservative assumptions are used for rockfish in Tiers 4 and 5. The rockfish assumptions included in Alternative 4 are very precautionary. Second, the EIS has a special section (4.2) that specifically addresses rockfish. This section analyzes the impacts of the alternatives, including the status quo, on rockfish. The analysis looks at six rockfish species and species complexes and evaluates the impacts of the alternative harvest strategies on each with respect to mortality, prey availability, habitat, reproductive success, and genetics. This analysis describes uncertainties and gaps in our knowledge about rockfish.

**Comment 6. Consider research presented in the 2004 GOA SAFE that indicates that the proportion of old GOA Pacific ocean perch has been in decline over the last two decades and should be harvested at a lower rate.**

**Response:** This comment reflects concerns about the harvest of older, more reproductively valuable fish from a fish stock during fishing operations. NMFS scientists already incorporate the age structure of rockfish in stock modeling. The 2004 GOA and BSAI SAFEs both have appendices discussing this issue. The DEIS discusses this issue in the evaluation of the reproductive success of rockfish on pages 4-20 and 4-21, citing recent research conducted on Pacific ocean perch stocks. In this instance, the research found the actual impacts on  $F_{MSY}$  were relatively small.

**Comment 7. There is no clear nexus between the ecosystem considerations chapter of the SAFE and recommendations of ABC and TAC, and there is no clear process for or evaluation of the broader consequences of fishing.**

**Response:** NMFS disagrees. This comment raises two issues: (1) the relationship between the ecosystem considerations chapter of the SAFE and ABC and TAC recommendations, and (2) the existence of a process to evaluate the broader consequences of fishing. With respect to the first issue, information from the ecosystem considerations chapter of the SAFE, and input from the staff of the Resource Ecology and Ecosystem Modeling Task at the AFSC, is incorporated into the preparation of each of the species-specific SAFE reports by the assessment authors and discussed in the plan team meetings. In the SAFE documents, each single species assessment chapter contains a section addressing ecosystem considerations pertaining to that particular species. The SAFE documents provide the background to ABC recommendations, which themselves provide individual species constraints on TACs.

With respect to the second issue, the PSEIS has evaluated the impacts of groundfish fishing activity under a wide range of alternative management regimes on a wide range of ecosystem components. The PSEIS preferred alternative included the measures incorporated into the current FMPs. This EIS also evaluates the consequences of alternative harvest strategies on ecosystem components and on the ecosystem as a whole. Both the PSEIS and this EIS evaluated the impacts of alternative harvest levels for a wide range of ecosystem components, including fish species, marine mammals, seabirds, habitat, overall ecosystem considerations, and the human social and economic environment.

**Comment 8. By compartmentalizing the proposed action to only setting catch levels, without consideration of other management measures, the DEIS fails to consider other equally important aspects of fishery management.**

**Response:** Fisheries management measures, other than harvest strategies, are outside of the scope of this action. This EIS analyzes the proposed action and reasonable alternatives to the proposed action, as defined by the purpose and need statement. Please see response to comment 2 from Trustees for Alaska. The proposed action is the adoption of a harvest strategy, which warrants evaluation as a distinct action within the context of the other regulations adopted to manage the BSAI and GOA groundfish fisheries. The EIS does consider all other actions taken to manage the fisheries, and reasonable foreseeable future fisheries management actions, as these are relevant to the environmental consequences of the proposed action and its alternatives.

The Council and NMFS have processes consistent with NEPA to evaluate other actions to regulate other aspects of fisheries management. The overall fishery management policy within which the harvest strategies fall has been evaluated in the PSEIS (NMFS 2004). Moreover, NMFS and the Council evaluated each management measure at the time they were adopted in the relevant NEPA documents. Considering different management measures in separate actions allows for more careful analysis of alternatives and the implications of each, and is often less confusing to the public. The Council and NMFS are actively evaluating a wide range of new management measures through these processes and will continue to do so.

**Comment 9. More effort must be made to reduce the incidental catch of non-target marine life and the waste of target species. Consider management measures to minimize bycatch, such as hard bycatch caps and area closures. As explained in the DEIS, in general, reductions in TAC will result in reductions in bycatch.**

**Response:** Additional management measures to minimize bycatch are outside the scope of this EIS, as defined by the purpose and need statement.

The EIS details the numerous management measures already in place to reduce bycatch in the groundfish fisheries, including PSC limits and numerous area closures. Many existing regulations reduce discards and waste, including groundfish retention standards, increase retention increased utilization (IRIU) provisions, non-AFA trawl bycatch control measures implemented through Amendment 79, and MRA provisions. Existing and proposed rationalization programs (Halibut/Sablefish IFQ, Rockfish Pilot Program, Amendment 80, and GOA Rationalization) include additional measures for bycatch accounting and to reduce discards and waste. As discussed in Chapter 7, PSC limits protect halibut, herring, crab, and salmon. NMFS and the Council have adopted a wide variety of area closures to minimize the effects of fishing on habitat, reduce interactions with protected species, minimize bycatch, among other purposes. These areas and the associated management restrictions were each developed based on site-specific considerations and relevant ecological criteria.

The Council and NMFS are currently considering additional measures to address bycatch issues in separate actions (BSAI salmon bycatch modifications, and EFPs for halibut and salmon exclusion devices). Each of these complex actions is receiving its own NEPA analysis to focus on alternatives and impacts.

**Comment 10. The EFH EIS (NMFS 2005) relied on historical patterns and levels of fishing effort, however, patterns and levels of fishing effort, particularly for bottom gear, are expected to change substantially under Alternative 2, which projects substantial increases in flatfish harvests. The substantial increase in flatfish TACs in 2007 and**

**2008, and subsequent increases in bottom trawl effort and fishing patterns in order to catch this increasing TAC, are not duly analyzed in the DEIS.**

**Response:** This EIS projects increases in flatfish TACs in 2007 and 2008 under the Alternative 2 harvest strategy. However, the comment is incorrect that the EIS projects substantial increases in flatfish harvests. Chapter 2 points to the implications of overall declines in pollock and Pacific cod biomass, the resulting decreases in TACs for those species, and identifies potential increases in flatfish TACs as one of the possibilities. However, this EIS also discusses the difficulty in projecting actual flatfish harvests in these circumstances. Potential limits on increases in flatfish harvests are associated with halibut PSC constraints and market constraints. Due to these factors, actual flatfish harvest in 2007 and 2008 may be similar to previous year's harvests and much lower than the predicted TAC amounts. It is possible that constraints on flatfish harvests in the BSAI may cause overall harvests to drop below the OY range as pollock TACs drop. Increases in flatfish harvests are possible as well, but these are likely to be smaller than the increases in TACs.

Potential changes in flatfish TACs are evaluated in the EIS, where changes in flatfish harvests may impact resource components. For example, there are discussions in Chapter 8 on marine mammals, Chapter 10 on habitat, Chapter 11 on ecosystem relationships, and Chapter 12 on economic and social factors. NMFS will revise Chapter 10 of the final EIS to incorporate the additional details reflected in this response.

**Comment 11. The EIS must assess the northward shift of fishing effort in response to changing fish distributions. A northward shift of fishing effort would substantially change the degree of overlap with the EFH for many species (for example, snow crab (*Chionoecetes opilio*)).**

**Response:** The DEIS Chapter 3, section 3.5, discusses regime shift considerations, including warming, loss of sea ice, and acidification in the Bering Sea, to inform decision makers and the public of the future changes in the marine environment in the action area. This section contains a discussion of the potential for changes in fish distributions.

The Council and NMFS are currently analyzing the northward shift of fishing effort and the overlap of the shift in fishing effort with EFH in the Bering Sea Habitat Conservation analysis. That NEPA document is also examining mitigation measures that may be necessary to address adverse impacts to EFH in the Bering Sea. The Council is in the process of selecting alternatives for that NEPA analysis, and a tentative schedule for initial review is scheduled for February 2007. Through that analysis, the Council and NMFS will determine if management measures are necessary to conserve EFH, and if so, they will develop and analyze alternative management measures in a focused NEPA analysis. A portion of the Bering Sea Habitat Conservation analysis is addressing the northward shift of fishing effort in response to changing fish distributions and how that relates to any degree of overlap with EFH species. For example, one of the alternatives under consideration is to provide a closure around the St. Matthew Island area that has high concentrations of blue king and snow crab. More information on this topic, and Council background on this issue, can be viewed at

[http://www.fakr.noaa.gov/npfmc/current\\_issues/BSHC/BSHC.htm](http://www.fakr.noaa.gov/npfmc/current_issues/BSHC/BSHC.htm)

NMFS will revise the reasonable foreseeable future actions sections of Chapters 3 and 10 in the final EIS to incorporate the additional details reflected in this response.

**Comment 12.** The EIS must address the effects of different harvest strategies on EFH in a credible manner. The DEIS references the flawed conclusion reached in the EFH EIS that no effects of fishing on EFH are more than minimal, even though that document was unable to determine the effects of fishing on EFH for 20 of 34 FMP species groups.

**Response:** This EIS addresses the effects of the alternative harvest strategies on EFH in a credible manner. This EIS bases its conclusions on the EFH EIS (NMFS 2005) analysis in conjunction with the habitat protection measures enacted after that document was finalized. EFH EIS represents the best available science and fully discloses the uncertainties in understanding the impacts of fishing on EFH. The EFH EIS concludes that the effects on EFH are minimal, although some may be persistent, because the analysis finds no indication that continued fishing activities at the current rate and intensity would alter the capacity of EFH to support healthy populations of managed species over the long term (NMFS 2005). Due to the uncertainties identified in the EFH EIS, the Council recommended, and NMFS implemented, precautionary measures to provide protection to EFH and HAPCs from the effects of fishing activities.

**Comment 13.** Analyze an alternative that reduces catch levels for key prey species for Northern fur seals and Steller sea lions (i.e.,  $F_{75\%}$  for pollock, Atka mackerel, and Pacific cod).

**Response:** The Alternative 4 harvest strategy does reduce TACs levels for all species, including key prey species for marine mammals. Chapter 8 provides an analysis of the impacts of the alternative harvest strategies on marine mammal prey availability and the impacts of prey availability on marine mammal populations. The differences between Alternative 2 and Alternative 4 pollock, Pacific cod, and Atka mackerel TACs are large. In the BSAI, the differences between the TAC projections are approximately 30 percent in both years, while in the GOA they are approximately 52 percent to 54 percent, depending on the year (calculations based on TAC projections in Tables 2-2 to 2-4 of the DEIS).

The Alternative 4 TACs imply a 2007  $F_{SPR\%}$  of  $F_{52\%}$  for pollock,  $F_{56\%}$  for Pacific cod, and  $F_{51\%}$  for Atka mackerel. At its October meeting, the Council recommended a lower TAC for Atka mackerel than that analyzed in the DEIS (63,000 rather than 90,900 mt). The implied  $F_{SPR\%}$  for Atka mackerel at this lower TAC is approximately  $F_{61\%}$ . Implied  $F_{SPR\%}$  for many flatfish species are considerably lower (Ianelli, personal communication).

Moreover, Alternative 5 TACs, set at zero, also provide an opportunity to evaluate the impact of fishing for prey species. Alternative 4 and Alternative 5 TACs are adequate for understanding the dynamics of fishing impacts on marine mammal prey availability. As explained in Chapter 2, singling out pollock, Pacific cod, and Atka mackerel as prey species is inappropriate when TACs for numerous other prey species also are established under the annual harvest specifications. No research or analysis conducted to date justifies reducing the harvest rate for these three species to  $F_{75\%}$ . Additionally, setting harvest rates for these species at  $F_{75\%}$  would greatly reduce the TACs for those species, causing a large reduction in revenue from these fisheries. As mentioned in response to comment 5 from Trustees for Alaska, implications of current harvest strategy on Steller sea lion prey species are being assessed by NMFS as part of the ESA consultation initiated on the groundfish FMPs.

**Comment 14.** Address the temporal and spatial impacts of concentrated fishing in Steller sea lion and Northern fur seal foraging habitat that may have a significant and adverse impact on the competition for prey. Setting a region wide TAC is a major limit in the current harvest strategy, without consideration of the impacts at smaller spatial scales and in time.



**Response:** The harvest strategy alternatives set TACs under existing management measures that address impacts at smaller spatial and temporal scales, such as the Steller sea lion protection measures, the Pribilof Islands Habitat Conservation Zone, and the EFH/HAPC closed areas. Chapter 8 of the EIS addresses the temporal and spatial impacts of fishing on Steller sea lions and northern fur seals. Chapter 8 also provides a summary of ongoing and future research concerning the temporal and spatial impacts of fishing on marine mammals.

Research on the interactions between groundfish fisheries and Steller sea lions is described in Chapter 8 and includes efforts to understand the fishery effects on pollock, Pacific cod, and Atka mackerel, and the availability of these species to foraging Steller sea lions at a local temporal and spatial scale. As described in Chapter 8, a thorough analysis of temporal and spatial impacts is being conducted for the FMP-level consultation for ESA-listed species, including Steller sea lions. Until that information is available, NMFS must rely on the information provided in past ESA and NEPA analyses for the best available scientific data. These analyses determined that the groundfish fisheries conducted under the current suite of temporal and spatial protection measures are not likely to jeopardize the continued existence or adversely modify critical habitat for Steller sea lions. Under Alternative 2, management measures resulting from new FMP-level BiOp will then be incorporated into the setting of future TACs.

As described in Chapter 8, less is known about the potential impacts of the groundfish fisheries on northern fur seals. Pollock is an important prey species for fur seals and is harvested by the groundfish fisheries, leading to concerns about potential competition. NMFS does not sufficiently understand the foraging behavior of northern fur seals to draw conclusions about impacts of pollock harvests on northern fur seals. Chapter 8 describes several recent studies that have been completed that show the size of pollock taken by the fisheries and consumed by fur seals may overlap and that fur seal foraging locations may extend beyond the Pribilof Island Habitat Conservation Zone. As new information becomes available, NMFS will further analyze temporal and spatial impacts of the groundfish fisheries on northern fur seals. Under Alternative 2, management measures resulting from that analysis would be incorporated into the setting of future TACs.

**Comment 15. Evaluate the efficacy of trawl exclusion zones.**

**Response:** Evaluation of the efficacy of trawl exclusion zones is beyond the scope of this action, which is to establish a harvest strategy within the current FMP and regulatory constraints.

The EIS provides a review of ongoing research into potential prey competition between fishermen and northern fur seals (DEIS, pages 8-20 to 8-22). The EFH EIS evaluated the efficacy of trawl exclusion zones for the protection of EFH (NMFS 2005). The Steller sea lion SEIS evaluated the efficacy of trawl exclusion zones on Steller sea lions (NMFS 2001). NMFS is currently conducting a BiOp that analyses the Steller sea lion protection measures, including trawl exclusion zones. NMFS is currently consulting on the effects of the Alaska groundfish fisheries on ESA-listed species and their critical habitat, including Steller sea lions and is developing a BiOp under Section 7 of the ESA. The efficacy of trawl exclusion zones will be examined in that BiOp. If NMFS determines that the groundfish fisheries are likely to jeopardize the continued existence of Steller sea lions or adversely modify their critical habitat, changes to trawl exclusion zones is one possible mitigation measure that may be considered. If the BiOp finds that the trawl exclusion zones should be changed, NMFS and the Council would analyze any modifications under NEPA before implementation. Under Alternative 2, management measures resulting from that BiOp will then be incorporated into the setting of future TACs.

**Comment 16. Concerns that the preferred alternative may have an impact on Northern fur seals and endangered Steller sea lions requires that a new preferred alternative be identified that reduces competition between groundfish fisheries and Steller sea lion and Northern fur seals.**

**Response:** NMFS acknowledges the comment. NMFS and the Council have identified Alternative 2 as the preferred alternative because NMFS and the Council believe Alternative 2 best fulfills our statutory mission and responsibilities, and balances appropriate management considerations among relevant economic, environmental, technical, and other factors. Please see comment 1 from the North Pacific Fishery Management Council.

Chapter 8 analyzes the impacts of Alternative 2, and the other alternatives, on Northern fur seals and Steller sea lions. As discussed in Chapter 8, while Alternatives 1 and 2 may have a greater potential for prey competition among the fisheries and Steller sea lions and Northern fur seals compared to Alternatives 3 and 4, none of the alternatives are expected to result in population declines or prevent recovery, therefore Alternatives 1 through 4 all meet Magnuson-Stevens Act, MMPA, and ESA requirements relating to Steller sea lions and Northern fur seals.

The CEQ regulations do not require NMFS to choose the most environmentally benign alternative as the preferred alternative. The concept of the preferred alternative is different from the environmentally preferable alternative (see CEQ 40 questions, #4 and #6). As explained in Chapter 2, public comment during scoping assisted the agency in developing Alternative 4. This and other comments received on the DEIS will help NMFS identify the environmentally preferable alternative in the Record of Decision.

## **Response to Justin Massey, Staff Attorney, Trustees for Alaska**

**Comment 1.** It is appropriate that NMFS, after rejecting prior requests to prepare an EIS for previous Alaska groundfish fisheries harvest specifications, is preparing an EIS for this major Federal action.

**Response:** NMFS acknowledges the comment.

**Comment 2.** Expand the range of alternatives in the DEIS. The DEIS contains an unreasonably narrow purpose and need statement that constrains the range of alternatives to an extent that violates NEPA, would result in violations of the Magnuson-Stevens Act, and threatens violations of the Marine Mammal Protection Act (MMPA) and ESA.

**Response:** NMFS disagrees. The range of alternatives in the EIS is reasonable based on the proposed action's purpose and need. The proposed action would establish a harvest strategy for the BSAI and GOA groundfish fisheries. Chapter 1 describes the proposed action and its purpose and need. A harvest strategy is needed for the management of the groundfish fisheries and the conservation of marine resources, as required by the Magnuson-Stevens Act and as described in the management policy, goals, and objectives in the FMPs.

The purpose of the harvest strategy is to provide for orderly and controlled commercial fishing for groundfish (including Community Development Quota fishing), promote sustainable incomes to the fishing, fish processing, and support industries; support sustainable fishing communities, and provide sustainable flows of fish products to consumers. The harvest strategy balances groundfish harvest in the fishing year with ecosystem needs (such as non-target fish stocks, marine mammals, seabirds, and habitat).

The range of alternatives and the purpose and need statement comply with NEPA and other applicable laws. Many of Trustees for Alaska and Oceana's comments request that the scope of the EIS be expanded to include a suite of management measures. NMFS has already analyzed FMP-level alternatives and has already considered many of the measures requested by the commenter in the PSEIS (NMFS 2005). The range of alternatives analyzed in the PSEIS is discussed in greater detail in the response to Oceana's comment 1. Management measures that were developed after the PSEIS was completed have been analyzed in separate NEPA analyses. Considering different management measures in separate actions allows for more careful analysis of alternatives and the implications of each, and is often less confusing to the public.

The purpose and need statement need only be as broad as is required by the action's overarching purpose. Courts have afforded agencies considerable latitude in defining the purpose and need of an action. A thorough review of the case law considering this issue shows, generally, that a statement of purpose and need is unreasonably narrow only if the statement results in the disqualification of all but one of the alternatives from consideration, making meaningless any comparative analysis among competing alternatives. In Northwest Ecosystem Alliance v. Rey, 380 F.Supp.2d 1175, 1185-1186 (W.D. Wash., 2005), the court offers this instructive analysis:

The regulations implementing NEPA require that an EIS specify "the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." (40 CFR 1502.10(d), 1502.13). Agencies are afforded considerable, although not unlimited, discretion to define the purpose and need of a project. Friends of Southeast's Future v. Morrison, 153 F.3d 1059, 1066 (9th Cir. 1998). A statement of purpose and need is evaluated under a "reasonableness standard." Westlands Water Dist., 376 F.3d at 866. Under this standard, an agency may not define the purpose in unreasonably narrow terms. "[A]n agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality." Citizens Against Burlington, Inc. v. Busey, 290 U.S. App. D.C. 371, 938 F.2d 190, 196 (D.C. Cir. 1991); see City of Carmel-By-The-Sea v. Dept. of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997) ("The stated goal of a project necessarily dictates the range of reasonable alternatives and an agency cannot define its objectives in unreasonably narrow terms."). At the same time, however, a purpose and need statement need not be so broad as to require consideration of alternatives that are inconsistent with the proposed action's overarching purpose. Friends of Southeast's Future, 153 F.3d at 1066 (citing City of Angoon v. Hodel, 803 F.2d 1016 (9th Cir. 1986)).

See also Muckleshoot Indian Tribe v. Forest Serv., 177 F.3d 800, 814 (9th Cir. 1999) ("[o]ne obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose and need so slender as to define competing reasonable alternatives out of consideration...") and Klamath-Siskiyou Wildlands Center v. U.S Forest Service, 373 F.Supp2d 1069, 1089 (E.D. Cal., 2004) ("Nor, however, can the agency narrowly define its purpose and need so as to winnow down the alternatives until only the desired one survives.").

The purpose and need statement in the EIS reasonably defines the purpose, need, and scope, of the action as "being constrained by the requirements of the Magnuson-Stevens Act, FMPs, and Federal Regulations" (DEIS, page 1-4). The purpose and need statement is not so narrow as to have "winnowed down" the reasonable alternatives until only one survived. In fact, the EIS fully analyses a range of four reasonable alternatives (plus a required no action alternative). As required by the CEQ regulations (40 CFR 1502.14), the four action alternatives, although constrained by the scope of the action, each represent a viable, distinct harvest strategy that allows for a meaningful, comparative analysis to inform the decision makers and public of available harvest strategies and their impacts on the environment.

The range of alternatives in the EIS is adequate. CEQ regulations at 40 CFR 1502.14(a) require that all reasonable alternatives be "rigorously explored and objectively evaluated." It is well settled that the benchmark for determining whether an alternative is reasonable depends on the nature and scope of the proposed action and that the range of alternatives considered in an EIS need not extend beyond those reasonably related to the purpose of the project. See Native Ecosystems Council v. U.S. Forest Service, 428 F.3d 1233, 1246-47 (9<sup>th</sup> Cir 2005) (quoting Idaho Conservation League v. Mumma, 956 F.2d 1508, 1520 (9<sup>th</sup> Cir. 1992), California v. Block, 690 F.2d 753, 761 (9<sup>th</sup> Cir. 1982), Westlands Water Dist. V. U.S. Dep't of Interior, 376 F.3d 853, 868 (9<sup>th</sup> Cir. 2004) and Laguna Greenbelt, Inc. v. U.S. Dep't of Transp., 42 F.3d 517, 524 (9<sup>th</sup> Cir. 1994)). The alternatives, both individually and collectively as a range, must stay within the bounds identified by the action's purpose and need. It is outside the scope of the action, and therefore the range of alternatives, to examine alternatives that would require changes to the OY ranges currently specified in the FMPs, new bycatch control measures, new area closures, or new measures to recover endangered species.

**Comment 3.** The Magnuson-Stevens Act requires that the harvest specifications for the Alaska groundfish fisheries account for the protection of marine ecosystems. The current OY range, as defined in the FMPs, accounts for protection of fish stocks, but not for protection of the ecosystem. NMFS has thus provided a purpose and need statement that is limited by an OY range that violates the Magnuson-Stevens Act by failing to account for the protection of marine ecosystems.

**Response:** While the OY ranges in the FMPs constrain the sums of the TACs, the OY range itself is not the optimum yield defined by the Magnuson-Stevens Act. The Secretary of Commerce makes an OY determination when it adopts a harvest strategy and chooses a set of TACs that are consistent with that strategy. The sum of those TACs constitutes the OY for that year, and that OY must comply with the Magnuson-Stevens Act definition. The definition of OY in the BSAI and GOA FMPs, under Section 3.2.1, does comply with the Magnuson-Stevens Act and states that OY “will provide the greatest overall benefit to the nation, particularly with respect to food production, recreational opportunities, and *taking into account the protection of the marine ecosystem.*” According to the PSEIS, the harvest strategies provide a baseline for single species targets and limits, while other management measures such as the OY range, TAC setting based on economic and ecological information, and specific management measures for Steller sea lion prey species, are all components of the status quo harvest policy that work together to achieve OY in an ecosystem context (NMFS 2004, see the PSEIS Appendix F).

The FMPs contain an additional requirement that OY be within the OY range established in the FMPs. As discussed in the PSEIS, the Council set the OY range to ensure that future harvests would be sustainable and intended to assure the continued health of target species and to mitigate the impact of commercial groundfish operations on other components of the natural environment. The Council set the BSAI OY range equal to 85 percent of the range of the summed species-specific MSYs in the BSAI (Council 2005a). The Council set the upper end of the GOA OY range below the range of the summed species specific MSYs in the GOA (Council 2005b). Protection of the sustainability of individual fish stocks is essential to the protection of the entire ecosystem. The upper bound of the BSAI OY is effective because it has constrained overall TACs and harvests in recent years, thus protecting the ecosystem and ecosystem components.

As noted in the response to Oceana’s comment 1, the PSEIS evaluated five separate alternative management policies. Each of these management policies included an approach to establishing an OY range in the FMPs. The approaches included (1) the current OY ranges, (2) setting an OY cap at the sum of OFLs or ABCs for each species, and (3) specifying OY as a formula (PSEIS 2004, Table 4.10-36). The current OY range was one component of the ecosystem protection measures included in the preferred alternative.

NMFS will revise Chapter 2 in the final EIS to incorporate the additional details on the BSAI and GOA OY ranges reflected in this response.

**Comment 4.** The Magnuson-Stevens Act national standard 1 provides the purpose and need for the groundfish harvest specifications.

**Response:** This comment mischaracterizes the purpose and need statement. As discussed in Chapter 1 of the EIS, the purpose and need for the proposed action, the choice of a harvest strategy, is much broader and encompasses all applicable Federal law. The purpose and need statement is appropriate for alternative harvest strategies.

**Comment 5.** The DEIS fails to make clear whether the alternatives would lead to harvest specifications that help recover imperiled species, as the MMPA and the ESA require. Under the MMPA, NMFS must ensure that this action helps restore the Northern fur seal and all ESA-listed species to their optimum sustainable populations. The ESA requires that NMFS ensure that this action does not prevent listed species from recovering to the point at which they can be removed from the list of threatened and endangered species.

**Response:** NMFS and the Council are taking many actions to promote the recovery of these species. Prior to approval, the Secretary ensures that this action and all actions it takes are in compliance with the MMPA and ESA. Chapter 8 addresses MMPA and ESA requirements for marine mammals, and describes, to the extent that they are known, the implications of the different alternatives for these species. As discussed in Chapter 8, using the best available scientific information, NMFS does not believe that the alternatives in this analysis will prevent attainment of optimum sustainable populations, or prevent the recovery of listed species. A revised recovery plan for Steller sea lions is under development, and its provisions and criteria for recovery are not finalized. The action is not expected to prevent meeting the conservation objectives of the Northern fur seal draft conservation plan. These objectives focus on further research and monitoring of fisheries interactions to provide a better understanding of potential impacts on the conservation of fur seals.

**Comment 6.** The DEIS incorrectly eliminated ecosystem-protection alternatives. Neither NEPA nor the Magnuson-Stevens Act allow NMFS to eliminate ecosystem-protection alternatives on the grounds that they would produce harvest levels outside the OY range.

**Response:** This comment refers to alternatives proposed during the scoping process by commenters who thought the proposed measures would provide more protection for ecosystems. As discussed in Chapter 2, these alternatives were not adopted because they suggested management measures that would mandate changes in the scientific approach to stock modeling to influence TACs and as such are beyond the scope of this action. Additionally, the proposed measures were operationally unfeasible (DEIS pages 2-19 to 2-24). Please see the response to Oceana's comment 4.

As explained in Chapter 2, Alternative 4, which was introduced in response to scoping comments, addresses commenters' objectives in suggesting lowering the TACs through modifications to stock assessment practices, while remaining consistent with the statement of purpose and need for this action, by setting TACs at the lower end of the OY range. The TAC reductions in Alternative 4 are large. These are described in more detail in the response to Oceana's comment 13.

As discussed in Chapter 2, the range of alternatives does encompass ecosystem considerations, as required by the Magnuson-Stevens Act. Ecosystem considerations are built in to the harvest strategies and the existing management framework within which the harvest strategies are implemented. Please see response to Oceana's comment 2. The alternatives considered for this action cover the full range of TACs available under the OY ranges, except for Alternative 5. Alternative 5, which falls outside the OY range, was included because of NEPA requirements to include a no action alternative, sets TACs equal to zero, and thus provides a basis for consideration of an alternative that eliminates ecosystem impacts. NMFS' response to Trustees for Alaska comment 2 addresses the agency's discretionary scope for developing the appropriate range of alternatives.

**Comment 7.** The DEIS incorrectly determined that an FMP amendment is necessary to change the optimum yield ranges in the BSAI and GOA. A determination of OY is within the scope of the adoption of harvest specifications (and thus arguably does not require an FMP amendment) because the Magnuson-Stevens Act requires any regulation that implements an FMP—such as the harvest specifications – to independently achieve statutory OY.

**Response:** The OY ranges are components of the GOA and BSAI FMPs, as described in Section 3.2.3 in each FMP. An FMP amendment would be needed to change these OY ranges. The Magnuson-Stevens Act requires that regulations that implement an FMP be consistent with that FMP, therefore, the harvest specifications are required to be within the OY range established in the FMPs.

The Secretary makes an OY determination when it adopts a harvest strategy and chooses a set of TACs that are consistent with that strategy. The sum of those TACs constitutes the OY for that year, and the FMPs mandate that OY must be within the OY range established in the FMPs.

The current OY ranges and several possible modifications thereof constitute key elements of the alternatives considered in the PSEIS (NMFS 2004). Please see response to comment 3 from Trustees for Alaska. Chapter 4 of the PSEIS analyzes the likely impacts of these alternatives, including their impacts on the marine ecosystem. NMFS does not need to re-evaluate them again with this action because alternative OY ranges are outside the scope of this action.

**Comment 8.** The DEIS incorrectly determined that a statutory change is necessary to change the upper limit of the optimum yield range in the BSAI. The Consolidated Appropriations Act of 2004 merely caps the upper limit of the BSAI OY range, it does not set a floor for its upper or lower limits.

**Response:** NMFS agrees and will modify the final EIS to indicate that a statutory change is not required to lower the upper limit of the OY range in the BSAI. Because the OY range is incorporated into the BSAI Groundfish FMP, the Council would have to amend the FMP to change the range, and could do this without a change in statute.

**Comment 9.** The DEIS incorrectly eliminates alternatives to prohibit trawling in critical habitat and other protection measures. The Magnuson-Stevens Act does not limit NMFS authority to implement time and area closures as part of the adoption of the harvest strategies and specifications, in fact, the BSAI FMP authorizes NMFS to adopt special groundfish management measures intended to afford marine mammal species additional protection.

**Response:** The Magnuson-Stevens Act authorizes the Council to adopt measures to protect marine mammals, including trawl closure areas. However, these measures are outside the scope of this action, as defined by the purpose and need statement. Please see response to comment 2 from Trustees for Alaska. In establishing the harvest strategy, NMFS and the Council are guided by FMP section 3.2.5, which lays out the procedures for setting the TACs, and we do this in the context of the existing management measures. The comment is referring to FMP section 3.5.3 which specifically allows the Council to recommend actions to protect marine mammals. Chapter 8 describes the numerous actions to protect marine mammals NMFS and the Council have taken under this FMP section. Neither the Magnuson-

Stevens Act nor the FMP required these actions to be in conjunction with the harvest strategy. In fact, the Council typically evaluates these measures separately to ensure that there is a careful analysis of the distinctive elements of the alternatives for each type of measure.

**Comment 10.** **The many imperiled species in the North Pacific EEZ that have failed to recover, including the Northern fur seal and the Steller sea lion, provide strong indication that existing protection measures have failed. Groundfish harvest is spatially concentrated in Steller sea lion critical habitat despite the Steller sea lion protection measures. Groundfish harvest is temporally concentrated in two large pulses (in late winter and late summer) despite groundfish rationalization and seasonal apportionments. Therefore, the DEIS is incorrect in the conclusion that spatial and temporal apportionment measures such as the Steller sea lion protection measures and groundfish rationalization, respectively, disperse the groundfish fisheries and that there is no basis on which to add additional measures into the DEIS. NMFS must improve upon this record starting with these harvest specifications.**

**Response:** The statement in the DEIS is correct. No basis exists on which to add additional marine mammal protection measures into this action. Consideration of new spatial and temporal measures, in addition to the harvest strategies, is outside the scope of this action, as defined by the purpose and need statement. Please see response to comment 2 from Trustees for Alaska.

The current information regarding fisheries interactions and Northern fur seals and Steller sea lions does not indicate that existing protection measures have failed. Many factors may have influences on Steller sea lion and Northern fur seal populations, including both environmental factors and fishing. Management measures have temporally and spatially dispersed the groundfish fisheries more than if no management measures were in place. NMFS is reevaluating the efficacy of these measures for ESA-listed marine mammals, in the reinitiated FMP-level ESA consultation for the groundfish fisheries and in the Steller sea lion recovery plan process. However, NMFS has concluded in current NEPA and ESA analyses that these measures disperse the fisheries adequately to protect Steller sea lions and other marine mammals.

**Comment 11.** **The “Low and Slow Approach” alternative, proposed in the scoping comment from the Pribilof Island Aleut Community of Saint George Island/Traditional Council, is reasonable – and consistent with the recommendations of various blue-ribbon panels that have examined the management of federal fisheries – and NMFS should develop and analyze it in the EIS. Not only does nothing prevent NMFS from doing so, NEPA, the MSA, the MMPA, and the ESA compel the agency to consider alternatives that explicitly account for the protection of marine ecosystems and the imperiled species that live therein.**

**Response:** The proposed “low and slow” approach falls outside the scope of this action because it requires additional measures beyond those required by the adoption of a harvest strategy. This is discussed in Section 2.5.3 of the DEIS. NEPA allows the agency to tailor the purpose and need to fit the action and NMFS is not required to consider measures outside the scope of the action, as defined by the purpose and need statement (the reader is referred to response to comment 2 from Trustees for Alaska). Moreover, the “low and slow” approach was examined in the PSEIS (NMFS 2004 page 4.8-1) and the Steller Sea Lion SEIS (NMFS 2001). Analyzing it again in this EIS is unnecessary.



The alternatives evaluated in this EIS account for the protection of marine ecosystems and the imperiled species that live therein, because they fall within an OY range which was established to take ecosystem considerations into account (the reader is referred to response to comment 3 from Trustees for Alaska).

Furthermore, the Council and NMFS have developed and implemented protection measures in the past, and are evaluating those measures, and are investigating any need for additional protection measures in the groundfish fisheries through the BiOp (the reader is referred to response to Oceana's comment 14).

**Comment 12.** For Steller sea lions, NMFS relies on the PSEIS to conclude that the alternatives would have "insignificant" effects because they "should not cause competition for key prey species that are likely to constrain the foraging success of Steller sea lions to the point of causing an overall population decline" (DEIS, page 8-19). Likewise, for depleted Northern fur seals, NMFS applies this "overall population decline" standard to avoid finding "significant" impacts (DEIS, page 8-22). This standard is inappropriate under NEPA, the MMPA, and the ESA, the last two of which require NMFS to recover imperiled species populations, not just maintain them at the brink of extinction.

**Response:** As noted in responses to previous comments, NMFS has taken many fishery management actions to promote the recovery of Steller sea lions and northern fur seals and currently is engaged in a new FMP-level consultation of the effects of the groundfish fisheries on ESA-listed species. NMFS maintains an active program of research into the status of these populations, potential fisheries interactions, and causes of population fluctuations. As noted above, the purpose of this action is to adopt a harvest strategy that does not prevent a stock of marine mammals from reaching or maintaining its optimum sustainable population, and that does not prevent the recovery of an ESA-listed species. On the basis of the analysis in Chapter 8 of the EIS, NMFS believes that the alternatives in this analysis meet these requirements.

**Comment 13.** The DEIS tiers to the PSEIS for its discussion of the impacts of adopting harvest specifications. While we support NMFS' efforts to efficiently apply NEPA, this action incorporates into the DEIS the failure of the PSEIS to disclose the full impacts of the groundfish fisheries on the North Pacific EEZ. NMFS must disclose the full impacts of the Alaska groundfish fisheries on the affected environment as it existed at the time NMFS prepared the initial FMP-level EISs for the GOA and BSAI in 1978 and 1981, respectively. Because NMFS failed to do this in the PSEIS, NEPA requires the agency to provide this assessment in the EIS. NMFS may do this in its discussion of direct or cumulative impacts, depending on its choice of comparative baseline, but NMFS must include this discussion in the EIS.

**Response:** As discussed in Chapter 1, although the EIS incorporates information from the PSEIS by reference, the EIS as a whole does not tier from the PSEIS. The PSEIS was designed to analyze the environmental consequences of alternative policy frameworks. Please see response to Oceana's comment 1. The harvest strategy alternatives derive from the policy adopted in the preferred alternative in the PSEIS and is one of the actions necessary to implement the preferred policy alternative from the PSEIS. The scope of this EIS is focused on the proposed action, which is a harvest strategy, and on alternative harvest strategies that meet the purpose and need. This EIS incorporates by reference information from

the PSEIS, when applicable, to focus the analysis on the issues ripe for decision and eliminate repetitive discussions.

Providing an assessment of the full impacts of the groundfish fisheries on the affected environment, as they existed in the late 1970s and early 1980s, is beyond the scope of the analysis in this EIS, and is unnecessary because the PSEIS provides this assessment. In addition to their comments on the DEIS, the Trustees for Alaska submitted their previous comments on the PSEIS, which are available on request from NMFS. The adequacy of the PSEIS itself, and responses to the Trustees comments on the PSEIS are discussed in the response to comments prepared for on the PSEIS, available on the NMFS Alaska Region web page at

[http://www.fakr.noaa.gov/sustainablefisheries/seis/final062004/Appen/app\\_g.pdf](http://www.fakr.noaa.gov/sustainablefisheries/seis/final062004/Appen/app_g.pdf).

**Comment 14. The DEIS notes that “[t]he BSAI is divided into nineteen reporting areas, some of which are combined for harvest specifications purposes” (DEIS, page 3-2). To provide adequate information to inform decisionmakers and the public, the DEIS must include raw data and a graph that depicts the harvests reported in these management areas.**

**Response:** Each year, NMFS provides SAFE reports on each species or species complex for which the Council recommends harvest specifications. These documents contain detailed historical data on the fisheries, along with numerous figures and maps. The SAFE reports for 2005 are available on the AFSC web page at URL: <http://www.afsc.noaa.gov/refm/stocks/assessments.htm>. SAFE reports for previous years are also available at this site. These SAFE reports are considered appendices to this EIS.

Data on historical specifications and harvest information for BSAI and GOA groundfish fisheries is widely available. NMFS prepares annual inseason management reports that provide catch data, maps, and graphs by species. The December 2005 report is available on the NMFS Alaska Region web page at <http://www.fakr.noaa.gov/sustainablefisheries/inseason/npfmcreport1205.pdf>. NMFS will post the 2006 report on the Region’s web page when it is available.

The annual reports and SAFEs adequately analyze and present the underlying raw data in a manner useful to decision-makers and the public. Including the raw data in the final EIS would not be helpful to decision-makers and the public because raw data requires processing, organization, and interpretation to be useful. Additionally, the inclusion of raw data would potentially run into considerable confidentiality difficulties and would greatly increase the size and complexity of the EIS.

**Comment 15. The DEIS notes that “[t]o integrate [ecosystem-based management] into fisheries management, NMFS and the Council will need to develop policies that explicitly specify decision rules and actions to be taken” (DEIS, page 3-10). Explain in the DEIS the policies that ecosystem-based management would require.**

**Response:** A description of the policies underlying ecosystem-based management is beyond the purpose of this EIS. The purpose of this EIS is to describe the environmental impacts of the alternative harvest strategies, including a review of the potential impacts of these alternatives on the ecosystem. Future policies for ecosystem-based management will depend on currently evolving scientific understanding and institutional innovations. A consensus on an appropriate and workable vision and approach to fully implement ecosystem management, either from the scientific side, or from the point of view of the appropriate organization of decision making, does not yet exist. These are active areas of

investigation by NMFS and the Council. The AFSC is conducting investigations into the development of ecosystem approaches to management, and is incorporating ecosystem considerations more fully into current decision making with respect to harvest specifications. The Council has been investigating new institutional arrangements to integrate ecosystems management into policy making (including its Ecosystem Committee, its initiation of development of an AI ecosystem plan, its establishment of the AI Ecosystem Team, and its leadership in development of the inter-agency Alaska Marine Ecosystem Forum). The North Pacific Research Board has just put out request for bids on ecosystem management. Descriptions of many of these activities may be found on the Council's website at this URL: [http://www.fakr.noaa.gov/npfmc/current\\_issues/ecosystem/Ecosystem.htm#AI%20Ecosystem%20Team](http://www.fakr.noaa.gov/npfmc/current_issues/ecosystem/Ecosystem.htm#AI%20Ecosystem%20Team). Ecosystem management is evolving; the policies it ultimately will require are not yet known.

**Comment 16. In Chapter 3, the DEIS briefly discusses the effluent discharge from shore-based seafood processors. NMFS should add a discussion of the effects of effluent discharges from catcher/processors and other off-shore seafood processors in the North Pacific EEZ.**

**Response:** The EIS contains discussions of the effects of effluent discharges from off-shore catcher-processors. Chapter 9 discusses the effects of offal as a food source for seabirds, and as an attractant, that may contribute to seabird takes (DEIS, pages 9-9 and 9-10). Chapter 11 contains a discussion of energy removal and energy redirection. The discussion of energy redirection discusses the issue of discards. This section draws on the Ecosystem Contributions volume of the 2005 SAFE reports (DEIS, pages 11-10 and 11-11). NMFS will provide additional information regarding this topic in Chapter 3 of the final EIS. Information specific to Alaska seafood processing permits from the EPA are available from <http://yosemite.epa.gov/R10/WATER.NSF/NPDES+Permits/General+NPDES+Permits#Seafood%20Processing>. The discussion will include the offshore seafood processor requirements under the Clean Water Act and the Ocean Dumping Act.

**Comment 17. NMFS should include a full environmental justice analysis of the halibut bycatch and bycatch trends of all federally managed fisheries, including non-trawl fisheries, and provide the data on which it bases the claim that PSC limits "prevent" adverse effects on halibut stocks and subsistence fisheries.**

**Response:** In Chapter 7, the EIS analyses the impacts of the harvest strategy alternatives on halibut stocks and the subsistence fisheries. Regulations at 50 CFR part 679.21 limit annual halibut mortality in the BSAI to 3,675 mt for trawl gear and to 900 mt for nontrawl gear. In recent years the Council has recommended, and NMFS has approved, in the GOA a halibut mortality limit of 2,000 mt for trawl gear and 300 mt for hook-and-line gear. Hook-and-line gear targeting sablefish, pot gear, and jig gear have been exempted from these mortality limitations, either because their mortality is believed to be low, or because their participants are required to discard halibut unless they hold halibut individual fishing quota. The Council recommended these exemptions because (1) the pot gear fisheries create low annual halibut bycatch mortality (averaging 18 mt annually from 2001 to 2005); (2) the Individual Quota Program requires legal-sized halibut to be retained by vessels using hook-and-line gear if a halibut IFQ permit holder is aboard and is holding unused halibut IFQ; and (3) halibut mortality for the jig gear fleet cannot be estimated because these vessels do not carry observers. NMFS believes jig gear halibut mortality is very low, given the small amount of groundfish harvested annually by jig gear (averaging 298 mt annually from 2001 through 2005), and the survival rates of any halibut incidentally caught by jig gear and released are high.

In recent years, 1995 through 2005, the trend has been for trawl gear to closely approach the halibut mortality limits in both the BSAI and GOA. In 2006, hook-and-line gear may reach the cap in the GOA. Over the period 1995 through 2005, for hook-and-line gear subject to the PSC limits, the trend was a decrease in halibut mortality, well below the halibut mortality limitations in both the BSAI and GOA. These measures are designed to prevent adverse effects from bycatch in the groundfish fisheries on halibut stocks. Please see response to Trustees of Alaska comment 18 concerning the subsistence halibut fisheries. Halibut PSC limits routinely lead to the closure of fisheries each year before fishery TACs are harvested.

Each year, the IPHC takes into account incidental halibut mortality in the groundfish fisheries, wastage in the commercial halibut fishery, the sport fishery, and the subsistence halibut fishery, before establishing catch limitations for the commercial groundfish fishery, so as to prevent adverse effects on halibut stocks. Although there are regulatory limits on the halibut subsistence catch by individual eligible participants, there is no limit on the total subsistence catch mortality.

Halibut PSC is discussed in Chapter 7 (DEIS, page 7-5) and the economic justice discussion is in Chapter 13 (DEIS, page 13-18). NMFS will modify the discussion in Chapter 13 of the final EIS to include the additional detail in this response.

**Comment 18. NMFS must ensure that the cumulative impacts analysis in the EIS presents timely information on environmental impacts, including emerging impacts like global climate change in the North Pacific EEZ and the recent adoption by the U.S. Minerals Management Service of a program of Outer Continental Shelf oil and gas activity that proposes lease sales in the North Pacific EEZ in the years 2007 through 2012.**

**Response:** NEPA requires a cumulative impact assessment on past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR 1508.7). Global climate change can not be characterized as an action since it is a natural occurrence and not an action; therefore it is not a reasonably foreseeable future action. However, the DEIS does provide information on ocean climate change and regime shift issues in Section 3.5. This discussion relies on the Ecosystem Chapter of the annual SAFE report. The SAFE report is used by stock assessment scientists when they do their analyses and is available to decision-makers and the public. Oceana's comment 11, and the response thereto, deal with the related issue of the northward shift in fishing activity in response to changing fish distributions.

Chapter 3, Section 3.3.4, discusses lease issues and cites the Minerals Management Service EIS and their conclusions for fisheries in the North Pacific EEZ.

# Public Comments

The Draft EIS attracted a total of five letters of public comments. Each submission was a detailed substantive letter with a number of specific comments. All letters are included in this section in the order of receipt. Each comment in each letter is summarized and responded to individually in the above section *Response to Comments*.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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COO1

October 12, 2006

Reply To  
Attn Of: ETPA-088

Ref: 06-054-NOA

Robert D. Mecum, Acting Administrator  
National Marine Fisheries Service - Alaska Region  
P.O. Box 21668  
Juneau, AK 99802

Dear Mr. Mecum:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (EIS) for **Alaska Groundfish Harvest Specifications** (CEQ No. 20060362) in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309, independent of NEPA, specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our Section 309 authority, policies and procedures, our review of the draft EIS considers the expected environmental impacts and the adequacy of the EIS in meeting procedural and public disclosure requirements of NEPA.

The EIS evaluates the environmental, social and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the Gulf of Alaska (GOA) and the Bering Sea and the Aleutian Island (BSAI) management areas. The harvest strategies are utilized to generate total allowable catch (TAC); prohibited species catch (PSC) and acceptable biological catches for species or species groups in the Gulf of Alaska and Bering Sea and the Aleutian Island management areas. The harvest strategies provide for orderly and controlled commercial fishing for groundfish, promote sustainable incomes to the fishing, fish processing and support industries; support sustainable fishing communities, and provide sustainable flows of fish products to consumers.

Five alternative harvest strategies were evaluated in the EIS. Alternative 1 would set total allowable catches (TACs) to produce harvest levels equal to the maximum acceptable biological catches (ABCs) unless the sum of the total allowable catches is constrained by optimum yield (OY) established in the Fishery Management Plans (FMPs). Alternative 2 (Status Quo and Preferred Alternative) would set total allowable catches that fall within the range of acceptable biological catches recommended by the North Pacific Fisheries Management Council (Council) Groundfish Plan Teams and total allowable catches recommended by the Council. In the Bering Sea and the Aleutian Island management area, total allowable catches would be generally set so that they sum to the maximum optimum yield and in the GOA management area, the total allowable catches are set below the maximum optimum yield level. Alternative 3 would set total allowable catches for stocks with high levels of scientific information to produce harvest levels equal to the most recent five-year average actual fishing mortality rates. For stocks with insufficient scientific information, total allowable catches would be set equal to the most recent five-year average actual catch. Alternative 4 would set low and spatially explicit total allowable catches for rockfish species. In addition, all other total allowable catches would be reduced by a

proportion that does not vary across species, so that the sum of all total allowable catches including rockfish is equal to the lower bound of the optimum yield for each management area (1,400,000 mt in the BSAI and 116,000 mt in the GOA). Alternative 5 would set all total allowable catches to equal zero. This is the no action alternative, but does not reflect status quo.

In general, impacts to target species, non-specified species, forage fish species, prohibited species, marine mammals, seabirds, essential fish habitat and the ecosystem are less under Alternatives 3 and 4 than Alternatives 1 and 2. While Alternative 5 would have the least adverse impacts on fish, bird and marine mammal species and their environment, it would have greater social, economic and environmental justice impacts than the action alternatives because of the loss of revenue due to the lack of fishing.

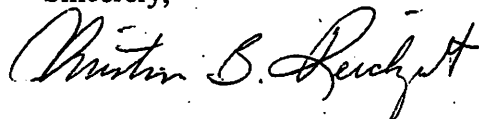
You and your staff are to be commended for tiering off other NEPA documents such as the Programmatic Supplemental EIS for the Alaska Groundfish Fisheries and the EIS for Essential Fish Habitat, to generate this document. It eliminated the need for duplication of information and allowed the reader to focus more clearly on the proposed actions.

We have assigned a rating of EC-2 (Environmental Concerns – Insufficient Information) to the draft EIS. This rating and a summary of our comments will be published in the Federal Register. A copy of the rating system used in conducting our review is enclosed for your reference.

Our concerns with the proposed action involve the impacts that the status quo (Preferred Alternative) may have on those stocks approaching their minimum stock size thresholds (MSST), the impacts this alternative will have on rockfish stocks and the inability to determine minimum stock size thresholds for Tier 4 through 6 stocks. In addition, while the EIS presents a thorough analysis of the environmental justice impacts, it does not provide information on what was done to provide adversely impacted communities the opportunity to participate in the decision making process in a meaningful manner. Our concerns and recommendations are highlighted in detail in the enclosed attachment.

Thank you for the opportunity to review this EIS. If you would like to discuss these comments in detail, please contact Mike Letourneau at (206) 553-6382.

Sincerely,



Christine Reichgott, Manager  
NEPA Review Unit

## **Attachment**

### **Alaska Groundfish Harvest Specifications EIS Comments**

#### **Impacts from Status Quo Harvest Strategy (Preferred Alternative)**

The status quo harvest strategy (Alternative 2) would provide for total allowable catch (TAC) levels that would be set so that they sum to the maximum optimum yield (OY) in the Bering Sea and Aleutian Islands (BSAI) and set below the maximum optimum yield in the Gulf of Alaska (GOA). Impacts to target species, non-specified species, forage fish species, prohibited species, marine mammals, seabirds, the ecosystem, essential fish habitat, society and economics are greater under the status quo harvest strategy than Alternatives 3 and 4. The status quo harvest strategy will have similar impacts as Alternative 1. The EIS is clear that under the status quo harvest strategy, no Tier 1 through Tier 3 stocks will be overfished or approach overfishing condition. However, the biomasses of some of these stocks are very close to approaching their minimum stock size threshold (MSST) (e.g., Pacific Ocean perch, Pacific cod, sablefish and Greenland turbot in the Bering Sea and the Aleutian Island management area; pollock, sablefish and Pacific Ocean perch in the Gulf of Alaska). The EIS states that it is currently impossible to evaluate the status of stocks in Tiers 4 through Tier 6 with respect to minimum stock size thresholds. In addition, genetic structure and reproductive success in terms of meeting the minimum stock size thresholds cannot be determined for Tiers 4 through Tier 6 stocks. The inability to assess the minimum stock size thresholds for these stocks is of particular concern for Tier 5 rockfish.

Mortality, genetic, reproductive, prey and habitat impacts would be less under Alternatives 3 and 4 than the other action alternatives. Alternative 3 would allow for setting total allowable catches with high levels of scientific information to the most recent five-year average actual fishing mortality rates and for those with insufficient scientific information set to the most recent five-year average actual catch. This would provide additional protection to those stocks where information is lacking such as those in Tiers 4 through 6 and those stocks whose biomass is approaching minimum stock size thresholds. Alternative 4 would set low and spatially explicit total allowable catches for rockfish species setting total allowable catches to sum to the lower optimum yield range, thereby reducing impacts to rockfish species. We therefore recommend that a more protective alternative be selected than the status quo (Alternative 2).

#### **Environmental Justice**

The EIS provides a detailed description of the how low income and minority communities were identified in the project area and the impacts these communities may encounter under each of the proposed alternatives. The analysis indicates that some alternatives will result in high and adverse impacts on low income and minority communities. For example, Alternative 4 may result in high and adverse fishery revenue impacts on low income and minority communities. However, the EIS does not discuss what actions were taken to assure that these communities had an opportunity to provide meaningful input into the decisions being made about the proposed actions.

The EIS needs to describe what was done to inform the communities about the project and the potential impacts it will have on their communities (notices, mailings, fact sheets, briefings, presentations, exhibits, tours, news releases, translations, newsletters, reports, community interviews, surveys, canvassing, telephone hotlines, question and answer sessions, stakeholder meetings, and on scene information), what input was received from the communities, and how that input was utilized in the decisions that were made regarding the proposed actions.



**U.S. Environmental Protection Agency Rating System for  
Draft Environmental Impact Statements  
Definitions and Follow-Up Action\***

**Environmental Impact of the Action**

**LO – Lack of Objections**

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC – Environmental Concerns**

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO – Environmental Objections**

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU – Environmentally Unsatisfactory**

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

**Adequacy of the Impact Statement**

**Category 1 – Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 – Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 – Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

# North Pacific Fishery Management Council

Stephanie Madsen, Chair  
Chris Oliver, Executive Director



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October 13, 2006

Robert D. Mecum  
Acting Administrator  
Alaska Region  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, AK 99802

RE: Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement (EIS)

Dear Mr. Mecum:

Following review of the Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement, the Council continues to support Alternative 2 as the preferred alternative. Alternative 2 represents the best harvest strategy for management of the groundfish fisheries. It provides maximum flexibility for the Council to set harvest levels to account for the most recent scientific information. The Draft EIS analysis also demonstrates that the Alternative 2 harvest strategy does not result overfishing or overfished fisheries, nor in adverse effects to the environment. Consequently, the Council strongly recommends that the Agency identify Alternative 2 as the preferred alternative in the Record of Decision.

In addition, our Scientific and Statistical Committee (SSC) has the following comments about the structure and contents of the Draft EIS, which we endorse.

- The authors produced a very readable and well structured document and the SSC appreciated the efforts to organize the draft EIS into separate stand-alone chapters with parallel structures. A number of short tables in each chapter contain brief and useful summaries of anticipated impacts under the different alternatives.
- The SSC also appreciates the responsiveness of the authors to previous SSC comments, in particular the inclusion of an appendix that details the projection methodology and efforts to compute confidence bounds for estimates of gross revenue. However, the SSC notes that including a discussion of unsuccessful efforts to compute such confidence intervals in the draft EIS may be premature at this point. Moreover, we re-iterate previous SSC concerns that estimates of gross revenue are not a very useful measure of revenue without cost information.
- While the organization into separate stand-alone chapters enhances readability, it also created a lot of redundancy. In particular, the SSC notes that sections on "reasonable foreseeable future actions" within each chapter repeat much of the same information and the authors may wish to consider combining the discussion of "reasonable foreseeable future actions" and their impacts on the different components of the ecosystem into a single chapter.
- The narrative format and a number of small tables in each chapter provide excellent summaries and discussions of anticipated impacts, but the large number of components examined within each chapter makes it sometimes difficult for the reader to identify those components that may be

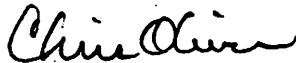
impacted under one or more alternative. The SSC suggests adding a single summary table at the beginning of each chapter that indicates for each component examined in the chapter and for each alternative whether anticipated impacts are unknown, of no concern, or of potential concern.

Other, minor comments regarding the contents of the Draft EIS:

- Page v of the Executive summary contains a strong statement under 'Essential Fish Habitat' that "... *the assessment concludes no action is needed to further conserve EFH*". This determination cannot be made based on the Harvest Specification EIS and the statement should be removed.
- Table 7-2 contains numbers that either suggest unreasonable precision or may be in error. We suggest dropping all decimal points.
- There is an apparent large contradiction between the first paragraph on page 13-6 and the numbers of unemployed Akutan residents in Table 13-2. This contradiction should be clarified in the text, rather than in a footnote on the following page (Footnote 33).
- In the analysis of seabird impacts, the authors should consider separating the discussion of albatrosses from those of shearwaters because albatrosses are much rarer and have a very different life history and life expectancy. For example, on page 9-5 it is stated that the takes of other albatrosses and shearwaters are less than 1% of the populations at risk. A take of one percent of the albatross population may reflect a substantial increase in total mortality of these species, which may experience natural mortality rates on the order of 5-10%.
- On p. 9-4, first paragraph under 'Incidental take': The second sentence should read "average **annual** longline bycatch ..." instead of "average longline bycatch...".

Thank you for the opportunity to comment.

Sincerely,



Chris Oliver  
Executive Director

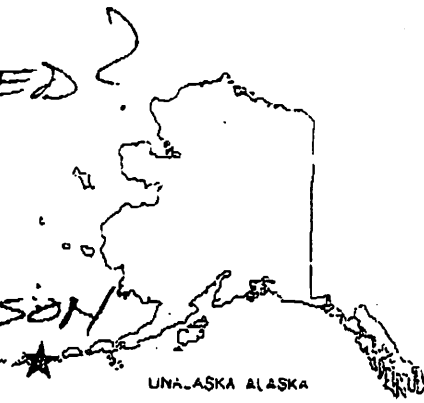
cc NOAA Office of Program Planning and Integration

SUE,  
HOW SHOULD WE PROCEED?  
PLEASE ADVISE.

CITY OF UNALASKA  
P.O. BOX 610  
UNALASKA ALASKA 99685-0610  
(907) 581-1251 FAX (907) 581-1417

REGARDS,

DOM IVERSON



October 16, 2006

Mr. Doug Mecum  
Acting Administrator  
Alaska Region  
NMFS, Alaska Regional Office  
PO Box 21688  
Juneau, Alaska 99802

**Subject: Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement (DEIS)**

Dear Mr. Mecum:

Through this letter, the City of Unalaska submits the following comments on the proposed Alaska Groundfish Harvest Specifications (DEIS), and requests that the all of the "best available science" be utilized in the process of the setting of the BSAI Cod TAC.

The City of Unalaska is very concerned about the proposed reduction in the BSAI Pacific Cod Total Allowable Catch (TAC) of 45% over a two-year period for the 2007 and 2008 fishing seasons. The BSAI Pacific Cod fishery is the second most important species in revenue dollars for Unalaska after BSAI Pollock fishery. The proposed cod reduction would significantly and negatively impact four of the City's most important revenue streams -- the local 2% landing tax, the 3% local sales tax, the State-shared Fisheries Business Tax and the State-shared Fisheries Resource Tax -- which could certainly affect the future of programs and services we currently offer to the public. Many local support sector businesses, which depend on the Pacific Cod fleet, would be facing a significant loss of revenue and uncertainty as well.

Because empirical data suggests that the CPUE numbers are in significant conflict with the Cod Assessment Model being used, and a significant possibility exists that the BSAI Pacific Cod abundance may be far greater than expected, we strongly support the use of all data in the 42 archival Pacific Cod tags collected in the summer groundfish survey in the specification process. We also strongly support peer review of the NMFS SS2 Pacific Cod Assessment Model in order to be sure that we do indeed have the "best available science" to make the final decision.

The City of Unalaska respects and values the NPFMC commitment to using the "best science available" and letting proven science rule over the setting of conservative ABC and TAC specifications in our valuable fisheries, and we are not asking you to change from that path. We agree with the Council and with NMFS that the value of this form of fisheries management is of the highest importance, and our revenue structure and local business economy have greatly benefited because of it.

Because of the degree of potential negative impact to our Community if the 45% drop in TAC is the final result of the Harvest Specifications, we simply want to be as sure as possible that the model and data used for setting the TAC for BSAI Pacific Cod has been fully vetted and groundtruthed before the final decision in December 2006.

Sincerely,



Shirley Marquardt  
Mayor, City of Unalaska

CC: Rodney F. Weher, Ph.D.  
NEPA, Coordinator  
Jim Balsiger,  
NMFS Alaska Administrator  
Stephanie Madsen, Chair  
North Pacific Fishery Management Council  
Unalaska City Council,  
Chris Hladick, Unalaska City Manager

October 23, 2006

Mr. Robert D. Mecum  
Acting Administrator  
Alaska Region  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, AK 99802

**RE: Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement**

Dear Mr. Mecum:

The Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement (DEIS) evaluates five alternatives for determining catch levels for Alaska groundfish fisheries, including the status quo and a no-action alternative. The DEIS evaluates the environmental consequences of the alternative catch strategies for target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, the economy and environmental justice. We agree that setting catch levels is a major federal action with significant effects on the quality of the human environment, and we appreciate the opportunity to provide these comments.

We remain concerned that the agency has never evaluated the effects of, and alternatives to, implementing the groundfish Fishery Management Plans. While consideration of the aforementioned effects is critical, in our view the generic nature of this EIS and the agency's continued failure to examine the full scope of management measures in the groundfish fisheries continues to be a major flaw. Our comments on the Draft EIS address considerations of Optimum Yield and rockfish. We also address the limited scope of the DEIS, discussing bycatch, essential fish habitat and marine mammals as examples.

In our view, the North Pacific needs to move to an ecosystem-based management approach that will protect and maintain the health, productivity and resilience of the marine ecosystem while providing for ecologically sustainable fisheries and vibrant coastal communities. Implicit in such an approach is the maintenance of:

- biological diversity,
- healthy populations of apex predators and prey,
- local population structure, including gender ratio, size and age structure,
- healthy and intact habitats, and
- ecologically sustainable fisheries and vibrant coastal communities.

We recognize that there is a great deal of uncertainty in measuring or modeling the ecosystem effects of TAC amounts. This uncertainty, and the risk of impacting ecosystem components such as seabirds, marine mammals, habitat and others, demands that NMFS take a precautionary approach in setting harvest levels. This means that when or where information is insufficient, take precautionary management measures that minimize risk to ecosystem health.

1. The DEIS unreasonably constrains alternative catch strategies by only considering those that result in catch levels within the range of OY.

All alternative harvest strategies except alternative 5 (set TACs at zero), are limited so that acceptable biological catch (ABC) is set according to Fishery Management Plan procedures and total allowable catch (TAC) is set at or below ABC, so that the sum of all TACs are within the range of Optimum Yield (OY) established in the BSAI and GOA fishery management plans (FMPs). DEIS at ES-ii. Both the National Environmental Policy Act (NEPA) and Magnuson Stevens Act (MSA), however, allow for analysis of alternatives outside of the BSAI and GOA OY range.

The MSA defines optimum yield as yield from a fishery "taking into account the protection of marine ecosystems," and allows for the reduction of maximum sustainable yield by any "relevant ecological factor." 16 U.S.C. §1802 (28). The current catch strategy, however, is largely a single-species maximum sustainable yield approach, with only slight adjustments made for possible ecosystem needs (Goodman et al 2002).

We ask that an additional alternative be considered that sets the sum of all TACs below the BSAI and GOA OY range. We refer back to our May 15, 2006 scoping comments where we requested alternatives that set catch rates for important prey species at  $F_{75\%}$  or an approach that uses frequency distributions to set ecosystem and single-species harvest levels within the normal range of natural variation (as in Fowler 1999), and reiterate that request.

In addition, another promising method for setting the OY range may be to use multi-species surplus production models. Mueter and Megrey (2006) estimated ecosystem-level maximum sustainable yields and suggested OY as  $1.96 \times 10^6$  mt for the BSAI and  $246 \times 10^3$  mt for the GOA. Their analysis has its limits – it does not consider important aspects of ecosystem-based fishery management such as the prey needs of marine mammals or the effects of the spatial and temporal concentration of the catch. Nethertheless, it warrants consideration in this EIS.

2. Rockfish

While we are pleased to see that the DEIS has analyzed alternative approaches for setting rockfish TACs, we remain concerned that the analysis does not reflect the true impact of historical and status quo fishing policies on rockfish. Alternative 4 would set TACs for rockfish species in Tier 3 at  $F_{75\%}$  and at  $F=0.5M$  for rockfish species in Tier 5. Currently there are five stocks managed under Tier 3, three stocks managed under Tier 4 and seven stocks and stock complexes managed under Tier 5. NMFS manages 12 species of rockfish in the BSAI and approximately 31 species of rockfish in the GOA. Biomass estimates are highly uncertain and determinations of stock status (overfished, overfishing or approaching an overfished condition) can only be made for the

five stocks in Tier 3. For all other stocks, reference stock levels cannot be estimated reliably. DEIS at 4-16.

North Pacific rockfishes have biological, physical and life-history characteristics that make them especially vulnerable to fishing pressure. These characteristics include extreme longevity, low natural mortality, increased fecundity with age, habitat fidelity, and infrequent recruitment – all of which require consideration when setting catch levels and appropriate management measures. Research suggests that maternal age can have a substantial influence on larval survival. Older rockfish not only contribute more offspring, but the larvae from older rockfish grow faster and survive starvation twice as long (Berkeley et al. 2004).

Furthermore, Froese (2004) notes that reduced percents of older “mega-spawners” in a population is a concern because of the important contribution to population survival made by old fish, including their high fecundity, more viable young, and their role as reservoirs of successful genes. Higher numbers of older fish thus can be considered an insurance policy against recruitment failure. The percentage of mega-spawners in a stock can be viewed as a proxy for resilience in the face of random events (such as recruitment failure) because of their longevity and prolonged reproductive phase (Froese 2004).

Management strategies that increase the proportion of older rockfish may have significant biological and economic benefits (Berkeley 2006). We continue to support alternative harvest strategies and management measures that reduce impacts to all managed rockfish species, account for the importance of age to larval production and survival, and prevent impacts to population structure and rockfish habitat. Given the sensitivity of rockfish species to fishing pressure and the many unknown impacts of the current harvests strategy on the majority of North Pacific rockfish species (DEIS at 4-17, 4-19 and 4-22), a more precautionary approach is needed.

The DEIS should consider research presented in the 2004 GOA SAFE that indicates that the proportion of old Gulf of Alaska Pacific Ocean Perch has been in decline over the last two decades. NPFMC 2004. GOA SAFE, at 399-2004. In the SAFE, NMFS scientists incorporated the research that older rockfish produce more offspring with higher survival and found that Pacific ocean perch should be harvested at a lower rate. The analysis found that there should be a 3% decrease in biomass for the GOA populations and a corresponding 15% reduction in allowable catch. Age truncation evident in Pacific ocean perch is also of concern for other species such as the demersal shelf rockfish assemblage and others where less information is available.

We request that the EIS consider the information from the 2004 GOA SAFE in particular, and that more generally, the evaluation of the status quo fishing policy on rockfish consider the species' vulnerability to fishing pressure and habitat loss, and the uncertainty surrounding their status.

### 3. Ecosystem-based fishery management

It is becoming broadly recognized that fisheries management must expand its focus from maximizing productivity of single species to a more holistic approach based on ecosystem



principles. It is incontrovertibly clear that fisheries have ecosystem level effects, and that we ought to move toward an ecosystem-based management approach.

Fishing can alter a wide range of biological interactions, causing changes in predator-prey relationships, cascading effects mediated through food-web interactions, and the loss or degradation of essential habitats. These impacts, along with natural fluctuations in the physical state of the ocean, can interact to intensify fishing impacts beyond targeted species. Fishing is also generally size and species selective, potentially changing the genetic structure and age composition of fished stocks, as well as decreasing the diversity of marine communities.

If the United States is to manage fisheries within an ecosystem context, food-web interactions, life-history strategies, and trophic effects will need to be explicitly accounted for when developing harvesting strategies. Other uses and values derived from marine resources should also be considered, because fishing activities directly or indirectly impact other ecosystem components and the goods and services they provide.

National Research Council at 2, 4. (2006). In the North Pacific, while NMFS and the Council prepare an Ecosystem Considerations chapter as an appendix to the annual Stock Assessment Fishery Evaluation (SAFE) reports, there is no clear nexus between ecosystem considerations and recommendations of ABC and TAC, and there is no clear process for or evaluation of the broader consequences of fishing. We are concerned that this EIS's focus will perpetuate rather than alleviate that problem. By compartmentalizing the proposed action to only setting catch levels, without consideration of management measures, the DEIS fails to consider other equally important aspects of fishery management. We provide three examples – bycatch, essential fish habitat, and marine mammals – below.

a. Bycatch

As you know, Congress requires that fishery management plans, “include conservation and management measures that, to the extent practicable, and in the following priority (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided.” 16 U.S.C. § 1853(a)(11); 16 U.S.C. § 1851(a)(9). While IR/IU resulted in a significant decrease in discards beginning in 1998, mainly through increased retention of pollock and cod, we find that it is necessary to take further actions to reduce bycatch in the North Pacific groundfish Fisheries. Overall amounts of discards have remained high since implementation of IR/IU, averaging over 310 million pounds of groundfish per year (1998-2004).

We continue to be concerned with the impacts of bycatch not only on groundfish, but also on prohibited species, prey species such as forage fish and squid, habitat forming species such as corals and sponges and other marine life. We note that where the DEIS analyzed reduced harvest rates, especially of pollock, it found a likely reduction in the incidental catches of prohibited species such as salmon and herring and other forage species. DEIS at 7-13 and 11-6. Further the DEIS found that in general, a reduction in pollock TAC would not only reduce

salmon bycatch but also reduce effects on Alaska Native communities and populations who take salmon for subsistence. DEIS at 13-23: 13-24, 13-28.

The catch of nearly 2 million metric tons of groundfish each year in North Pacific groundfish fisheries comes at a major costs for other marine life that are taken incidentally, as well as resulting in the waste of millions of pounds of groundfish. More effort must be made to reduce the incidental catch of non-target marine life and the waste of targeted species. In general, reductions in TAC will result in reductions in bycatch. Management measures such as hard bycatch caps on all marine life and time and area closures are necessary for minimizing bycatch. The DEIS ought to consider management measures such as hard bycatch caps and area closures.

b. Essential Fish Habitat

The analyses and models in the EFH EIS relied on historical patterns and levels of fishing effort. However, patterns and levels of fishing effort, particularly for bottom trawl gear, are expected to change substantially under Alternative 2 (status quo), which projects substantial increases in flatfish harvests. The projected TAC for flatfish species in 2008 is 380% larger than in 2007. This substantial increase in catch, and subsequent increases in bottom trawl effort and fishing patterns in order to catch this increasing TAC is not duly analyzed in the DEIS.

In addition, the status quo alternative does not consider the effects of a northward shift of fishing effort in response to changing fish distributions. A northward shift of fishing effort would substantially change the degree of overlap with the EFH for many species (for example, opilio crab), and must be assessed.

The DEIS references the flawed conclusion reached in the EFH EIS that no effects of fishing on EFH are more than minimal, a conclusion with which we fundamentally disagree. See Oceana et al. comments on Essential Fish Habitat Draft Environmental Impact Statement. Recall that the EFH EIS was unable to determine the effect of fishing on EFH for 20 of 34 FMP species groups, yet concluded that the overall impact on EFH was 'not more than minimal' (Appendix B, EFH EIS). The EIS must address the effects of different harvest strategies on habitat in a credible manner.

c. Marine Mammals

In the November 30, 2000 Biological Opinion on the fishery management plans of the BSAI and GOA (FMP BiOp), NMFS concluded that the F<sub>40%</sub> harvest policy is "reasonably likely to reduce significantly" the availability of important prey to Steller sea lions, and is likely to reduce carrying capacity for sea lions significantly (NMFS 2000 FMP BiOp, pp. 225, 259). This cumulative, ecosystem-wide effect of fishing down stocks under the MSY-based fishing exploitation rates is compounded by the spatial and temporal concentration of fishery removals and localized depletions of the prey base. Therefore, the November 30, 2000 FMP-level BiOp concluded that adverse competitive fisheries effects occur at three temporal-spatial scales, including the "global" scale of the fishery catch policy as well as the regional and the local scale effects (FMP BiOp, p. 289). The catch policies evaluated in the DEIS must reduce TAC levels

for important sea lion prey, in addition to addressing the temporal-spatial impacts of concentrated fishing in sea lion foraging habitat.

The level at which region wide harvest levels are set, however, is not the only necessary step in accounting for ecosystem needs. For example, the spatial and temporal concentration of the catch can greatly amplify the effects of fishing. Simply setting a region wide TAC is a major limit in the current catch strategy, without consideration of the impacts at smaller spatial scales and in time. The spatial and temporal concentration of fisheries may have a significant and adverse impact on competition for prey. As the DEIS notes when considering impacts on Steller sea lions:

Fritz and Brown (2005) have examined a portion of Steller sea lion critical habitat and found Pacific cod harvest rates 5 to 16 times greater within a certain portion of critical habitat than the overall harvest rate for the BSAI. This may be a concern for potential localized depletion of prey if the Pacific cod available to Steller sea lions in the critical habitat area is not sufficient to support foraging.

DEIS at 8-20.

In addition to the impacts of the current harvest strategy on Steller sea lions, more consideration and analysis must be given to similar impacts to Northern fur seals. The DEIS notes:

Additional information has been developed regarding the potential impacts of the fisheries on fur seal, particularly regarding prey size and foraging location overlap with the groundfish fisheries. The following new information provides an indication that the size of prey may be the same for some foraging fur seals as pollock harvested by the fisheries and that some fur seals may forage outside of the Pribilof Island Habitat Conservation Zone. Therefore, the probability of adverse impacts from the fisheries may be higher than what we expected under the 2005 EIS for subsistence harvest of fur seals (NMFS 2005).

DEIS at 8-21. This information requires that additional alternatives be developed that reduce harvest of prey from fur seal foraging habitat (i.e.  $F_{75\%}$  for important prey species) and evaluate the efficacy of trawl exclusion zones.

Concerns that the preferred alternative, and even other alternatives with reduced catch levels, may have an impact on Northern fur seals and endangered Steller sea lions requires at a minimum that:

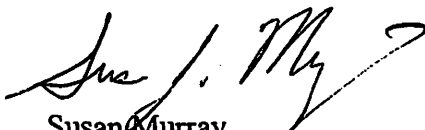
- 1) An additional alternative be analyzed that reduces catch levels for key prey species (i.e.  $F_{75\%}$  for pollock, Atka mackerel and Pacific cod), and
- 2) A new preferred alternative be identified that reduces competition between groundfish fisheries and these marine mammals.

## Conclusion

The approaches used for setting catch levels in the Gulf of Alaska, Bering Sea and Aleutian Islands have major implications for target species and the marine ecosystems. There are undoubtedly ecosystem level impacts and these impacts must be explicitly accounted for in considering harvest levels. We see a real need for developing and implementing an ecosystem-based management approach for fisheries in the North Pacific. Further, we recognize that this will be challenging. However, signs of concern, such as impacts to long-lived rockfish, the bycatch of target and non-target marine life, essential fish habitat and marine mammals, demands that precaution is taken. What is needed now is an ecosystem-based fishery management approach that will protect and maintain the health, productivity and resilience of the marine ecosystem while providing for ecologically sustainable fisheries and vibrant coastal communities.

We ask that the EIS address the issues raised above pertaining to an alternative that reduces the harvest levels below the sum of the OYs, with additional consideration and analysis of ecosystem-based fishery management, rockfish, bycatch, essential fish habitat and marine mammals. Ultimately, the preferred catch strategy must explicitly account for ecosystem needs and take precautionary measures to maintain biological diversity, healthy populations of apex predators and prey, local population structure (including gender ratio, size and age structure), healthy and intact habitats, and ecologically sustainable fisheries and vibrant coastal communities.

Sincerely,



Susan Murray  
Acting Director  
Oceana

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# TRUSTEES FOR ALASKA

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October 23, 2006

Robert D. Mecum  
Acting Administrator  
Alaska Region  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, AK 99802

Re: COMMENTS ON THE ALASKA GROUND FISH HARVEST SPECIFICATIONS  
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Mecum:

Thank you for the opportunity to comment on the Alaska Groundfish Harvest Specifications Draft Environmental Impact Statement (DEIS). These comments are submitted on behalf of the Center for Biological Diversity, The Ocean Conservancy, and the World Wildlife Fund.

As set forth below, we request that the National Marine Fisheries Service (NMFS) revise the DEIS to comply with the National Environmental Policy Act (NEPA) and to ensure that the harvest strategy and specifications adopted by the Secretary of Commerce comply with the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Marine Mammal Protection Act (MMPA), and Endangered Species Act (ESA).

The DEIS shares many of the problems that Trustees for Alaska and other organizations identified in their comments on the 2004 Programmatic Supplemental Environmental Impact Statement (PSEIS) on the Alaska Groundfish Fisheries. To the extent that the DEIS tiers to the PSEIS, Trustees for Alaska incorporates herein by reference its comments on the PSEIS.

## I. The Alaska Groundfish Fisheries Significantly Affect the Human Environment

The adoption of a harvest strategy and specifications for the Alaska groundfish fisheries would have environmental impacts that exceed those of most federal actions. This action would affect an area nearly twice the size of the State of Alaska, the 900,000 square mile North Pacific Exclusive Economic Zone (EEZ). PSEIS at § 1.2. The North Pacific EEZ is the source of over half of the commercial fish landed in the United States. *E.g.*, NMFS, *Annual Commercial Landing Statistics* (2006). These fish are essential prey for the many imperiled species in the North Pacific EEZ, including 25 species listed under the ESA. PSEIS at chs. 3-4, tbl. 3.4-1; DEIS at tbl. 3-2. It is thus appropriate that NMFS, after rejecting prior requests to prepare an environmental impact statement (EIS) for previous Alaska groundfish fisheries harvest

specifications. is preparing an EIS for this major federal action significantly affecting the quality of the human environment.

## II. NMFS Must Expand the Range of Alternatives in the DEIS

The DEIS contains an unreasonably narrow purpose and need statement that constrains the range of alternatives to an extent that violates NEPA, would result in violations of the MSA, and threatens violations of the MMPA and ESA.

An EIS must provide “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). The range of alternatives “is the heart of the [EIS]” and should provide “a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14. An agency must “[r]igorously explore and objectively evaluate all reasonable alternatives.” *Id.*; *Alaska Wilderness Recreation & Tourism Assoc. v. Morrison*, 67 F.3d 723,729 (9th Cir. 1995).

“The stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives and an agency cannot define its objectives in unreasonably narrow terms.” *City of Carmel-By-The-Sea v. U.S. Dep’t of Transp.*, 123 F.3d 1142 (9th Cir. 1997). According to the DEIS, MSA National Standard 1 provides the purpose and need for the groundfish harvest specifications:

Any fishery management plan prepared, and any regulation promulgated to implement any such plan, pursuant to this subchapter shall be consistent with the following national standards for fishery conservation and management:

(1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the *optimum yield* from each fishery for the United States fishing industry. . . .

16 U.S.C. § 1851(a) (emphasis added); DEIS at § 1.4.

“The term ‘optimum’, with respect to the yield from a fishery, means the amount of fish which—will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and *taking into account the protection of marine ecosystems*; [and] is prescribed on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant social, economic, or *ecological* factor.” 16 U.S.C. § 1802(28) (emphases added). *See also* 16 U.S.C. § 1802(5) (defining “conservation and management”). The harvest specifications for the Alaska groundfish fisheries must therefore “account for the protection of marine ecosystems.” 16 U.S.C. § 1851(a).

The MMPA and the ESA further govern the adoption of a harvest strategy and specifications for the Alaska groundfish fisheries. Under the MMPA, NMFS must ensure that this action helps restore the Northern fur seal and all ESA-listed species to their “optimum sustainable population[s].” *E.g.*, 16 U.S.C. §§ 1361(2), 1362(1)-(2), 1382(e), 1383b(b). Similarly, the ESA requires that NMFS ensure that this action does not prevent listed species from recovering to the point at which they can be removed from the list of threatened and endangered species. *E.g.*, 16

U.S.C. §§ 1531(b)-(c), 1533(f)(1), 1536(a); *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004).

NMFS purports to balance these mandates in the DEIS, asserting that “[t]he harvest strategy balances groundfish harvest in the fishing year with ecosystem needs (such as target and non-target fish stocks, marine mammals, seabirds, and habitat).” DEIS at 1-4. However, NMFS constrains the alternative harvest levels for the Bering Sea and Aleutian Islands (BSAI) management area within the optimum yield (OY) range provided in the BSAI fishery management plan (FMP). DEIS at ch. 2.<sup>1</sup> This OY range does not account for the protection of the ecosystem:

The OY range encompasses the summed [Acceptable Biological Catch specifications] of individual species for 1978-1981 (Low *et al.* 1978; and Bakkala *et al.* 1979, 1980, and 1981). This sum was used as an indicator of the biological productivity of the complex, although such use is not completely satisfactory because multi-species/ecosystem interactions are not taken into account explicitly. The 15 percent reduction from [maximum sustainable yield] reduces the risk associated with incomplete data and questionable assumptions in assessment models used to determine the condition of stocks.

BSAI FMP at § 3.2.3. In other words, the OY range in the DEIS accounts for the protection of fish “stocks,” but not for “the protection of marine ecosystems.” NMFS has thus provided a purpose and need statement that is limited by an OY range that violates the MSA by failing to account for “the protection of marine ecosystems,” as MSA National Standard 1 requires. The DEIS’ purpose and need statement is thus “unreasonably narrow” and results in a range of alternatives that violates NEPA.<sup>2</sup> *E.g., City of Carmel-By-The-Sea*, 123 F.3d 1142.

NMFS’ various justifications for eliminating ecosystem-protective alternatives suggested in scoping comments compounds these NEPA violations. Commenters asked NMFS to consider  $F_{50\%}$  to  $F_{60\%}$ ,  $F_{ABC/2}$ , and other harvest strategies to explicitly account for the protection of marine ecosystems. DEIS at § 2.5.1. NMFS not only eliminated these alternatives from further consideration because they would produce harvest levels outside the OY range provided in the BSAI FMP, NMFS asserts that Alternative 4 “embodies” or “replaces” such alternatives because it sets harvest levels at more “conservative” rates than the *status quo*. *Id.* This is untrue.

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<sup>1</sup> The BSAI FMP sets an OY range of 1.4 to 2 million metric tons. BSAI FMP at § 3.2.3. Alternatives 1 and 2 would produce harvests of 2 million metric tons in 2007 and 2008. DEIS at tbls. 2-1 & 2-2. Alternative 3 would produce harvests of 1.48 million metric tons in 2007 and 1.36 million metric tons in 2008. *Id.* Alternative 4 would produce harvests of 1.4 million metric tons in 2007 and 2008. *Id.*

<sup>2</sup> None of the alternatives for the BSAI – by far the most productive management area in the North Pacific EEZ (its 1.4 to 2 million metric ton optimum yield [OY] range exceeds the 116 to 800 thousand metric ton OY range of the Gulf of Alaska) – fall outside the OY range provided in the BSAI FMP or otherwise explicitly balance the proposed harvest with ecosystem needs, as MSA National Standard 1 requires.



As discussed above, a range of alternatives constrained by the BSAI OY range fails to account for the protection of marine ecosystems. This is true regardless of whether NMFS and the Council evaluate the Stock Assessment and Fishery Evaluation (SAFE) report or implement inseason management, actions which NMFS appears to claim satisfy its legal obligations under the MSA. See *id.* at § 2.5.2 (“NMFS and the Council consider the impacts of all harvested species on the ecosystem in the development and evaluation of the SAFE report and during implementation of inseason multi-species fisheries management practices.”). Such use of the SAFE report and inseason management fails to ensure that the Alaska groundfish fisheries achieve OY so long as NMFS constrains harvest specifications within the OY range provided in the BSAI FMP. Consequently, neither NEPA nor the MSA allow NMFS to eliminate these alternatives on the grounds that they would produce harvest levels outside the OY range provided in the BSAI FMP.<sup>3</sup>

The most problematic aspect of NMFS’ elimination of proposed alternatives is NMFS’ persistent misstatements of the law. For example, in response to a comment asking NMFS to “[s]et OY to include marine mammals getting a percentage of the catch,” NMFS provides the following:

Presumably this commenter would like to see the upper bounds of the OY ranges in the BSAI and [the Gulf of Alaska (GOA)] reduced. However, determination of OY is outside the scope of this action. A change in the upper limit of the OY in the BSAI would require Congressional action because the OY is specified in Section 803 of the Consolidated Appropriations Act of 2004 (Public Law 108-199). Changes in the lower limit of the OY in the BSAI, and of the upper and lower limits in the GOA, would require an FMP amendment.

DEIS at 2-23. This is incorrect. A determination of OY is within the scope of the adoption of harvest specifications (and thus arguably does not require an FMP amendment) because the MSA requires any “regulation” that implements an FMP – such as the harvest specifications – to *independently* achieve statutory OY. 16 U.S.C. § 1851(a). More importantly, a reduction in the upper or lower limits of the BSAI OY range would *not* require Congressional action because section 803 of the Consolidated Appropriations Act of 2004 provides that the BSAI OY “*shall not exceed 2 million metric tons.*” Pub. L. 108-199, 118 Stat. 110 (2004) (emphasis added). The Act merely caps the upper limit of the BSAI OY range, it does not set a floor for its upper or lower limits.<sup>4</sup>

NMFS similarly dismisses other comments suggesting that NMFS should prohibit trawling in critical habitat and “[s]pread out harvest levels through the year and disperse highly concentrated

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<sup>3</sup> Furthermore, we request that NMFS answer the basic question posed by these comments: Do TACs under any of the alternatives approximate  $F_{50\%}$  to  $F_{60\%}$ ,  $F_{ABC/2}$ , or otherwise explicitly protect marine ecosystems? The conclusory response that Alternative 4 is more “conservative” than the *status quo* does not provide a rationale for NMFS’ conclusion that Alternative 4 “embodies” or “replaces” the suggested alternatives.

<sup>4</sup> We also request that NMFS revise a similar misstatement of the OY mandate in the Consolidated Appropriations Act of 2004 that appears on pages 15 and 43 of the draft Biological Opinion on the Alaska Groundfish Fisheries.

fisheries in time and space to avoid localized impacts to habitat, non-target species, and other ecosystem components.” DEIS at § 2.5.3. To these comments, NMFS responds that “[h]arvest specifications are implemented within the context of existing closures. Additional closed areas would require regulatory change, specific detailed analysis, and are outside the scope of this action.” *Id.* Again, this legal analysis is incorrect. The MSA does not limit NMFS’ authority to implement time and area closures as part of the adoption of harvest strategies and specifications; in fact, the BSAI FMP authorizes NMFS to adopt “special groundfish management measures intended to afford species of marine mammals additional protection other than that provided by other legislation. *These regulations may be especially necessary when marine mammals [sic] species are reduced in abundance.*” BSAI FMP at § 3.5.3 (emphasis added); 16 U.S.C. ch. 38, subch. IV & §§ 1853(b)(2)-(3).

NMFS goes on to cite spatial and temporal apportionment measures such as the Steller sea lion protection measures and groundfish rationalization, respectively, to conclude that “NMFS and the Council have taken many actions to disperse the groundfish fisheries and see no basis on which to add additional measures into this analysis.” DEIS at § 2.5.3. This statement not only fails to demonstrate NMFS’ compliance with the laws that govern the adoption of a harvest strategy and specifications, it misses the fundamental point that *these protection measures have proven inadequate*. Groundfish harvest is spatially concentrated in Steller sea lion critical habitat despite the Steller sea lion protection measures. NMFS, *Draft Groundfish FMP Biological Opinion* fig. 4.22 (Sept. 7, 2006). Groundfish harvest is temporally concentrated in two large pulses (in late winter and late summer) despite groundfish rationalization and seasonal apportionments. *E.g.*, NMFS, *Alaska Region Inseason Management Report for 2004* (2004); Greenpeace et al., *Rethinking Sustainability* 99-105 (2006). The many imperiled species in the North Pacific EEZ that have failed to recover, including the Northern fur seal and the Steller sea lion, provide strong indication that these measures have failed. NMFS must improve upon this record starting with these harvest specifications.

It should be noted that the ecosystem-protective alternatives submitted by scoping commenters recognize the challenges NMFS faces in managing the Alaska groundfish fisheries. For example, the suggestion that NMFS consider an alternative to “[s]pread out” the harvest spatially and temporally recognizes these challenges by seeking to capitalize on the extensive work done on the “Low and Slow Approach” in the 2003 Steller sea lion supplemental EIS (SEIS). As the St. George Traditional Council explained in its scoping comments,

[t]o evaluate the spatial apportionment of the TAC, we would like to suggest evaluation of an alternative similar [to] the “Low and Slow Approach” described in the SSL SEIS and the Draft Programmatic SEIS for the Groundfish Fisheries (NMFS 2001a). Essentially, the approach seeks to establish lower [TACs] for pollock, Pacific cod, and Atka mackerel, prohibit trawling in critical habitat, and implement measures to spread out catches through the year. The advantage of drawing from this alternative is that you already have a wealth of existing background material which could be brought into the analysis. This would also be an

alternative that would be in accordance with the US Commission on Ocean Policy and Pew Oceans reports such that ecological constraints are quantified.

Letter from Chris Mercurief, St. George Traditional Council, to Sue Salveson, NMFS 2-3 (May 15, 2006). This proposed alternative is patently reasonable – and consistent with the recommendations of various blue-ribbon panels that have examined the management of federal fisheries – and NMFS should develop and analyze it in the DEIS. Not only does nothing prevent NMFS from doing so, NEPA, the MSA, the MMPA, and the ESA compel the agency to consider alternatives like the “Low and Slow Approach” that explicitly account for the protection of marine ecosystems and the imperiled species that live therein. 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1502.14; *Alaska Wilderness*, 67 F.3d at 729; *City of Carmel-By-The-Sea*, 123 F.3d 1142; 16 U.S.C. § 1851(a).

Finally, the DEIS fails to make clear whether the alternatives would lead to harvest specifications that help recover imperiled species, as the MMPA and the ESA require. For Steller sea lions, NMFS relies on the PSEIS to conclude that the alternatives would have “insignificant” effects because they “should not cause competition for key prey species that are likely to constrain the foraging success of Steller sea lions to the point of causing an overall population decline.” DEIS at 8-19. Likewise, for depleted Northern fur seals, NMFS applies this “overall population decline” standard to avoid finding “significant” impacts. DEIS at 8-22. This standard is inappropriate under NEPA, the MMPA, and the ESA, the last two of which require NMFS to *recover* imperiled species populations, not just maintain them at the brink of extinction. *E.g.*, 16 U.S.C. §§ 1361(2), 1362(1)-(2), 1382(e), 1383b(b), 1531(b)-(c), 1533(f)(1), 1536(a). *See* 40 C.F.R. § 1508.27 (directing agencies to consider “significance” under NEPA in light of “[t]he degree to which the action may adversely affect an endangered or threatened species or its [critical] habitat” and “[w]hether the action threatens a violation of Federal, State, or local law”).

For the foregoing reasons, the range of alternatives – the “heart” of the DEIS – contains an “unreasonably narrow” purpose and need statement that violates NEPA, would result in violations of the MSA, and threatens violations of the MMPA and the ESA.<sup>5</sup> NMFS must therefore recalculate the BSAI OY range and expand the range of alternatives in the DEIS accordingly to comply with NEPA, the MSA, the MMPA, and the ESA.

### III. NMFS Must Assess the Direct, Indirect, and Cumulative Impacts of the Alaska Groundfish Harvest Specifications.

The DEIS tiers to the PSEIS for its discussion of the impacts of adopting harvest specifications. DEIS at 1-10. While we support NMFS’ efforts to efficiently apply NEPA, this action

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<sup>5</sup> Further discussion of the fundamental problems with the range of alternatives in the DEIS are incorporated herein by reference from sections 5.3, 5.4, 7.0, and 8.0 (and associated subsections) of the attached comments on the PSEIS (entitled, in pertinent part, “Comments on the 2003 North Pacific Groundfish Draft Programmatic Supplemental Environmental Impact Statement”). NMFS must remedy the identified analytical shortcomings and flaws to the extent that they form the basis of the analysis in the DEIS.

incorporates into the DEIS the failure of the PSEIS to disclose the full impacts of the groundfish fisheries on the North Pacific EEZ. We thus incorporate herein by reference Part One section II and Part Two section I of our attached comments on the PSEIS (entitled “Structural Flaws and Selected Failures of Analysis”).

Our attached comments on the PSEIS demand that NMFS disclose the full impacts of the Alaska groundfish fisheries on the affected environment as it existed at the time NMFS prepared the initial FMP-level EISs for the GOA and BSAI in 1978 and 1981, respectively. *See* Mark Spalding, Alaska Oceans Program, et al., *Structural Flaws and Selected Failures of Analysis* pts. I & II (Nov. 6, 2003) (“NMFS must either include a comprehensive discussion of these effects in its cumulative impacts discussion, or change the baseline for its impacts analysis so that it begins when the FMPs were promulgated.”). Because NMFS failed to do this in the PSEIS, NEPA requires the agency to provide this assessment in the DEIS. NMFS may do this in its discussion of direct or cumulative impacts, depending on its choice of comparative baseline, but NMFS must include this discussion in the DEIS. *E.g.*, 42 U.S.C. § 4332(2)(C); 40 C.F.R. §§ 1502.16, 1508.7, 1508.8, 1508.25. *See Lands Council v. Powell*, 395 F.3d 1019, 1027 (9th Cir. 2005) (holding that the Forest Service violated NEPA by approving a timber harvest plan without taking “its required ‘hard look’ with respect to prior timber harvests”).

#### IV. Additional Comments

Each of the following paragraphs provide additional, specific comments on the DEIS.

The DEIS notes that “[t]he BSAI is divided into nineteen reporting areas, some of which are combined for harvest specifications purposes.” DEIS at 3-2. To provide adequate information to inform decisionmakers and the public, the DEIS must include raw data and a graph that depicts the harvests reported in these management areas.

The DEIS notes that “[t]o integrate [ecosystem-based management] into fisheries management, NMFS and the Council will need to develop policies that explicitly specify decision rules and actions to be taken.” DEIS at 3-10. We support mandatory regulations that incorporate ecosystem-based management as required by the MSA, and request that NMFS better explain in the DEIS the “policies” that ecosystem-based management would require.

The DEIS briefly discusses the effluent discharge from shore-based seafood processors. DEIS at 3-20. NMFS should add a discussion of the effects of effluent discharges from catcher-processors and other off-shore seafood processors in the North Pacific EEZ.

NMFS should more completely discuss environmental justice issues related to the subsistence halibut fishery in the DEIS. The DEIS states that “[w]hile [prohibited species catch (PSC)] limits on halibut are often closely approached in both the BSAI and GOA trawl fisheries, the limits themselves prevent, by design, adverse impacts to halibut stocks and associated subsistence fisheries.” DEIS at 13-18. NMFS should include a full environmental justice analysis of the halibut bycatch and bycatch trends of *all* federally managed fisheries, including

non-trawl fisheries, and provide the data on which it bases the claim that PSC limits “prevent” adverse effects on halibut stocks and subsistence fisheries.

Finally, NMFS must ensure that the cumulative impacts analysis in the DEIS presents timely information on environmental impacts, including emerging impacts like global climate change in the North Pacific EEZ and the recent adoption by the U.S. Minerals Management Service of a program of Outer Continental Shelf oil and gas activity that proposes lease sales in the North Pacific EEZ in the years 2007 through 2012. *See* 40 C.F.R. § 1502.24 (“Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.”).

## V. Conclusion

For the foregoing reasons, we request that NMFS revise the DEIS to comply with NEPA and to ensure that the harvest strategy and specifications adopted by the Secretary of Commerce comply with the MSA, MMPA, and ESA.

Thank you for considering these comments. Please contact me if you need further information.

Yours truly,

/s/

Justin Massey  
Staff Attorney

Cc: NOAA Office of Program Planning and Integration

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