ESTIMATED TIME

1 HOUR

MEMORANDUM

TO:

Council, SSC and AP Members

FROM:

Chris Oliver

Executive Director

DATE:

November 26, 2007

SUBJECT:

Protected Resources Report

ACTION REQUIRED

Receive report on Protected Resources issues and take action as necessary.

BACKGROUND

A. Update on SSL Recovery Plan, FMP Consultation, BiOp, and EIS

At the October 2007 meeting, the Council was briefed on the schedule for completion of the draft Revised Steller Sea Lion Recovery Plan, the ongoing FMP level Section 7 consultation, the status quo Biological Opinion, and an accompanying EIS. Since the Council envisions recommending changes to current Steller sea lion protection measures, the EIS would analyze those changes in light of the draft status quo BiOp and final Recovery Plan. NMFS recommended to the Council that a Notice of Intent (NOI) to prepare an EIS be published in the Federal Register as soon as possible upon approval of the Council (probably mid to late October 2007). The Council decided to ask NMFS to postpone publication of the NOI until the April 2008 Council meeting. At that time, the Council and NMFS would have the opportunity to further discuss the EIS schedule in light of the recently released final SSL recovery plan. The Council's motion, which includes their rationale for this request, is attached as Item B-6(a).

Since the October 2007 meeting, Council and NMFS staffs have worked to develop an alternative EIS schedule that would accommodate the Council's request yet allow for changes in SSL protection measures to be effective as soon as possible. During the Steller Sea Lion Mitigation Committee meeting of October 16-18, 2007 (minutes of that meeting are attached as Item B-6(b)), the SSLMC recommended that the Council ask for another schedule that would allow changes to fishing regulations to be effective for the 2010 fishing year. Anticipating that the Council would discuss this issue, staffs developed a revised schedule that would allow new regulations to be effective for the 2010 fishing year. That schedule is attached as Item B-6(c). NMFS has sent the Council a letter explaining this schedule and how the NOI and subsequent EIS process would unfold. NMFS requests that the Council reconsider its October 2007 action and allow a longer scoping period that would begin before April 2008 to allow more time for the public to review information and provide scoping comments. The NMFS letter is attached as Item B-6(d).

1

B. SSL Recovery Plan Comments Report

In May 2007, NMFS released for public review a revised draft of the Draft Revised Steller Sea Lion Recovery Plan. The Council convened a special meeting in August 2007 to review this plan and take public comment. The public comment period closed on August 20, 2007. NMFS received over 8,000 submissions in the form of form letters sent by email, 99 percent of which were in identical text. NMFS also received 20 submissions from individuals and organizations, which include the comments from the Council and its SSC. The Comment Analysis Report, prepared by URS Corporation for NMFS, is attached as Item B-6(e). NMFS is now in the process of finalizing the plan, with a target date for its release of March 2008.

C. Northern Right Whales

On October 29, 2007, NMFS published in the Federal Register a proposed rule that would designate critical habitat (CH) for the endangered North Pacific right whale (see attached Item B-6(f)). This Proposed Rule is partly a housekeeping issue. Based on a June 2005 court order, NMFS proposed to designate critical habitat for the North Pacific Ocean northern right whale in a FR notice dated November 2, 2005; the Final Rule was published July 6, 2006. At that time both the Atlantic and Pacific Ocean populations were part of one stock. However, genetic data indicated the North Pacific Ocean population was taxonomically a distinct stock, and on December 27, 2006 NMFS issued a Proposed Rule to separate the North Pacific population as a separate species. A Final Rule has not been issued.

Part of the ESA listing process is a requirement to designate CH. Since the North Pacific right whale has been proposed as a separate species, designation of its CH is necessary. But CH for this population had already been designated in late 2005; that designation was for CH for a population of right whales that was part of a group that included the Atlantic population. With separation of the North Pacific population from the Atlantic population, the CH already defined for the North Pacific right whale needed to be re-designated, and then published. Therefore, NMFS has published this previously-designated CH in this new October 29, 2007 FR notice. If that ain't confusing, I don't know what is. A chronology of events in the saga of the northern right whale in North Pacific waters is attached as Item B-6(g).

And finally, the National Marine Mammal Laboratory conducted a cetacean survey in 2007, specifically including surveys of the eastern Bering Sea and GOA for North Pacific right whales. None were sighted. A news story on the survey is attached as <u>Item B-6(h)</u>.

D. Petition to list the Black-footed Albatross

On October 9, 2007, the U.S. Fish & Wildlife Service (USFWS) published a 90-day finding on an Earth Justice petition to list the black-footed albatross as threatened or endangered under the Endangered Species Act (the FR notice is attached as Item B-6(i)). The USFWS determined that the petition presented substantial scientific or commercial information indicating that listing the black-footed albatross may be warranted and a 12-month review of the species' status has been initiated.

E. Cook Inlet Beluga Listing dEIS Update

In April 2007, NMFS issued a draft EIS on a proposed listing of the Cook Inlet beluga whale stock under the Endangered Species Act. The Federal Register notice requested comments from the public on this listing; the comment period closed on August 6, 2007. NMFS contracted with URS Corporation to prepare a Comment Analysis Report (CAR). According to that report, NMFS received the highest number of public comments the Agency has ever received on a prior proposed action – nearly 180,000. Of these, most were email form letters. An excerpt from the CAR that provides the issues raised over

listing the Cook Inlet beluga is attached as <u>Item B-6(j)</u>. Based on the comments received, as well as other data or new information on this population of beluga whale, NMFS will make a decision on whether to list the species.

F. Survey of SSL Nonpups in 2007

In June 2007, marine mammal scientists from the National Marine Mammal Laboratory (NMML) conducted an aerial survey of Steller sea lion adults and juveniles (nonpups) throughout the range of the western Distinct Population Segment (DPS). The survey methodology employed vertically-oriented medium format photography with manual counting of animals from photographs. This technique is the same as was used in the previous survey. In addition, the 2007 survey employed simultaneous vertically-oriented digital photography to test this procedure and equipment as a replacement for the medium format equipment that will be phased out in future years.

Results of the surveys are provided in the attached report (Item B-6(k)); counts and trends in population size are reported by survey subregion for the western DPS. Results indicate that, compared with the 2004 counts, SSL nonpup counts increased in the central and western GOA and the eastern AI regions, but decreased in the eastern GOA region and the eastern portion of the central AI region. NMML was unable to complete surveys in the western AI and only completed a portion of the survey of the western portion of the central AI region. For 2008, NMML plans to again conduct a range-wide nonpup survey, including the range of the eastern DPS, and survey emphasis will be on gathering data for the western portions of the AI. Pup surveys likely will not be completed until 2009.

G. Seabird Deterrence Exemption in Area 4E (SSC only)

At the February 2007 meeting, the Council approved changes in regulations for seabird deterrence. As part of the motion, the Council requested an analysis of a trailing amendment to exempt small vessels from seabird deterrence regulations in IPHC Area 4E. Available data suggested that exempting all or part of Area 4E might be appropriate, but an analysis of new short-tailed albatross satellite tagging data would be required to better inform such a decision. The Council requested that this analysis be conducted. Staff has developed an approach for the study of the STAL data which involves geospatial analysis techniques. Staff will present this approach to the SSC only at this meeting. The Council is scheduled to receive the draft trailing amendment analysis for initial review at its February 2008 meeting.

H. Integrated Weight Groundline Exempted Fishing Permit Research Report

In April 2005, the Council recommended approval of an Exempted Fishing Permit (EFP) to support a study of integrated weight groundline (IWG) as a seabird avoidance measure in the longline fisheries. The Federal Register notice describing the request for this EFP is attached as Item B-6(I). The EFP, granted to the North Pacific Longline Association, would continue experiments to develop effective devices for seabird deterrence during longline fishing activities previously conducted by the University of Washington Sea Grant Program. The IWG project began in the summer of 2005 with a separate P. cod allocation to cover harvests by two hook-and-line catcher/processors conducting the experiments. The EFP was required to allow the NPLA vessels to develop and test hook-and-line gear with improved effectiveness at seabird avoidance with certain exemptions from gear requirements, prohibited species catch (PSC) limits, fish retention restrictions and requirements, and improved retention/improved utilization (IR/IU) requirements. Ed Melvin with Washington Sea Grant will present the results of this research.

Earl's SSL motion under Staff Tasking, October 9, 2007

Earl Krygier moved the following:

The schedule for completion of the SSL Recovery Plan, the "status quo" BiOp, and the consideration of revisions to the existing SSL mitigation measures are closely linked. This schedule has been in flux for a number of reasons. NMFS has proposed that scoping be initiated now in anticipation of developing an EIS to analyze potential changes to the existing SSL mitigation measures. The Council believes that scoping would be premature due to the new schedule for preparation of the Recovery Plan and the BiOp. Therefore, the Council:

- Requests that the discussion regarding scoping be rescheduled to the April (2008) Council meeting. This discussion would follow the release of the final Recovery Plan now scheduled for March of 2008. The Council believes that the information contained in the final Recovery Plan will be important to inform the public about the issues and range of alternatives for possible mitigation measures, and thus important to meeting the objectives of scoping for the EIS.
- Include on the April agenda the discussion regarding scoping. At that time the Council will consider the new information in the Recovery Plan, discuss the purpose and action that might be initiated, and identify the possible range of alternatives, the relevant scientific information and other matters that should be included in the notice of intent to inform the public and achieve the goal of scoping.
- 3) Recommends that work continue on the 'status quo' BiOp and that it remain on the schedule for May, 2008.

Because there are no changes envisioned in the Status Quo BiOp there is no need for scoping until the Council considers changing the current mitigation measures.

The motion was seconded.

Ms. Salveson advised that under NEPA a Notice of Intent (NOI) should be published as soon as practicable after a decision is made to prepare an EIS. The purpose of a NOI is to provide an early and open process for identifying the scope of issues and identifying significant issues that might be related to the proposed action. The Agency is trying to integrate the NEPA process into the Council process so that a NEPA timeframe would not create delays in the Council process. In order to do that, the Agency thinks it is necessary to initiate a scoping process as soon as possible in the process. A delay of six months in the NEPA process will most likely create a delay in the ultimate rulemaking phase of the project.

The motion carried, 10 to 1, with Salveson voting no.

North Pacific Fishery Management Council Steller Sea Lion Mitigation Committee Meeting October 16-18, 2007 Alaska Fisheries Science Center, Seattle

Minutes

The Steller Sea Lion Mitigation Committee (SSLMC) convened in Seattle at the Alaska Fisheries Science Center on October 16-18, 2007. Committee members present were: Larry Cotter (Chairman), Jerry Bongen, Julie Bonney, Ed Dersham, John Gauvin, John Henderschedt, Dan Hennen (via video conference in Seward), Terry Leitzell, Dave Little, Steve MacLean, Stephanie Madsen, Max Malavansky Jr, Art Nelson, and Beth Stewart. Also present were Bill Wilson (Council staff); Dr. Doug DeMaster (NMFS AFSC); Kristin Mabry, Steve Lewis, Melanie Brown and Scott Miller (NMFS AK Region staff); Earl Krygier, (ADF&G); Mel Morris (Chairman, Alaska Board of Fisheries); John Lepore (NOAA General Counsel AKR); several AFSC and NMML scientists; and several members of the public. Chairman Cotter introduced and welcomed to the SSLMC two new members of the Committee, Stephanie Madsen and Beth Stewart. Ms. Madsen fills a seat vacated by Kevin Duffy and Ms. Stewart fills a seat vacated by Sam Cotten who was recently appointed to a seat on the Council.

Bill Wilson reviewed the agenda (attached), the work schedule for the coming several days, and the handout materials provided to each committee member. The minutes of the SSLMC's June 19-21, 2007 meeting were reviewed and approved.

Mr. Cotter reviewed the main goals of this SSLMC meeting. He characterized this meeting as being a transition from developing the proposal ranking tool to the process of analyzing proposals and developing a package of recommendations for Council review. He suggested that the SSLMC should develop a set of goals and objectives for the upcoming committee work, and identify some of the metrics against which the SSLMC will judge potential impacts of proposals. Mr. Cotter explained that at this meeting the SSLMC will hear reports on data sets that are available for proposal analysis, and go through proposals to identify additional data needs.

Mr. Wilson reviewed the results of the August 1-3, 2007 special Council and SSC meeting which was held primarily to review the May 2007 draft Revised SSL Recovery Plan. At that meeting, the Council requested that staff prepare a letter to NMFS outlining the Council's concerns with the SSL Recovery Plan. This letter was sent to NMFS on August 10, 2007, and is posted on the Council's website; the SSC minutes are also on the website.

Mr. Wilson also reviewed the results of the recent Alaska Board of Fisheries (BOF) Meeting held in Anchorage October 9-11. Mr. Mel Morris, Chairman of the BOF, gave details on the Board's actions. SSLMC members were provided with descriptions of several Board-generated proposals that could have effects on SSLs and which will be addressed by the BOF at their upcoming November 13-15, 2007 meeting in Homer.

DRAFT

Since these proposals are under active consideration, they were referred to the SSLMC to include in the Committee's proposal review process. Mr. Cotter stated that the Committee would include them, and these proposals would be part of the SSLMC's upcoming review. These proposals are:

- 395 Change definition of daily trip limits for commercial pollock vessels in the GOA
- 396 Re-evaluate allowing the State waters pollock fishery in Aleutian Islands to be prosecuted in 2008
- Reduce maximum vessel size to 60' or less LOA for State waters P. cod fishery in Aleutian Islands
- After the Aleutian Islands State waters P. cod A season is closed, allow P. cod pot fishery to continue to harvest until June 10 with catch counted against the B season GHL; change how gear sectors affect closing and reopening the State waters P. cod B season

Mr. Cotter asked if the State does not close the State waters pollock fishery in the Aleutian Islands, would a Section 7 consultation be triggered. Dr. DeMaster stated that it would, and NMFS would have to focus effort on that issue until a Biological Opinion (BiOp) on that particular action is prepared. The SSLMC discussed the ramifications of each of these proposals. Mr. Morris noted that the Board would address these concerns at its Homer meeting, November 13-15.

Melanie Brown reviewed a revised schedule for completion of the final Revised SSL Recovery Plan, the FMP-level consultation process, the development of a status quo Biological Opinion, and the accompanying NEPA process (which will involve development of an EIS). Discussion ensued, focusing particularly a shift in the initiation of scoping to April. This change in scoping schedule was prompted by a Council motion at its October 2007 meeting asking that scoping not be initiated until after the SSL Recovery Plan is completed; the Council felt that identifying alternatives upon which to base scoping would be more appropriate after the recovery plan is available. The SSLMC discussed the changes in this schedule, including postponement of completion of a final SSL Recovery Plan to March 2008 and the draft status quo BiOp to May 2008, and how the Committee's work on proposals will mesh with this schedule.

The SSLMC expressed concern over this new schedule, and the degree to which this schedule would delay implementation of new SSL mitigation measures to 2011 or perhaps later. Dr. DeMaster and John Lepore noted that this schedule considers the time necessary for NMFS to complete the recovery plan and BiOp in a manner that is risk averse and gives the agency a strong position to avoid litigation. In addition, this schedule allows for Council involvement in each step of the process during regularly scheduled meetings. The SSLMC requested that concern be voiced to NMFS over the length of time scheduled for the NEPA process. The SSLMC asked that NMFS look at the entire process of completion of the recovery plan, BiOp, EIS, and related actions, and develop a new regulatory schedule that would provide for implementation of new

DRAFT

mitigation measures no later than the 2010 fishing year. Mr. Cotter will contact the Council chair and make this request.

Mr. Cotter noted that the SSLMC must complete its work by May 2008 to keep the process on schedule. While it will be difficult to anticipate the content of the SSL recovery plan and its recovery criteria, the SSLMC must proceed with development of recommendations based on its current understanding of SSL biology and fishery interactions with SSLs. Dr. DeMaster added that, based on the Committee's familiarity with new data and SSL scientific studies, the SSLMC knows some of the more sensitive concerns (e.g. changes in 0 to 10 n mi around SSL sites, or large shifts in seasonal harvests), and therefore the SSLMC now is in a good position to know generally what kinds of mitigation measures may be realistic and which may not. Dr. DeMaster felt it was appropriate for the SSLMC to press on with the above schedule.

SSLMC Proposal Analysis Goals and Objectives

Mr. Cotter and Dr. DeMaster reviewed the process used by the old RPA Committee to develop a recommended set of alternative SSL protection measures that eventually were adopted by the Council in 2001. Mr. Cotter and Dr. DeMaster indicated their belief that the kind of approach used by the old RPA Committee might be helpful to follow, at least in part, as the SSLMC continues its work on proposals. The SSLMC has built a lot of expertise in its membership, and should now proceed with development of recommendations for changes in SSL protection measures for Council review and approval.¹

After a review of the 2001 RPA Committee's goals and objectives, the SSLMC then received an extensive review, presented by John Lepore, of Federal laws and Executive Orders that should be kept in mind as the Committee develops a suite of changes to SSL protection measures. In particular, this presentation focused on jeopardy and adverse modification of critical habitat decisions, and a summary of these presentations is provided immediately below. After hearing the presentations described below, the SSLMC adopted its goals and objectives for the upcoming months. These goal and objectives statements were modified later in the meeting to be clearer, and the final version is provided here:

3

[[]Editor's note from the June 19-21, 2007 SSLMC meeting: Once this recommended package is accepted by the Council, it would be considered the "proposed action" that would be the subject of the ongoing Section 7 consultation, culminating in a revised BiOp that would be presented to the Council in September 2008. This proposed action also would be folded into the NEPA analysis and would be analyzed in a draft EIS scheduled for completion and presentation to the Council according to the new schedule discussed at this October 2007 SSLMC meeting.]

Goal: Develop regulatory changes to the Atka mackerel, Pacific cod, and pollock fisheries' SSL mitigation measures that continue to meet the mandates of the ESA, MMPA, MSFCMA, and other applicable laws, while conserving marine biodiversity and sustaining viability of the diverse fishing communities dependent upon the Alaska fishery resources.

Objectives:

- Continue to avoid jeopardy and adverse modification.
- Encourage development of a sound experimental design for monitoring.
- Minimize adverse social and economic impacts.
- Minimize bycatch of PSC and other groundfish.
- Promote safety at sea.
- Minimize adverse impacts to threatened and endangered species in the BSAI and GOA.

The Committee discussed how proposals would be evaluated and what kinds of data it will require to assess impacts of proposals. Dr. DeMaster suggested that the SSLMC could, as part of meeting the above goals and objectives, consider retaining the zonal approach to evaluating fishery effects on SSLs as described in the 2001 BiOp and its 2003 Supplement. The SSLMC could develop weightings for each fishery type when prosecuted in the SSL site zones (0-3, 3-10, etc.). Some questioned that, since the Proposal Ranking Tool (PRT) already considers fishery effects in zones around SSL sites, doing so again might be considered "double counting"; others thought using this approach might be a reasonable means to check how the PRT scores comport with a specific metric to determine effects, keeping in mind that the PRT scores are meant to rank proposals, not assess their individual impacts. Dr. DeMaster suggested that the SSLMC will need metrics for conducting impact assessments. John Lepore concurred, reminding the SSLMC that there are two issues involved: the PRT ranks proposals relative to each other only, and it will be a different process to evaluate proposal impacts. John Hendershedt remarked that the SSLMC needs to address the larger issues of jeopardy and to be holistic, and futuristic, as it considers all aspects associated with jeopardy. Other metrics the SSLMC may consider are data on counts and trends at individual SSL sites and in regions; Dr. DeMaster also reminded the SSLMC that, as it considers impacts on SSLs, keep in mind that weaning of juveniles is now thought to typically occur when the juvenile is either one, two or even three years of age.

Federal Laws and Related Considerations

John Lepore, NOAA GC, presented an overview of certain laws and orders that the SSLMC should keep in mind as the Committee develops a recommended package of changes in SSL protection measures for Council consideration. His presentation focused on the ESA, MMPA, NEPA, RFA, and E.O. 12866.

The ESA requires "conservation" of ESA-listed species and the ecosystem upon which they depend. This includes considerations of recovery – i.e. to get a species off the List.

DRAFT

To do so, the Agency must consider the five standards used to list a species: habitat, over utilization, disease and predation, inadequacy of existing regulations, and other factors affecting a species' continued existence. The ESA requires defining critical habitat (CH), which includes elements of conservation and recovery of the species. The ESA also requires recovery planning, with recovery meaning the steps necessary for conservation and survival of the species.

Under the ESA, a recovery plan is a guidance document without force of law. It is discretionary, since circumstances can change after a recovery plan is written and approved, and the Agency has the latitude to diverge from recovery criteria as needed, but certainly with explanation and justification. The ESA also requires Section 7 consultations, which start with a Biological Assessment document that initiates a consultation and is the means by which the Agency determines if the proposed action is "likely to adversely affect" a listed species; if yes, the consultation proceeds through a formal process. In this latter process, the Agency then determines if the action is likely to cause jeopardy to the continued existence of the listed species or adversely modify or destroy its designated CH; this assessment is provided in a Biological Opinion. Mr. Lepore explained in more detail the standards under which jeopardy determinations are made.

The MMPA requires protection of marine mammals and their habitat. It provides for incidental take authorizations, and the Agency must consider current, authorized takes when writing a BiOp under the ESA.

NEPA requires evaluation of the proposed action's impacts on the human environment. The Regulatory Flexibility Act – RegFlex – requires preparation of an IRFA which defines the impacts on small entities from a proposed action. Fishing businesses are generally considered small entities. This act requires the Agency to determine that its action will not have undue or disproportionate adverse effects on small entities. Executive Order 12866 requires determination of the costs and benefits of regulations promulgated by the Agency to ensure that net benefits are maximized.

Mr. Lepore then reviewed two recent court cases on jeopardy and adverse modification (JAM) decisions. One involving the U.S. Fish & Wildlife Service was the *Gifford Pinchot* case, and the other involved NMFS in a 2004 BiOp.

Under Gifford Pinchot, the court ruled that conservation of a listed species is more than just survival; it also must include recovery. Destruction or adverse modification of CH could occur if enough CH is lost so as to threaten a species' recovery even if there remains enough CH for the species survival. The key here is that in determining JAM, an Agency must consider BOTH survival and recovery, not just one or the other.

Under the NMFS BiOp decision, the court determined that NMFS must consider recovery (impacts of an action on recovery) as well as survival in the consultation process. To get a species off the List, conservation of CH is required, and management

must include an analysis of actions necessary for both recovery and survival of the species in its BiOp.

Regarding the future SSL recovery plan, Mr. Lepore noted that the delisting criteria in the recovery plan must be considered when the Agency evaluates a proposed action in its jeopardy determinations. Mr. Cotter questioned whether the delisting criteria in the upcoming final recovery plan will be THE driver of the JAM determinations. Mr. Lepore noted that these criteria must be measurable and objective, and as such are important parts of the JAM determination process; the Agency, however, has some discretion in considering delisting criteria when making JAM determinations. Dr. DeMaster felt that the Agency definitely will use these criteria in future consultations and BiOps.

The SSLMC further discussed the meaning of "recovery"; Mr. Lepore noted that recovery is essentially equivalent to conservation in the ESA, and both terms mean a process for getting a listed species off the List. Recovery criteria inform the BiOp, and in the SSLMC process in the coming months both the recovery plan and the status quo BiOp will inform the SSLMC's final development of recommendations to the Council.

Databases and Analytical Support for Proposal Analysis

Steve Lewis, NMFS Alaska Region, gave an overview of databases that are available for the SSLMC to use during proposal analysis. Mr. Lewis also provided examples of analytical products that can be developed during this process. Mr. Lewis presented these databases, and how they were constructed:

- 1) VMS enabled catch in area database
- 2) Extrapolated observer data for the Atka mackerel, P. cod, and pollock fisheries
- 3) Extrapolated observer data by 154 SSL sites
- 4) Catch by vessel database

Mr. Lewis reviewed detailed elements of each database, anomalies in each, and how unobserved vessel data are treated. Examples of each database were illustrated, and Mr. Lewis gave a description of the kinds of analyses and products that can be generated from these databases. He also demonstrated a bathymetry mapping database, and illustrated how it might be used to inform the SSLMC's proposal review process.

Proposal Ranking Tool Review

Kristin Mabry led the SSLMC through a review of the process used to build the PRT, the elements and hierarchy within the PRT, how elements were weighted, and the implications of the SSLMC's final PRT structure. Ms. Mabry pointed out some general conclusions about SSLs and how they interact with fisheries that were reached by the SSLMC in its process of constructing the PRT:

- Effects of fishing are greater on SSLs than on the SSL prey field
- Effects of fishing on proximity and SSL site type are more important that what prey species are being harvested (and summer rookeries and nearshore zones are most sensitive)
- Summer is marginally more important to SSLs than winter

DRAFT

- More fish caught in a shorter period of time is more adverse to SSLs
- All regions in which SSL occur are equally important
- Seasonal/spatial importance of prey was inferred from scat data, acknowledging the limitations of these data

Ms. Mabry reminded the SSLMC that the PRT ranks proposals relative to each other, and does not constitute an impact assessment. The Committee still needs to conduct economic impact analyses, assessment of proposal effects on bycatch, analyses of proposal effects on fishery management and safety, and other analyses that consider the elements of jeopardy and adverse mod.

SSL Counts and Trends and the 2007 Surveys

Lowell Fritz reviewed count data from the 2007 SSL surveys conducted over the range of the western DPS. This year NMFS used a NOAA twin otter aircraft with both medium format and digital cameras. The medium format will phase out since the camera film is no longer manufactured. Mr. Fritz reviewed differences in how counts are made using both formats. In the future, digital holds promise for providing better data. The SSLMC discussed with Mr. Fritz the procedures used to compare and standardize counts using correction factors to keep a consistent time series of counts.

The 2007 non-pup surveys indicated an overall stability in the western DPS, with differences among regions. The trend site counts show a decrease in the eGOA with increases in the eGOA and wGOA subregions. The eAI showed a slight increase, but counts were poor for the cAI and no counts were obtained for the wAI.

The SSL survey/count program also attempts to obtain oblique 35 mm images where possible along with the vertical medium format and digital images, but this requires a second aircraft and thus coordination with other SSL researchers such as the University of Alaska or the Aleutians East Borough SSL programs. Oblique photos provide an opportunity to check counts made in the past using this technique along with counts made with current techniques. These opportunities provide NMML to re-check how both techniques compare.

Mr. Fritz reviewed several additional SSL programs and provided updates. Rookery versus haulout trends are both up, with western areas of the wSSL showing some decreases on haulouts. Mr. Fritz reviewed the Holmes et al. paper (Ecological Applications December 2007) on SSL natality that shows birth rate declines based on modeling studies of the wDPS. Brand/resight data show SSL movement varies by region and brand origin. Also, from these data survivorship calculations show a puzzling decline from birth to the first year, but then increases in survivorship in future years.

Survival studies show stable or increasing survival in both the eastern and western SSL populations based on resighting studies at Forrester and Marmot Islands. Compared with the fairly rapid decrease in survivorship at Marmot in 1987-1988, overall survivorship at

Marmot (females only) in 2000-2006 is stable and nearly the same as in the 70s and early 80s.

Proposal Review

Mr. Cotter reviewed the BOF-sponsored proposals provided to the Committee earlier in this meeting, and suggested that the following be added to the list of proposals to be considered in the SSLMC proposal review process. Those proposals are:

- Proposal #34 (BOF #395) Pollock daily trip limits in GOA
- Proposal #35 (BOF #396) Close state waters pollock fishery in AI for 2008
- Proposal #36 (BOF #397) Limit vessel size (all gear types) to <60' LOA in AI State waters P. cod fishery
- Proposal #37 (BOF #398) Open a P. cod fishery to pot vessels only in AI State waters after the BSAI A season closes; account catch in this A season fishery against B season allocation

The SSLMC agreed to include these proposals in the proposal review process.

Bill Wilson reviewed all of the proposals with the Committee to refresh memories and to provide opportunity for Committee members to clarify each proposal. No detailed discussion occurred; this was primarily a way to review each and to ask questions and clarify the proposal's intent. After this proposal review, Mr. Cotter suggested that the Committee might want to combine some obviously similar proposals (e.g. BSAI pollock A season start, or BSAI pollock A/B TAC split) and perhaps organize them by geographic region (BS, AI, and GOA). The SSLMC noted it does not want to loose the PRT scores for each individual proposal, and these scores will be retained in this process; there was agreement that some combinations should occur.

The SSLMC then agreed to the following proposal consolidation:

- Combine #1 and #29 (retain all options in both)
- Combine #2 and #27 (retain all options in both)
- Combine #10 and #17 (keep #17, drop #10)

The Committee discussed whether the Atka mackerel fishery proposals might be combined, but determined that both #8 and #33 should stay as is and separate from each other.

Ms. Mabry reminded the Committee that as proposals are refined, groups of proposals can be scored as a group by the PRT, allowing the SSLMC to rank groups of proposals relative to other groupings; in fact, the Council's SSC likely would require that this step be part of the overall process of developing a recommendation for the Council to consider.

The Committee proceeded to review each proposal in detail, identifying questions, data needs, analysis suggestions, etc. Part way into that process Mr. Cotter suggested that a subgroup convene to describe a series of generic data sets that likely would be needed for many of these proposals. By doing so, he felt that going through the list by the whole committee might be expedited.

The subgroup met to prepare generic data requests. Members of this group were Mr. Cotter, Wilson, and Lewis; Drs. Hennen and Hills; and Ms. Mabry and Brown. Those data requests were presented to the full committee the following day. A list of generic data and other needs is attached. The Committee would use many of these "generic" data to put proposals into an historic context. Mr. Cotter suggested that the SSLMC will need to be careful when looking at 2000 and 2001 data, since in 2000 the fisheries were under the Zilly injunction, and in 2001 fisheries were managed under one set of conditions in the early part of the year and another set of conditions later in the year. Some questioned the amount and level of detail of generic data needed for proposal analysis. Mr. Cotter noted that these data will be important to verify the nature and amount of data available on each proposal, and he further suggested that the SSLMC should be transparent in the review process and eventual decision making; i.e., the Committee should use, or have the ability to reference, any relevant or applicable data sets that are available.

The SSLMC then reviewed the remaining proposals to identify any additional, unique data sets that might be needed to evaluate each individual proposal. All proposal-related data needs were compiled into a table (see attached).

Some committee members noted that, in the process of analyzing proposals and reviewing data, alternative measures that are not specifically part of the proposals in hand may be identified; how might these be treated? Mr. Cotter noted that alternative ways to accomplish the intended goal of some proposals may be identified; Mr. Cotter noted that this is an anticipated part of the SSLMC's work, and alternative proposals, combinations of proposals, or variations on management measures might be analyzed in this process. The SSLMC should be able to suggest and analyze these alternatives as it moves through its work. This may be particularly evident since the Council has adopted, or intends to adopt, new measures that were not part of the management of fisheries when proposals were requested; thus, some measure of flexibility is required as the SSLMC moves forward.

Mr. Cotter requested that members of the SSLMC provide to Bill Wilson any additional data requests not listed on the attached table. These data requests should be provided no later than November 15, 2007. During this meeting, additional data needs were identified by Julie Bonney, Beth Stewart, Max Malavansky, Jerry Bongen, Dan Hennen, Chuck McCallum, and Thorn Smith; these needs are included in the attached list. All data will be brought to the next SSLMC meeting.

Mr. Cotter asked that the SSLMC review all of the Outside the Model Considerations (OTMC) previously identified for many of the proposals, and place these into categories based on the Objective statements developed by the SSLMC and adopted as goals/objectives for its future work. Ms. Mabry led the Committee through that process. The result was a table showing how these OTMCs related to the Committee's objectives. This list is attached to these minutes.

And finally, as part of the process of documenting this committee's work and decisions, Mr. Cotter noted that this process would be helped if each proposal writer developed a statement for each proposal about how that proposal would meet or satisfy each of the Committee's goals/objectives. Using the list referenced immediately above, and attached to these minutes, Mr. Cotter asked each proposer to write such a statement for each of their proposals, and send this statement to Bill Wilson no later than December 1, 2007. This statement will be an important part of documenting the Committee's decisions. It also will be helpful in starting the discussions and making decisions at upcoming SSLMC meetings.

Consortium SSL Research Update

Dr. Andrew Trites, University of British Columbia and North Pacific Universities Marine Mammal Research Consortium, provided brief updates on new Consortium SSL research. In a feeding experiment where SSLs were fed a low ration and as a result measured weight loss was 15%, when fed again during winter the animals readily gained weight back, but when repeated in summer the animals were unable to regain weight unless fed in considerable excess. Findings suggest there may be a different physiological mechanism SSLs employ to metabolize food depending on season; are SSLs "used to tough times in winter" and therefore genetically adapted to having the ability to readily put on weight in that season?...and less so in the summer when food maybe more available and easy to get and weight gain is not as large an issue? Based on this and other recent work, Dr. Trites intends to update his nutrition model. He also reported that he plans to study effects on nutrition on female SSL ovulation using captive animals.

Dr. Trites also reported that two new papers will be coming out soon, one from Dr. Paul Wade and colleagues and another by Dr. Trites and his group, both focusing on additional discussion, and refutation, of the megafaunal collapse hypothesis. Both papers provide additional evidence that commercial whaling was not connected to declines in SSLs or fur seals.

Next Meeting and Work Schedule

Mr. Cotter stated that the Committee needs to meet as soon as possible, once the requested data sets and other items are prepared and available. The SSLMC must work through the proposals and develop some initial, though preliminary, products by early to mid March when the final recovery plan will be released. Mr. Cotter acknowledged that maybe more than one meeting will be necessary to get through all data for all proposals and discuss and deliberate each, and develop an initial product. Given the uncertainty, Mr. Cotter suggested January 2008 for the next meeting. Based on a variety of conflicting meetings and events, January 6-8, 2008 at the AFSC was the decision for the next meeting. Mr. Wilson will look into a meeting site for the first day, January 6, since it is Sunday and the AFSC may not be available; he also will send out reminders.

DRAFT

<u>Adjourn</u>

The Committee adjourned at 11:15 a.m. October 18, 2007.

Bill Wilson

Bill.wilson@noaa.gov

North Pacific Fishery Management Council Steller Sea Lion Mitigation Committee Meeting Alaska Fisheries Science Center October 16-18, 2007

Purpose: Initiate proposal analysis, review databases and demo products, adopt goals, identify information needs and develop data requests. Review Council meeting on SSL Recovery Plan.

AGENDA

October 16 - 8:30 AM - 5:00 PM

- 1. Introductions and Opening Remarks, Announcements, Agenda Approval (Cotter)
- 2. Minutes of Last Meeting (Wilson)
- 3. Update on August 2007 Council Meeting in Anchorage (Cotter, Wilson)
- 4. Updates on Other Meetings, Etc.
 - (a) Board of Fisheries Meeting October 9-11 (Wilson)
 - (b) October Council Meeting and New EIS Schedule (Brown)
- 5. Initiate Proposal Analysis (Cotter)
- (a) Review 2001/2002 RPA Process and Criteria (Cotter, DeMaster)
- (b) Review Applicable Federal Laws and Orders (Lepore)
- (c) Review Jeopardy and Adverse Modification Standards/Criteria (DeMaster, Lepore)
- (d) Adopt SSLMC Goals and Objectives (All)
- (e) Review and demonstrate data bases available for proposal analysis (Lewis)
 - VMS Enabled Catch-In-Areas database by GIS shapefile 2003 2006. This is a product that transfers the attributes of a shapefile, e.g., 0-3, 3-10, 10-20 n mi to the fully accounted databases: Catch Accounting System. It will automatically split the database records as necessary to facilitate this process. Includes the attributes found in the Catch Accounting System to include Vessel ID, Vessel Class, Processing Sector, Fish Caught Code, Target Code, Directed Fishery Code, NMFS Reporting Areas, Tons, Date, and many other items. Fully accounts for unobserved vessel classes such as smaller vessels and jig vessels. It uses both VMS and Observer point data to process GIS data into the database.
 - VMS Enabled Catch-In-Areas database by Area 2003 2006. Has all groundfish catch by state statistical area and is currently being made available in smaller 20km and 5km blocks. Also includes all the attributes found in the Catch Accounting System.

DRAFT

- Catch of Atka m, pollock, P cod inside/outside CH, by zone, by year, updated through 2006. Updated tables from 2003 Supplement to 2001 BiOp. Tables generated from database listed above.
- Observer Data 1992 2006. Observer data unextrapolated.
- Observer point data coarsely extrapolated to Blend and Catch Accounting for <u>P.cod</u>, pollock, and Atka mackerel. Does not account for unobserved or lightly observed vessel fleet.
- <u>Catch By Vessel/Catch In Areas By State Stat Area: 1995 2001</u>. This is a
 combination of Observer Data, Fish Ticket Data, and WPR data to account for the
 catch. Includes most of the information found in Blend/Catch Accounting System
 data. The resolution is the state stat area.
- <u>Catch by SSL Site Location</u>. Database includes expanded observer data and analysis for each of the 151 Steller sea lion sites individually. Where the 20nm buffers of CH overlap, so do the catch data, but this allows analysis of catch around the sites individually. Data is query-able by individual site.
- A series of lookup tables to discriminate between fleets of vessels.
- Lookup tables for economic analyses.
- <u>Bathymetric data</u>. More detailed bathymetry products can be generated to examine portions of a region's bathymetry perhaps even overlay it with SSL telemetry or other data.

October 17 - 8:30 AM - 5:00 PM

- (f) Review updated SSL count and telemetry data (Fritz, Gelatt)
- (g) Initiate Proposal Analysis Using Available Databases and OTMCs
- (h) Identify Information Needs and Develop Data Requests

October 18 - 8:30 AM - 5:00 PM

- 6. Continue Proposal Analysis
- 7. Discuss Committee Meeting Schedule
- 8. Action Items, Closing Remarks, Adjourn (Cotter)

Public comment periods will be provided during the meeting.

Contact Bill Wilson at the Council offices if you have questions: 907-271-2809 or bill.wilson@noaa.gov

Generic Data and Other Proposal Review Needs for Evaluating Proposals to the SSLMC

Fisheries

Create GOA database that would allow us to look at:

- Pollock and P. cod catch and incidental catch (PSC and other groundfish)
- Catch by week, gear, vessel size, and by sector, value, location (State stat areas) 1996-2007
- Earlier data are limited because do not have VMS data and limited spatial resolution. VMS data is done in 10 km blocks and can be queried.
- Steve can provide temporal animation of data.

Create same database for BSAI for pollock, P. cod, and Atka mackerel.

Express results in maps of prey species fisheries and also need data/maps of sideboard fisheries.

Economic data on pollock roe from industry by mid December to Bill. Differences in roe grade over time. This was discussed later, and Wilson paper on early A season may suffice for now.

Value of Atka mackerel inside and outside HLA, including discard rates.

Fishing speeds to help with determining fishing behavior with VMS data - provided by industry.

Request proposals be reviewed by NMFS Inseason and Enforcement people

Prey species distribution (SAFE document, EFH adult distributions). Need to differentiate between size available for prey and size available to fishery if possible.

SSLs

Percent of CH (SSL protection area) closed in a region. Zonal accounting of CH open vs closed based on 0-3, 3-10, 10-20, and CH outside 20. Obtain from NMFS PR and Analytical Team

SSL trends in area over time. (Dan H. has data by rookeries, and Lowell F. provided data by larger areas.) Steve L. can provide data on change in fishing in CH (Either site specific or by larger area).

Percent of protected area.

Need maps showing the current SSL protection zones, and maps of the zones around SSL sites if a new classification of sites (based on new SSL counts) is adopted.

SSLMC Objectives

- 1. Continue to avoid jeopardy and adverse modification.
 - Is there additional fishing effort inside of SSL critical habitat?
 - Does the proposal provide trade-offs that reduce the total negative effects to SSL?
 - Does the proposal open a substantial amount of critical habitat?
 - Does proposal indirectly provide protection to additional sites?
 - Does proposal indirectly affect nearby SSL sites?
 - Does proposal affect important research site? (e.g. Chiswell)
 - Does proposal offer additional measures to control fishing rate or effort?
 - Does the proposal affect an SSL site that has special importance? (e.g. Marmot)
 - Does the proposal reduce the no-fishing time between end of year (December) and first of year (January) fisheries at a critical time for SSL?
 - Does proposal shift effort into a time/space or prey availability level that may have negative effect on SSL?
 - Does the proposal affect the number of fishing days required to harvest the quota?
- 2. Encourage development of a sound experimental design for monitoring.
- 3. Minimize adverse social and economic impacts.
 - Does the proposal provide economic benefits?
 - What is the impact upon harvesting and/or processing efficiency?
 - Does the proposal have any effects on other fisheries?
 - Will the proposed action be further affected by recent or pending council actions?
- 4. Minimize bycatch of PSC and other groundfish.
 - Does the proposal potentially create bycatch issues in other SSL prey species?
 - Does the proposal potentially create bycatch issues in PSC species?
- 5. Promote safety at sea.
 - Does the proposal reduce or increase safety for the fleet?
- 6. Minimize adverse impacts to threatened and endangered species in the BSAI and GOA

Data needs for selected proposals as identified by the SSLMC. Most of the data are provided by the generic database. Bold items are not available from the generic database.

Proposal	Data needs	Who provides data
1/29	Roe value to determine the economic benefit, (Wilson's paper with proposal provides sufficient information on this)	Bill's memo, SSLMC
	• Effect on other fisheries and regions (16 vessels AFA and not sideboarded moving into the GOA). Post season issues with flatfish and cod (all gear). (Amd. 80/85) yellowfin not included	NMFS Inseason management and Industry
	 Impact on Chinook bycatch, seasonal, Salmon Bycatch rates during season. First week and last week of fishing in last five years. Where does fishery occur now on Jan. 20. Historical info on where fisheries occurred before the 1/20 date. 	 NMFS Inseason, current salmon bycatch EA, info from Seastate, (recent trends), NMFS
	CPUE during the season or days vessels out	• NMFS
	 Shoreside plant concerns Geographic distribution of fixed gear fleet for 5, 10, and 15 days at beginning of A season. 	SSLMC or industryNMFS
2	 Where fishing takes place outside of CH during the A season in BS Compare Chinook bycatch at the end of A season with Chinook bycatch at the end of the B season Value of non-roe fish vs roe fish 	NMFSNMFS
3	CP pot cod vessels catch rates and season endings. Weekly in past 5	NMFS NMFS
	 Location of fishing effort for CP longline and pot cod in BS in B season vessels vs CVs (Competition) Need maps by week with overlay, total catch by location. 	• NMFS

1	CP hook and line BSAI P. cod catch data by location	 NMFS
	All BS fisheries by season, gear, by week, and location	NMFS
	 CPUE by week in the B season and compare to CPUE at the end of the 	NMFS
	A season	NMFS/ AFSC
	Seabird and halibut bycatch	 NMFS and industry
	Efficiency of fishery	 Industry and NMFS
	Safety and weather	(seabird EA for
		weather)
	VMS data back to when it started	NMFS
8	for Atka mackerel	
	Atka mackerel distribution	 NMFS/AFSC
	(tagging study)Zonal catch activity around sites	• NMFS
	 ID areas that are important 	_
	regarding fishing and ssl trends,	SSLMC
	what trade off may be important	
9	Cod fishing effort in open period	NMFS
7	back through time	
12	Proposed rookery designation and	 NMML and PR in draft
12	site counts	biop
19	Report from cameras at St.	Max
	George (Max has)	
	 Zonal catch activity around sites 	• NMFS
21	What was result of opening zones	NMFS
	in 2004 in GOA, who ended up	
	fishing there. Compare to what	
	proposal said would happen.	
22	% of total area of SSL CH in areas	 NMFS
	WAI, CAI, EAI/EBS, WGOA,	
	CGOA, EGOA (by SSL area	
	definitions, not fish management	
	area definitions)by:	
	Rookery 0-3, 3-10, 10-20	
	Haulout 0-3 (not Rookery 0-10), 3-10 (not Rookery 0-10)	
	Foraging Area (not Rookery 0-10 or Haulout 0-3)	

State water (not Rookery 0-10 or Haulout 0-3)

 % of total area of SSL CH in areas WAI, CAI, EAI/EBS, WGOA, CGOA, EGOA (by SSL area definitions, not fish management area definitions) broken out by "Open to Pollock vs Closed to Pollock" by

Rookery 0-3, 3-10 and 10-20

Haulout 0-3 (not Rookery 0-10), 3-10 (not Rookery 0-10)

Foraging Area (not Rookery 0-10 or Haulout 0-3)

 % of total pollock catch 2002-2006 in areas EAI/EBS, WGOA, CGOA, EGOA (by SSL area definitions, not fish management area definitions) broken out by "Open to Pollock vs Closed to Pollock" by

Rookery 0-3, 3-10, 10-20

Haulout 0-3 (not Rookery 0-10), 3-10 (not Rookery 0-10)

Foraging Area (not Rookery 0-10 or Haulout 0-3)

Outside CH

 % of total pollock catch and average CPUE in the 1990's of SSL CH in areas WAI, CAI, (by SSL area definitions, not fish management area definitions) broken out by

Rookery 0-3, 3-10, 10-20

Haulout 0-3 (not Rookery 0-10), 3-10 (not

Rookery 0-10)

Foraging Area (not Rookery 0-10 or Haulout 0-3)

Outside CH

State water (not Rookery 0-10 or Haulout 0-3)

 % of total pollock catch and average CPUE in the 1990's of SSL CH in areas 541/542/543 and by 2 degree longitude blocks broken out by

Rookery 0-3, 3-10, 10-20

Haulout 0-3 (not Rookery 0-10), 3-10 (not Rookery 0-10)

Foraging Area (not Rookery 0-10 or Haulout 0-3)

Outside CH

State water (not Rookery 0-10 or Haulout 0-3)

- Pollock summer bottom trawl survey biomass distribution by 541/542/543 and by finest strata used in survey/stock assessment process.
- Estimate of present ex-vessel and 1st wholesale value per ton of AI pollock using historic AI pollock size distributions and roe recovery rates.

For GOA, use the fish ticket data for the smaller vessels. Don't try to extrapolate from VMS data from larger vessels.

Draft Steller Sea Lion Measures Development Timeline (11/14/07) - assumes that all key events and document releases occur on schedule and that key staff are available to accomplish analytical workload.

						2008						
SSL Project Components	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Council Meetings		SSLMC status report on proposals		Review final Recovery Plan and SSLMC progress report		Review Status Quo BiOp, SSLMC recommendations, and EIS scoping report and recommend (1) range of alternatives for EIS analysis and (2) preliminary preferred alternative for Action BiOp						
SSLMC Review Proposals and Recommend Alternatives	Propos	sal analysis	(2) Review final recovery plan and compare with proposal	·	(2) Review Status Quo BiOp and finalize recommendations						1	
ESA Documentation			(1) NOA and Release Final Recovery Plan		(1) Release draft Status Quo BiOp - May 1	Develop Action Biological A prelim prefe	Assessment bas	sed on Council	De	velop draft Action	BiOp	Release draft Action BiOp
NEPA, Regulatory Flexability Act, and EO 12866 Documentation				NOI for EIS, 30- day scoping period	Develop scoping report	Scoping report to Council - June 1			Develop dra	ft EIS/RIR/IRFA	i i	1
						i ja						

AGENDA B-6(c)

2009										2010		
jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan
	(1) Review preliminary DEIS/RIR/IRFA, draft Action BiOp, SSLMC comments, and CIE review and (2) Chose preferred atternative				Take final action based on final Action BiOp, DEIS/RIR/IRFA, and CAR							
SSLMC review of draft Action BiOp			·									
CIE Review		Complete fin	al Action BiOp	Final Action BiOp to Council								
Preliminary DEIS/RIR/IRFA to Council		Publish DEIS/R comme	IR/IRFA, 45-day nt period	Develop Comment Analysis Report (CAR) and submit to Council				Sign ROD with final rule				
						<u> </u>						
				Council	Develop propo	osed rule	Publish prop	osed rule, 30-	Respond to	comments and p final rule	Publish final rule	Fi



UNITED STATES DEPARTMENT OF Commence National Oceanic and Atmospheric Administration

National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802-1668

November 20, 2007

Mr. Eric Olson, Chairman North Pacific Fishery Management Council 605 W. 4th Avenue #306 Anchorage, AK 99501-2252 RENOVE 2007

N. DR.

Dear Mr. Chairman:

Working with Council staff, we have revised the project schedule for revisions to the Steller sea lion protection measures and enclosed a new draft timeline for the Council's consideration. This ambitious schedule would provide for the final rule to be effective in January 2010, and incorporates the Council's recommendation to initiate scoping for the environmental impact statement (EIS) in April 2008. To achieve the requested effective date, all of the milestones must be met by the month projected in the schedule. A delay in any of the milestones likely would delay implementation beyond the January 2010 goal. The schedule includes several major milestones and coordination issues that are further described below.

Recovery Plan and EIS Scoping

In October 2007, the Council recommended that NMFS delay the publication of the Notice of Intent to develop an EIS until April 2008. This delay of the scoping period is intended to ensure the final recovery plan would be available to inform the public during the EIS scoping period. The final recovery plan is scheduled for release in March 2008. We agree that the final recovery plan could provide important information to anyone participating in the EIS scoping process. To ensure adequate time for the public to review information, and provide scoping comments, we recommend the Council reconsider its October action and provide for an extended scoping period which commences before April 2008. A scoping period of 60 days starting at the end of February or early March would provide the opportunity to review the final recovery plan before the end of the scoping period and would provide an additional 30 days for developing and submitting comments. The scoping period would close before the end of April to provide time to develop the scoping report for the Council's consideration in June.

Status Quo Biological Opinion and EIS Alternatives

In June 2008, the Council is scheduled to recommend a range of alternatives for analysis and a preliminary preferred alternative that could be analyzed in the action biological opinion. The alternatives will be used in the EIS, Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis (IRFA) to support the action. The Council should consider the following



three items when recommending alternatives: (1) the status quo biological opinion, (2) the EIS scoping report, and (3) recommendations from the Council's Steller Sea Lion Mitigation Committee (SSLMC).

The status quo biological opinion is scheduled for release May 1, 2008. The status quo biological opinion will inform the Council and the SSLMC of the impacts of the status quo fisheries on Steller sea lions and their critical habitat.

The primary sources of information on alternatives to status quo will be the SSLMC recommendations and the EIS scoping report. In May 2008, the SSLMC is scheduled to provide to the Council the committee's recommended revisions to the Steller sea lion protection measures. These recommendations would be based on the committee's analysis of proposals, the status quo biological opinion, and the final recovery plan. The scoping report will inform the Council on public comments received during scoping on the range of alternatives and issues to be analyzed.

Action Biological Opinion and EIS/RIR/IRFA

Following the above activities, the next major milestone is the release of the draft action biological opinion and preliminary draft EIS/RIR/IRFA. The draft action biological opinion would be released in December 2008, to provide time for the Center for Independent Experts to review it and provide comments to the Council in February 2009. If desired by the Council, this time period would allow for additional review and comment by the SSLMC as well. At the February 2009 meeting, the Council also would review the preliminary draft EIS/RIR/IRFA and recommend whether it should be released to the public. If the Council recommends publication, NMFS would publish the draft EIS/RIR/IRFA and release the document for public comment.

In May 2009, NMFS would release the final action biological opinion and the comment analysis report summarizing and responding to the public comments on the draft EIS/RIR/IRFA. With this information, the Council would be able to take final action in June 2009. After Council final action, NMFS would produce the final EIS/RIR/IRFA and commence the rulemaking process with the goal of having the revisions effective in January 2010.

We appreciate your patience and input on the development of a schedule for assessing potential revisions to the Steller sea lion protection measures. We look forward to continuing to work with the Council and the SSLMC to coordinate and complete this complex process.

James W Balsiger

Administrator, Alaska Region

Enclosure (Draft SSL Measures Development Timeline 11/14/07)

COMMENTS ON DRAFT REVISED STELLER SEA LION (SSL) RECOVERY PLAN October 2007

Submissions

Section 1: Form Letters via email

There were 8,058 submissions received via email during the comment period, which took place from May 21 until August 20, 2007. The majority of these (8,046 or 99.8 percent) were form letters submitted by supporters of Greenpeace. By running a word count algorithm on each document and comparing each letter to the standard form letter, we determined that more than 99 percent (8,023) of the form letters were the same (i.e., no text was added or modified). Of the remaining 13 emails, three were comments on another project and five were duplicates submitted as attachments of the hard copy submissions already received. Five submissions were identified as having unique content. These comments, as well as the text from the standard form letter, were analyzed and the concerns expressed have been summarized which are included in Section 2. Figure 1 in Appendix A shows the email submissions received by date.

Geographic Distribution

Email submissions were overwhelming from addresses in the United States and its territories. The top five states include: California (1,404), New York (571), Florida (419), Texas (331) and Illinois (287); 633 submissions did not have enough information to identify the location of the sender. Comments were received from North (7,452) and South (7) America, Europe (138), Asia (6), Australia (9) and Africa (1). The United States submitted the most comments (6,867), followed by Mexico (154), Canada (43), Great Britain (41) and France (20), with 418 not identified. Figures 2-4 in Appendiz A illustrate the distribution.

Section 2: Written submissions and peer review comments

NMFS received comments from 20 individuals and organizations during the comment period. Comments were provided by the U.S. Marine Mammal Commission, the State of Alaska, the North Pacific Fishery Management Council (NPFMC), members of the fishing industry, non-governmental organizations (NGOs), members of academia and other interested parties. These submissions and peer review comments are listed below:

Date Submitted	Name	Organization
6/28/2007	Goldsworthy, Simon	Center of Independent Experts
6/28/2007	Hindell, Mark A.	Center of Independent Experts
6/29/2007	Harwood, John	Center of Independent Experts
7/20/2007	Benton, David	Marine Conservation Alliance
7/31/2007	Benton, David	Marine Conservation Alliance
7/31/2007	Bowen, W.D.	North Pacific Research Board
7/31/2007	Boyd, I.L.	Sea Mammal Research Unit, St. Andrews
8/10/2007	Madsen, Stephanie D.	North Pacific Fishery Management Council
8/16/2007	Gauvin, John R.	H&G Workgroup
8/17/2007	Fraser, David	Adak Fisheries LLC
.8/19/2007	Trites, Andrew W.	North Pacific Universities Marine Mammal Research Commission
8/19/2007	Young, Sharon	Humane Society of the United States
8/20/2007	Livingston, Pat	Scientific and Statistical Committee to NPFMC
8/20/2007	Cummings, Brendan	Center for Biological Diversity
8/20/2007	Hocevar, John	Greenpeace
8/20/2007	Ragen, Timothy J.	Marine Mammal Commission
8/20/2007	Brune, Jason	Resource Development Council
8/20/2007	Lloyd, Denby	Alaska Department of Fish and Game
8/20/2007	Boyd, I.L.	Sea Mammal Research Unit, St. Andrews
8/20/2007	Stump, Ken	Oceana, Inc.

All submissions were carefully reviewed and the main substantive concerns summarized. The following section presents the summaries of the concerns expressed in each letter. The summary statements have been organized based on the same structure used in the response to comments prepared by NMFS for comments on the 2006 Draft Recovery Plan to facilitate comparison. Only substantive comments are summarized below. Comments that simply reiterate Plan content have not been included here.

Population Structure

- Based on the current evidence it seems likely that the SSL population is really one
 contiguous metapopulation with clines in genetic diversity through the long coastal
 range. The evidence for the separation of the wDPS from the eDPS is very weak and
 undermines the fundamental basis for the ESA classification. NMFS should revisit this
 classification of the population structure and reexamine their management strategy and
 legal obligations for SSLs under the ESA.
- NMFS should expand the discussion of alternative classifications to the current legal structure of two distinct populations (i.e. metapopulation, substructure within the eDPS, a distinct Asian population) and include criteria for how such population structure determinations would be made. The SSLRP should explore what these different classifications would mean in terms of ESA status, management, and recovery.
- The SSLRP should explore in depth the current data and reasons for the division of
 eastern and western DPSs. It appears that there is considerable intermixing of these
 populations and they may be more appropriately considered one stock.

Population Status and Trends

- In the section concerning pup versus non-pup surveys, there needs to be some background to explain the history of population surveys. Why are counts of non-pups a priority when pup counts should be more accurate and give more information on vital rates?
- Place-names referred to in the text should be present in the figures; e.g. Samalga Pass, Kenai-Kiska regions all appear to be significant place names or geographic regions, yet they are not readily discerned in the figures.
- Regarding marine habitat use (section F2), it is unclear how extensive the data set on foraging actually is (i.e. numbers of seals tracked, breakdown of gender, age and location). It would be helpful to be more explicit in this section.
- The trend analyses described in the background (p. 21) were conducted using linear regression of natural logs of the counts. There have been some recent improvements in the analysis of population trends using General Additive Models (GAMS) (DeLittle, Bradshaw et al. 2007; Van den Hoff, Burton et al. 2007) which should be explored.
- Throughout the document (e.g. p. 23), estimates of stocks and population sizes are
 presented without their associated errors. It is not clear if this was because none had been
 calculated, or whether they were left out for the sake of brevity. Inclusion of error
 estimates would be immensely helpful.

Western DPS Status

 Greater reference to age and seasonal differences in diving and movement and availability of prey and distribution of predators would have resulted in a more valuable characterization of marine habitat.

- Some sections split the wDPS into Russian and/or Asian regions, and the differentiation is unclear. There is some confusion/inconsistency with reference to Russian and/or Asian rookeries and populations. Fig 1-1 is unclear in delineating anything except eastern and western DPS. A clear and unambiguous figure detailing stocks is needed.
- It is difficult to justify listing the wDPS as an "endangered" population. There is strong evidence that several pinniped populations have recovered from population levels that are two orders of magnitude lower than the SSL population. In addition, there is uncertainty about the meaning of "extinction". The PVA assumes extinction to have occurred at a population size of 4,743 sea lions. There is plenty of evidence showing that several populations of pinnipeds that are now healthy were once reduced to much lower levels than this. Conversely, relatively few have gone extinct.
- The raw population data placed within the PVA model suggests that the current balance of birth and death rates makes the population unsustainable. But the gross evidence from the population trajectory does not support this view. The data from population surveys are likely to be more robust than modeling efforts and are therefore more believable.
- The SSLRP makes an inadequate presentation regarding the positive population growth and improved health of the wDPS since 2000. Numerous recent studies indicate there are no signs of current nutritional stress and no differences between the wDPS and eDPS with regard to milk composition, maternal attendance patterns, or foraging success of females in the summer.

Feeding Ecology

- Despite the estimated increase in juvenile and adult survival, evidence for continued low birth rates through 2004 in the central Gulf of Alaska suggests that many females are still unable to obtain adequate nutrition to successfully support pregnancy. The Plan appropriately concludes that the balance of evidence does not support the junk-food hypothesis as the mechanism leading to chronic nutritional stress in the western SSL DPS.
- Data on energetic demands should be addressed separately from discussion of the validity of the "junk food hypothesis". Use of the term "junk food" in reference to nutritional studies is confusing and should be discontinued.
- Pg. 40. "Energetic Demands: Rejection of the Junk Food Hypothesis". This subsection
 title draws a premature conclusion that is not supported by the text that follows. Pages
 40-43 attempt to reject a dated hypothesis using incorrect or misleading information. The
 title of this section should be removed and the text modified.

Conservation Measures

• Changes in near-shore fisheries management must comply with applicable laws and to do so would require further environmental analyses, permits, such as a section 10(a)(1)(B) incidental take permit, and the completion of additional plans, such as a habitat conservation plan.

- Current mitigation measures, which do not seem to discriminate among population segments, might be modified to give priority protection to segments of the population most important to increasing the population trend, such as breeding females, while mitigation measures that don't protect these segments might be reduced. It is recognized that any changes will need to be supported by the appropriate ESA Section 7 analyses.
- Concerning marine area/aquatic foraging zones/critical habitat, there needs to be some clear and unambiguous description to what these areas are, why they were selected, when they were enacted, and what they were designed to achieve relative to conservation measures introduced to protect the species.
- The arguments that conservation measures implemented since the late 1990's have provided greater protection for SSL critical habitat are not convincing. There is no time series of conservation measures that can be correlated, in a statistical sense, with the rate of change of the western DPS. The SSLRP should say that the conservation measures "coincided" with changes in the rate of change of the western DPS, because there is no evidence that these conservation measures actually altered the impacts of commercial fishing on the availability of prey to SSL.
- The management actions taken during the 1990s to reduce anthropogenic effects (e.g. shooting harassment and incidental take) may have had a significant effect on the rate of decline in the wDPS. This suggests that these factors should be rated much more highly as potential causal agents. However, from the detail provided in the Plan it was difficult to determine what these measures actually were or how they implemented. This in turn made it difficult to assess how significant a role this played in reducing SSL mortalities.
- The methods that NMFS has used to identify critical habitat from telemetry data are unconvincing. Information using the latest telemetry technology should be used to reassess critical habitat areas.
- The section on conservation measures is organized by threat, which, while logical and consistent with the approach used in other portions of the Plan, does not allow a reader to sense the progression of protective measures that have been implemented over time. The section could be improved by adding text and perhaps a table describing the temporal sequence of major actions taken to conserve/recover SSL (e.g., passage of the MMPA, initial ESA listing, approval of first Recovery Plan, critical habitat designation, ESA reclassification, co-management agreements, fishery management measures, etc.), and how each of them addressed threats known at that time.
- The SSLRP presents substantial detail on the conservation measures that have been
 enacted to date with the glaring exception of fishery regulating measures. The SSLRP
 needs to present much more detail on past and current fishery management regulations so
 readers can understand what has been done to protect SSLs without having to find and
 read all the referenced documents.
- The sub-section on Incidental Take in Commercial Fishing provides estimates of the
 minimum number of animals taken in commercial fisheries, describes the Marine
 Mammal Observer Program, and lists the fisheries that have been observed. However, it
 does not, but should, indicate the frequency with which each fishery has been observed
 and the reliability of the data and extrapolations of number of animals taken. The section

should also discuss which fisheries have not been observed, and how likely it is that they might be taking SSL.

Factors Potentially Influencing the Populations

- A more even-handed treatment of killer whale predation is necessary, including fair discussion of alternative hypotheses for how killer whales may have in the past or are currently affecting the wDPS.
- Include the following points in support of a "low" ranking:1) Evaluation of competition with commercial fisheries requires an assessment of the degree of several dimensions of overlap. While fisheries and SSL consume some of the same prey, the mean depths differ, the mean sizes differ, and the 'mean' locations differ, in addition there are species that are a significant part of SSL diet that are harvested in insignificant amounts by fisheries. These differences all serve to limit the degree of overlap and thus the degree of competition. The degree of fisheries competition is a function of the degree of cumulative overlap in several dimensions. Even if SSL and fisheries forage at the exactly the same depths (which they do not), if they do so at substantially different locations based on horizontal (lat/long) coordinates, there is a limitation in the degree of overlap via the interaction of the vertical dimension with the horizontal dimension. Add the dimensions of time and sizes of prey, and the likelihood of head to head competition between fisheries and SSL is diminished if NMFS were ever to undertake an analysis of the cumulative overlap in a multidimensional model.
- NMFS should conduct more research on killer whale population dynamics in the North Pacific, and convene one or more workshops to discuss and resolve issues with assessment of effects of transient killer whales on the wSSL and how killer whales may affect recovery of the wSSL. A broad spectrum of scientists who hold various views on the issue of killer whale effects on SSLs should be included in this process.
- NMFS should revise the SSLRP to address concerns about a biased presentation against fishery impacts and insufficient consideration of competing hypotheses regarding the decline of SSLs and their failure to recover (i.e. climate change and killer whale predation). The SSLRP seems to be making the case that chronic nutritional stress is limiting population growth when the evidence does not exist.
- Part of the case for ranking fisheries as a "high" threat rests on an assumption of a linear reduction of carrying capacity as result of the effects of a F40 harvest strategy reducing the biomass of some SSL prey species. First, it is uncertain whether such a response would be linear given that not all prey species are commercially harvested. Second, to the degree that a linear response is plausible, this should result in a change in carrying capacity. Given global control rules and the various mitigation elements in fisheries as currently managed, the threat is that the carrying capacity has shifted to something like current population levels. A shift in carrying capacity to a population level between 40,000-50,000 animals is very different from extinction.
- Pg. 42. par. 2. NMFS cites unpublished data to support its position but does not provide enough information about the data to allow an independent assessment of its validity or whether NMFS has drawn the correct conclusion.

- Pg. 42. Par. 3. "Therefore, instead of pollock being bad for sea lions (Alverson 1992), gadids are likely to have been an important component of a healthy sea lion diet for decades (Calkins et al. 2005, Fritz and Hinkley 2005)." This sentence is misleading and should be deleted.
- Pg. 42. Par. 3. The assumption that reduced natality rates, derived from a simulation model for the Central Gulf, are due to nutritional stress is highly speculative and not supported by the available data.
- The Draft Revised Plan fails to analyze well the relative importance, going forward, of
 the historical causes of the SSL decline. That failure makes it extremely difficult to focus
 on the current and prospective conditions that are likely most relevant to the survival and
 recovery of the species.
- The findings of the FIT studies on cod, Pollack (two separate GOA studies), and Atka mackerel (several separate studies of how fishing affects mackerel abundance at Seguam and other areas) need to be incorporated into the assessment of fisheries as a potential factor affect SSL.
- The fisheries competition section should be redrafted to present the available information in a more informative and balanced manner. The Recovery Plan's description of fisheries competition as a factor that may influence the recovery of the wDPS...presents only a narrow slice of the available scientific information, particularly the portion that suits NMFS' conclusion that fishing has a large effect on SSL. Overall we feel the draft RP builds a one-sided case that fisheries competition is a leading factor affecting sea lion recovery. This is done through "cherry-picking" the arguments starting with the perceived inadequacies of MSY management, the F40 harvest strategy, and single species catch quotas.
- The revisions made to the SSLRP contain a considerable number of factual errors and misrepresentation of information pertaining to nutritional research. The use of "nutritional stress" needs to be clearly distinguished regarding whether it is caused by quantity or quality of prey, as well as its effects on adult and juvenile sea lions. As currently written, the term nutritional stress takes on multiple meanings.
- The treatment of localized depletion within the fisheries competition section is grossly unbalanced and ignores important scientific information collected through field studies by NMFS' own Fisheries Interaction Team (FIT) over the last four years. Instead the RP presents the findings from a set of depletion models studies (e.g. Fritz and Brown) where Leslie depletion model equations (closed system models) were used to theorize about fisheries creating large holes in the prey field. The FIT studies which are not mentioned in this section of the RP, however, have not confirmed these theoretical findings in terms of degree of localized prey removal. The FIT field work has in some cases not even found a statistically significant effect of fisheries removals on the local prey field.
- The Unimak Pass cod fishery study is an example of the relevant empirical work (even if it does not support the RP's take on fisheries competition as a threat) that needs to be cited so the reader can contrast it to the Fritz and Brown theoretical fish down modeling exercise.

- There is very little evidence to support the idea that there is nutritional stress in the wDPS population as a causal factor in the population dynamics. Nutritional stress, even if it could be hypothetically related to competition from fisheries, is not a basis for targeting the fisheries as a factor significantly affecting the species from this point forward.
- A balanced review of fishery effects should provide details about the findings of Loughlin and Merrick (1989), Ferrero and Fritz (1994), and Dillingham et al. (2006) rather than dismissing them. It should also explore and discuss the findings of Trites and Larkin (1992), Sampson (1996), Shima et al. (2000), Wolf and Mangel (2004), Wolf et al. (2006), and Guenette et al. (2006). Localized depletion studies have been conducted by NMFS on pollock, Pacific cod, and Atka mackerel. These studies have bearing on understanding the effects of fisheries on SSLs. Results of the studies undertaken by Libby Loggerwell and colleagues should therefore be presented.

Threats Assessment

- The science in the plan is confusing and conflicting, particularly regarding the uncertainty of potential threats.
- The SSLRP provides a comprehensive assessment of what is known about potential threats to both the eastern and western populations of SSL. These threat assessments are subject to a great deal of uncertainty, which has profound effects on the ability to manage the recovery, and research to address these areas of uncertainty should be high priorities.
- The Draft Revised Plan should summarize and discuss recent field work on localized depletion in the final recovery plan. The Draft Revised Plan ignores important work accomplished by NMFS' Fisheries Interaction Team (FIT) whose research in the past several years has focused explicitly on how fisheries may affect the prey field for SSLs

Western DPS Status

- While it may be that the female reproductive rate is what is holding back the population, the causal factors simply remain unknown. In the face of such uncertainty, the conclusion that the fisheries threat is "potentially high," while such a factors as killer whale predation, which is subject to similar uncertainties, are discounted, is not understandable.
- Failure of recovery of the wDPS of SSL could be the result of synergy among multiple threats. Although there are references to combined effects in the threats-based criteria, there needs to be a clear statement requiring satisfaction that cumulative impacts of multiple smaller effects are not likely to recur despite minimizing individual threats.
- Only if one assumes there is a potential for the repeal of a large portion of the core
 mitigation measures would it be reasonable to rank fishing as "potentially high." NMFS
 should differentiate between fisheries "as managed" and the potential of fisheries
 managed with substantially lower levels of SSL protection measures, in assigning a
 "potentially high" ranking.

- By sequentially eliminating or downgrading other hypotheses (e.g., killer whales, shooting, subsistence, climate change, trawl bycatch) as the sole cause of the decline, the drafters determine, by default, that the cause must be fishing. The analysis then concludes that any changes in fishing regulations from the status quo will "appreciably diminish" the chance for recovery of sea lions. This analysis is flawed; it is designed to reach a predetermined and incorrect conclusion, ignoring the wide range of factors that may have interacted to result in the decline of the SSL.
- Clarify how threats assessment ratings were determined. Are threat assessment rankings
 influenced by how well they might be mitigated or not? Specific rankings were
 questioned (e.g. high threat from competition with fisheries, downgrading of killer whale
 predation, medium threat from toxicity).
- For fisheries to be ranked as a "high" threat, the mechanism of nutritional stress must be at play to such a degree that it has impacts at the population level. There is a paucity of evidence that this is the case. While it is reasonable to have taken precautionary measures, this has been done. As such, it is inappropriate to rank fisheries as they are currently managed as a "high" threat. Further NMFS now dismisses Killer Whale predation, which it estimates (pg.89) at 2500 animals (or even substantially more based on Paul Wade's presentation to the NPFMC) as a medium threat.
- Estimates of transient killer whale numbers in the BSAI have recently doubled, indicating that they should be even more of a concern to recovery, not less as implicated by the demotion of the killer whale threats assessment.
- Evidence for nutritional stress is very weak and should be dismissed. NMFS has unfairly
 pushed this hypothesis in the face of contrary evidence. The section describing
 nutritional stress says more about current internal agendas in NMFS than about what we
 actually know about the influence of nutritional stress on Steller sea lions.
- For the section on killer whales in the previous draft of the RP, NMFS estimated SSL takes using extrapolations based on the potential number of SSL that would be consumed if killer whales preyed on SSL for a high percentage of the diet. Now, NMFS appears confident that the Wade et al. field work which evaluated killer whale diet around a limited set of areas (primarily passes) now trumps the previous approach and should be used for essentially downgrading the killer whale predation threat across the board.
- Given the scientific controversy on the issue of orca predation, and the lack of definitive data it is premature to downgrade the orca predation threat from "potentially high" as recommended by the Recovery Team to "medium" as recommended by NMFS staff. NMFS is urged to reinstate the threat as "potentially high" and follow the recommendation of the NPFMC for a scientific process to further evaluate this issue.
- If nutritional stress is still considered to be a credible mechanism that is currently limiting SSL population growth, all the factors that may be contributing to a food shortage should be addressed evenly, including competition with fisheries, changing forage base due to climate change, or inter-specific competition (e.g. from whales and arrowtooth flounder). The SSLRP selectively dismisses many of the diet studies that would lend support to environmental causes of nutritional stress, implying that competition with fisheries is the only plausible threat to recovery of the wDPS.

- It is difficult to follow the logic applied for down-grading of the potential threat from killer whales. NMFS has systematically dismantled the killer whale hypothesis for reasons that are not completely clear and with arguments that verge on advocacy rather than objective assessments of evidence. The way in which killer whales have been dealt with is in stark contrast to the analysis of nutritional stress. Overall, the balance of evidence put forward as supporting nutritional stress is probably weaker than the balance of evidence supporting killer whale predation effects and yet the SSLRP comes to quite different conclusions about them as threats.
- It may not be appropriate to extrapolate the results of the fatty acid diet analysis from the Gulf and Eastern Aleutian Islands killer whales to all areas affecting the wDPS. We also feel the Recovery Plan should present both the earlier extrapolations based on a higher fraction of the killer whale diet comprised of SSL and more recent diet analysis work on killer whales. The earlier estimates of potentially larger number of SSL removed by killer whales can serve as an upper bound, and more recent work can serve as a lower bound, but for the lower bound it should be noted that the data collected around passes may not represent other areas where oceanic passes and gray whale migrations occur.
- Most of the threat assessment sections consist of a statement in favor of the relevant hypothesis followed by a series of comments that appear to contradict the opening statement. There seems to have been little success in achieving a consensus within the Recovery Team on each of these issues, and the reader is left to evaluate a series of contradictory opinions.
- NMFS conclusion that nutritional stress, caused by competition for prey with the fisheries, is the greatest threat to recovery effectively dismisses the conclusions of the National Research Council (2003), the nation's most prestigious science panel, which concluded that top-down predation rather than bottom-up nutritional stress was the more likely cause of the decline. It also contradicts the weight-of-evidence approach used by the Steller Sea Lion Recovery Team. In its assessment of evidence on nutritional stress and the elimination of killer whale predation as a Potentially High threat, the 2007 revised draft seems to depart from a reasonable weight-of-evidence approach.
- NMFS has reduced the threat of predation by killer whales from high to medium, yet the
 relative amount of research continuing to be undertaken by NMFS and other research
 groups suggests otherwise. Research continuing on killer whales is significantly higher
 than all of the other medium threats combined. It therefore appears that researchers feel
 that killer whales continue to pose a high threat to the recovery of Steller sea lion.
- NMFS should address the uncertainty regarding the relative importance of fisheries and other factors in the decline of SSLs by extending the statistical framework studies begun by Wolf and Mangel to formally test for evidence of all the hypotheses simultaneously in all the data we have. We already have the data to do these analyses but we should be constructing them now and re-running them regularly to examine the emerging pattern. It may then be possible to modify management progressively based upon the emerging results. A fair test would be to provide 3-6 independent scientists/groups with a brief and the same data and ask each group to produce their own model structure independently. It is important to do this in order to eliminate model uncertainty through model averaging.

- On page 114, the Plan discusses the importance of inter-specific competition as a potential threat under the nutritional stress section. This needs to be considered in the same way as fisheries, i.e. at appropriate spatial and temporal scales.
- One of the major changes in the Draft Revised Plan from the Plan released in May 2006 is the downgrading of the threat assessment for killer whale predation from "potentially high" to "medium." DRSSLRP, p. 114. The Plan states that "[m]ajor limitations in the available data result in substantial uncertainty," and, while the Recovery Team was unable to reach consensus, NMFS changed the ranking based upon "public review and comment and additional scientific data which was not available to the Team." Id. If the NMFS downgrading of the killer whale threat was based on the Maniscalco paper cited on p. 111 (but not listed in the literature list), the data in the paper was presumably available prior to the preparation of the May 2006 draft since one of its authors was on the Recovery Team. Yet NMFS ranked the killer whale threat as "high" in that earlier draft.
- Pg. 103. Par. 2. The Revised Recovery Plan cites only 3 of the 8 studies that explored the effects of fisheries on sea lions but failed to find a consistent relationship between fishery catches and changes in sea lion numbers. The premature dismissal of studies that failed to find a relationship between fishing and the decline of sea lions is in sharp contrast to the multiple citations of Hennen (2006), which was the only study that associated the decline of sea lions with changes in fishing. The Recovery Plan should note that the conclusions drawn by Hennen are confounded by oceanic regime shifts that occurred concurrent with the implementation of management actions.
- Reviewers expressed agreement with the conclusion that competition with fisheries and environmental variability are the two highest ranking threats. However, each of these should be listed as "high" rather than "potentially high" as the concept of potential is inherent in something being a threat.
- Some of the threat assessment sections conclude with a subsection of "Data gaps" while
 others do not. The implication is that other sections that do not present data gaps have
 none. The format should be consistent.
- The agency logic that Orca predation is not a "potentially high" threat because predation induced mortalities are lower and total natural mortality does not make sense, unless one assumes that Killer Whale populations have tracked declines in SSL populations, and that the rate of predation as a percent of natural mortality has been constant. If, by contrast, the Killer Whale populations have been constant and the absolute numbers of SSL consumed have been constant (dismissing the SMC hypothesis), then there may have been a fourfold increase in the fraction of natural mortality attributable to Orcas. However, "natural" Orca predation may have been at higher SSL population levels, the agency has not presented any compelling logic dismissing the "predator pit" scenario.
- The agency should give higher priority to field studies such as those developed by the Fisheries Interaction Team. One field study indicating that trawl fisheries did not cause localized depletion of cod (Conners et al. 2004) was discredited in the SSLRP in favor of a modeling exercise (Fritz and Brown 2005). This persistent preference for modeling exercises over actual field tests of localized depletion should be re-evaluated.

- The conclusion that bottom-up threats are now more important to the western DPS than top-down ones (p. 119) is "in contrast to ... NRC (2003) which favored top-down controls as the primary factor". The Plan justifies this contradiction by saying that, "Much of the evidence considered here was not available to the NRC in 2002 ..." (p. 119). However, the main "new" evidence in support of the bottom-up approach comes from Holmes et al (in press) and this is essentially an extension of the analysis in Holmes & York (2003), with broadly similar conclusions (that natality rates in the central Gulf of Alaska have continued to decline). This information was presented to the NRC by York so they were aware of this data. The question remains whether this evidence applies to a larger segment of the wDPS than the one rookery surveyed by Holmes et al.
- The current level of uncertainty regarding the alternative hypotheses for the SSL decline is so large that NMFS cannot develop a rationale for distinguishing between them. Instead, the plan constructs some elaborate (perhaps fanciful) arguments around very little data that are associated with a high level of uncertainty. In order to better accommodate this scientific uncertainty, NMFS should adopt the Environmental Protection Agency's risk assessment/mitigation approach to managing the SSL.
- The downgrading of the threat assessment for killer whale predation from potentially high to medium is largely semantic because it remains a level 2 action priority and is not something NMFS can mitigate.
- The Draft Revised Plan (at p. 88) appears to understate the impacts of killer whales discussed in the Williams paper, by stating that a population of 170 transient killer whales could account for the decline of the western SSL distinct population segment ("DPS"), whereas, in fact, Williams suggests that fewer than 27 male transient killer whales or 40 female transient killer whales could have caused the decline.
- The Draft Revised Plan presents alternative calculations of killer whale energetics to Williams et al., which found that a small number of Orcas specializing in SSL consumption, could explain the initial decline, and that an even smaller number could explain the depressed rate of recovery. The data presented by the Draft Revised Plan shows that a larger number of Orcas with a small percent of SSL consumption in their diet are "perhaps the largest single source of Steller sea lion mortality (pg. 114) and represent "about a quarter of annual natural mortality" (pg. 89) which would equate to 2500 animals dying each year as a result of Orca predation. It is illogical to then conclude that level of mortality is "probably not hindering mortality". It becomes even more illogical in light of the data presented to the SSC by Paul Wade showing estimates Orca predation equating to 40-80% of natural mortality.
- The Draft Revised Plan, without substantial justification, relies upon an unreferenced paper by Maniscalco, et al., to dismiss estimates of killer whale predation in an earlier paper, Williams, et al., "Killer appetites: assessing the role of predators in ecological communities," Ecology 85(12): 3373-3384 (2004). If anything, the Williams findings would appear to be even more powerful today, since the latest transient killer whale population numbers show a population of about 314 animals. Draft Revised Plan, p. 84. This would appear to indicate that minimally only about 13% of the current transient killer whale population would be sufficient to explain the original decline -- almost double the size of the threat originally ranked as "potentially high."

- The Executive Summary claims that the SSLRP was unanimously endorsed by the Recovery Team. However, it appears that NMFS lowered the threat assessment ranking for killer whale predation on their own, in opposition to the opinion of some members of the Team. NMFS should acknowledge upfront in the preface that their draft deviates significantly from the recovery team draft and, if presented to the recovery team in its present form, would not have been a consensus document.
- The following factors identified in the Plan as medium or low threats to the western DPS should be changed to "not currently a threat to recovery": toxic substances; illegal shooting; entanglement in marine debris; disturbance from vessel traffic and tourism; and disturbance from research.
- The Plan's review of the data on potential nutritional stress is thorough, balanced, and incorporates the most recent information available based on analyses and publications to the present time.
- The potential for killer whale predation on SSL to have a considerable localized effect appears significant based on work that has been done on the "Kodiak Killers", and a large number of SSL flipper tags recovered found in a single killer whale stomach.
- The ranking of incidental take in fisheries as a "low" threat is not well justified. Given the historical information about incidental take in some fisheries and uncertainty about what is happening on vessels without observers and also foreign fleets, this may still be a substantial problem and deserve a higher ranking.
- The section on disease (pages 94-96) would benefit from a reference to the several mortality events that have struck the New Zealand sea lion population at the Auckland Islands over the last decade or so. These incidents provide the most recent examples of mortality events that have affected sea lions globally.
- The SSLRP discusses the implications of an ocean regime shift on SSL. A similar regime shift has also been proposed for the Southern Ocean at about the same time (1970s) (Weimerskirch, Inchausti et al. 2003), and it might have been helpful if the Team had been familiar with this hypothesis, as it highlights the global nature of some of the issues being considered. Considerable evidence suggests that similar regime shifts may be expected in the future. On-going monitoring of key demographic parameters that span future changes will be invaluable in assessing the importance of, and nature of, environmental variation on this and other species. The SSLRP should include a discussion of anthropogenic climate change, which is a very real problem for high latitude ecosystems within the time frame of the recovery plan. At least it needs to be acknowledged and suitable monitoring needs to be put in place.
- The SSLRP ignores another paper by Maniscalco et al. (2005) that found very high rates of SSL pup mortality due to killer whale predation. These observations of predation events, though not cited in the Recovery Plan, seem to support the agency's own conclusion on page 114 that killer whale predation "is perhaps the largest single source of SSL mortality." So why was the threat of killer whale predation reduced from potentially high to medium?

- The SSLRP misrepresents recent results about killer whale predation by unfairly comparing the results of Maniscalco et al. (2007) and Williams et al. (2004) and coming to the erroneous conclusion that Williams was wrong. These studies used different methods and were in very different areas. The results from one study site should not be extrapolated to other sites without corroborative studies because killer whales act differently in different places.
- The SSLRP places a lot of emphasis on the new paper by Holmes et al. (in press) to argue that birth rates of SSLs are depressed and that this is evidence for chronic nutritional stress. But that study was based on the absence of pups at one rookery from aerial photography. The video camera work from Chiswell Island shows that pups may be lost at an early age by waves washing them offshore and by killer whale predation. These types of mortality would not be seen by aerial photography and would therefore make the photographic results appear to show a lower birth rate rather than a high pup mortality rate. The Holmes paper may therefore have questionable conclusions. These results should not be extrapolated to the entire range of the wDPS because they reflect a localized condition that may not apply elsewhere.
- The SSLRP should emphasize the fact that the factors responsible for the decline may not be identical to the factors limiting current population growth and that multiple factors are likely involved to various extents in different locations.
- The SSLRP should explain and assess the potential for killer whale predation to have density dependent/density independent effects and to create a "predator pit" that threatens the current recovery of SSLs, separate from any discussion of the validity of the megafaunal collapse hypothesis.
- The SSLRP should include a Threats Assessment Table that evaluates threats to reproduction and natality using the same format as was used in Table IV-1 on page 120. For instance, toxic substances, heavy metals, diseases, parasitism, and killer whale predation of pups at rookeries are all recognized as possible threats to recovery associated with the reproductive rates of adult females and survivability of pups. Such an assessment of threats specific to particular age/sex groups will help focus and balance the development of recovery criteria and research objectives.
- The SSLRP should not have a lengthy discussion about the various hypotheses regarding the decline of SSLs because this controversy will never be resolved scientifically. Degrading some hypotheses to elevate the drafters' preferred hypotheses rather than adopting the Recovery Team's multifactor hypothesis is not consistent with good public policy. The SSLRP should focus on the current threats to recovery, which may be quite different than the factors that caused the decline.
- The SSLRP should present a better balance of presentations for alternative hypotheses by citing opposing papers (e.g. climate-change effects on carrying capacity).
- The threats analysis in the SSLRP does not provide a clear distinction between the relative magnitude of top-down versus bottom-up factors as causal factors in the decline of the wDPS. This inconclusive analysis makes it difficult to determine whether the recovery goals and actions listed in the plan are appropriate and likely to be effective.

- The validity of the megafaunal collapse hypothesis should be treated separately from the threat assessment of killer whale predation. Killer whale predation could very well present a significant risk to SSL recovery regardless of their potential role in causing the decline.
- There appears to be a reasonable "balance" in terms of the coverage given to each threat category, although the killer whale section appears over-represented. The debunking of the "sequential megafaunal collapse hypothesis" could have been addressed more economically.

Recovery Strategy

- A key part of the recovery process is "eliminating or controlling the threats" (p. 139). However, how can you eliminate or control regime shifts or other natural processes such as killer whale predation (or should you even try)? Natural factors should be regarded as a baseline condition and the plan should act to minimize any anthropogenic factor acting in addition to it.
- Actions 5.7.1 and 5.7.3 should be revised to require mandatory reporting and sampling of Native-harvested SSL, as is done for other marine mammal species in the Fish and Wildlife Service's Marking, Tagging, and Reporting Program.
- Analyses of the efficacy of critical habitat and the subsequent re-evaluation of critical habitat should be given higher priority.
- Development of an implementation plan should be raised to a priority 1 action.
- Efforts to improve live-capture methods (action 1.4.1) should be expanded, particularly those that will permit the safe capture of older and larger individuals to fill gaps in our knowledge of foraging ecology and vital rates.
- Give high priority to recovery action 3.5; evaluating and reducing the impacts of research activities on SSLs, ensuring that such unintended effects do not bias research results, and address permitting issues to ensure that important research on SSLs can continue without unnecessary interruptions or constraints.
- Instead of a large-scale experimental design, the agency should modify the adaptive
 management proposal so that it relies on a more localized design that mitigates impacts
 to fishermen and fishing communities and requires that "appropriate" rather than
 "current" mitigation measures are maintained until the species is recovered. In this way,
 the Recovery Plan can best adapt to updated scientific information and test the
 competition from fisheries hypothesis.
- It is unlikely that new information on the importance of killer whale predation would be used to take measures to enhance SSL recovery. Therefore, resources devoted to this research should be balanced against how new information would be used in recovering SSL.
- Reviewers generally agree on the priorities assigned to recovery actions, with some exceptions.

- The benefits of continued efforts to monitor health and body condition of individuals (actions 1.3.1 and 1.3.2) are questionable. The Plan should describe the specific health and condition parameters that should be monitored and provide rationale for how such monitoring will contribute to population recovery. Given the presumed low risk of disease and contaminants in limiting the recovery of SSL, efforts to develop non-lethal sampling techniques to assess health (action 1.4.2) should have a low priority
- The Plan presents a reasonable approach to the recovery strategy but the adaptive management plan needs to be much better defined and a multi-hypotheses modeling approach should be pursued.
- There are two other technologies not mentioned in the plan that might also be used to better understand the foraging ecology of SSL. One is the use of animal-borne video cameras to calibrate probable fish capture with dive characteristics to enhance interpretation of diving data and to determine the differential costs of prey capture as a function of prey type. The other is the use of two-way acoustic tags that could be used in combination with tagging prey to determine prey encounter rates by SSL.

Maintain Current Fishery Conservation Measures (Recovery Strategy and Recovery action 2.6.6)

- A network of marine reserves and an adaptive management approach is needed to assess the relative impacts of factors such as the effects of fishing and climate variability on sea lion prey. Fishery managers should bear the burden of proof to show compelling evidence that the lifting or lessening of protective measures will not threaten recovery.
- The Draft Revised Plan does not sufficiently recognize the need for flexibility to modify fishery conservation and management measures. NMFS should not require maintenance of "current" mitigation measures but should substitute with "appropriate" mitigation measures to allow for flexibility to changing environmental conditions, fishery stocks and new SSL information. Such flexibility would also offer opportunities to test the efficacy of protective measures while allowing sustainable fisheries. As science improves regarding the causes of the SSL decline and the constraints on the species' recovery, management agencies, such as the Council and NMFS, should be able to modify and/or remove particular fishery management and conservation measures, to the extent that they may not be relevant to achieving the objectives of the Draft Revised Plan.
- If the weight of current scientific evidence suggests that the fisheries are likely not a significant factor limiting SSL recovery, then the rationale for strict maintenance of current conservation measures as required for recovery of the wDPS is weak.
- Management flexibility may be appropriate even in the short run. For example, recent science suggests that juvenile SSLs are weaned during the summer instead of during the winter. See Trites, et al., "Insights into the Timing of Weaning and the Attendance Patterns of Lactating Steller Sea Lions (Eumetopias jubatus) in Alaska During Winter, Spring and Summer," Aquatic Mammals 32(1):85-97 (2006). Winter is the most critical fishing time for the groundfish fleets because fish are aggregated and roe is an important product. Many of the mitigation measures now in place have reduced the winter fisheries in order, in theory, to protect weaning juveniles. With the new information in hand, the

Council and NMFS may be able to modify those measures to enhance fishing opportunities without adverse effects on the SSL population.

- Fishery management measures currently in place to protect the Steller sea lions and their critical habitat should be maintained. Significant changes to existing fishery management measures, such as opening fisheries in state waters, would be inconsistent with any recovery plan, and would likely jeopardize sea lions and adversely modify their critical habitat. New trawl fisheries within Steller sea lion critical habitat targeting important sea lion prey species, particularly near shore, would be irresponsible, inconsistent with the recovery of the species, and would not ensure against jeopardy to the species and adverse modification of their critical habitat.
- All fisheries that might impact the prey base of SSL, including those managed by the State of Alaska, should be evaluated and managed in a manner such that they will have negligible impacts on population recovery.
- Fishing is the only potentially high-ranked threat in the Draft Revised Plan with a high feasibility of mitigation. The fishery conservation measures put in place in the late 1990s appear to be having a positive impact, demonstrating that there is hope and value in this approach. However, simply maintaining the existing fishery conservation measures is unlikely to achieve the Draft Revised Plan's goal of enabling Steller sea lions to recover to the extent that they can be removed from the endangered species list.
- One of the 3 actions the "team's draft" recommended (pg. 113) was to: "Maintain appropriate fishery conservation measures". In the "agency's draft" (pg. 124) this task is titled: Maintain current fishery conservation measures (Action 2.6.6: Priority 2a). "In both drafts the task under 2.6.6 is actually described with different language: Evaluate and implement appropriate fisheries regulations..." The language "evaluate and implement appropriate..." best captures the concept of using the best available information to tailor mitigation measures to our understanding of evolving hypotheses of how fisheries may impact SSL.
- Setting "current regulations" into the Recovery Plan eliminates flexibility in adjusting regulations to allow adaptive management actions. At the very least, this action item should be rewritten to specifically allow deviation from current mitigation measures in at least three situations: (1) where equally protective measures are implemented, (2) to allow study of adaptive management actions which will be evaluated for effectiveness on a periodic basis, and (3) to implement adaptive management measures which have been demonstrated to be effective.
- Why is fishing allowed (apparently concentrated) in SSL critical habitat?

Adaptive Management (Recovery Strategy and Recovery Action 2.6.8)

An adaptive management approach to research will be critical to clarifying the
uncertainty of Steller sea lion response to potentially depleted food resources (either from
environmental variability or from competition with fisheries or other species).

- An adaptive management program is likely to be both expensive and complicated to
 design, unable to produce, when the "experiment" is complete, any truly useful results
 and from a cost-benefit perspective, is not likely to be worthwhile.
- NMFS is already conducting an experimental manipulation of the fisheries by implementing conservation measures that affect the fisheries. It is possible that some of the recent positive increase in SSL trends could be the result of some of these conservation measures. The text on p160 says, "Given signs of recovery in the western DPS, it is important to take this opportunity to implement an adaptive management program to test the underlying hypotheses of the conservation measures". This would be a major mistake. NMFS should not impose any more restraints on the fishing industry in an attempt to assess the effects of fishing on SSLs. Adding one set of experimental measures on top of another would create a mess that confounds any useful interpretation of the results, causes unnecessary hardship on the industry, and could have unintentional adverse effects on SSLs.
- The continued specification of a large-scale Adaptive Management program as a needed recovery action is inappropriate and faces innumerable difficulties, for example, the "jeopardy" and "no adverse modification" proscriptions of the ESA would make it infeasible as a matter of law.
- The North Pacific Research Board should be requested to convene a multi-disciplinary symposium to further explore the adaptive management approach and to build upon previous work on the statistical design of such a program that could utilize a multiple hypothesis modeling approach to secure unequivocal results while minimizing the impacts to fishermen and fishing communities.
- The objectives of an adaptive fisheries management program are confusing. It is not clear
 whether NMFS is proposing this as a means to mitigate potential impacts on SSL as soon
 as they have been identified or to develop an improved knowledge of how SSLs respond
 to different potential impacts through experimental manipulations.
- The State recommends reconsideration of recovery actions that require an adaptive management experimental design. An adaptive management program should be more clearly defined and include research approaches designed to determine the mechanism through which resource limitation might impact vital rates of Steller sea lions. A more explicit explanation of the purpose of this adaptive management approach and indication of what results might prove unequivocal is warranted. The State is concerned that this task, as defined, is seemingly impossible to accomplish without incurring great costs and potentially disenfranchising fishing participants and coastal communities.
- The team has designed a recovery strategy for the eastern and western populations of SSL that is ecologically and biologically defensible. The recovery strategy highlights the design and implementation of an adaptive management program to evaluate fishery conservation measures and key actions. This is perhaps the only way to remove some of the uncertainty around some of the major causal factors and deserves to be a top priority.
- There may be enough data now available to allow the relative strengths of each hypothesis to be assessed through a table-top modeling exercise, essentially making any large-scale adaptive management program unnecessary.

While recognizing how difficult it will be to develop and implement, an adaptive
management plan to assess fishery impacts and mitigation measures would be much
better than continuing the massive reductionist research program that has not yielded
conclusive evidence in spite of extraordinary levels of funding.

Development of Recovery Criteria (PVA)

- Although the ESA requires recovery criteria to be measurable and objective, it does not
 provide explicit standards for criteria beyond general descriptions. It is troubling that the
 selection of appropriate risk is a policy decision and NMFS does not have a national
 policy regarding extinction risks. It is not clear whether and why the metrics and
 thresholds for "acceptable" risk of extinction used in the Recovery Plan are appropriate
 for SSLs. Greater clarity and defense of the criteria set need to be demonstrated.
- The importance of density dependant responses in the demographic parameters is
 identified as an important issue. Currently, few of the SSL models incorporate density
 dependence, even though they are likely to exist and are very likely to influence
 estimates of extinction times from these models. This should be a high research priority
 and would benefit from focused, small scale experiments associated with the Adaptive
 Management Plan.

Approaches to the Criteria

Weight-of-Evidence

- Although the weight of evidence approach to developing recovery criteria is necessarily somewhat subjective, the recovery criteria are reasonable with regard to requiring a sustained population increase that is widely distributed throughout the population.
- The "weight of evidence" approach for determining if a factor was ranked high or low meant that evidence or appraisal in support of one point of view required contrary evidence to sustain a different perspective. This sometimes clouds the relative positions of the report findings. Part of the challenge is that not all experts are in agreement on what the most important factors are, or on each factors relative importance. The weight of evidence approach is meant to synthesize and accommodate divergent perspectives to reduce the risk that some factors, considered unimportant by some groups but not others, are actually examined in case they really are an important threat.
- The PVA approach may be preferable to a "weight of evidence" approach by providing greater assurance that criteria are measurable and objective, are based on risk of extinction rather than more nebulous indices that may or may not accurately gauge threats to recovery, and is designed to take into consideration scientific uncertainty regarding population dynamics and threats.

<u>Population Viability Analysis (PVA) – Comments Not Supportive of the Goodman PVA:</u>

- During review of the 2006 SSLRP, several technical problems were identified in the Goodman PVA that were not addressed in the 2007 revised draft (e.g. using an extinction risk of 1 percent in 100 years, lack of density dependence, and use of old growth rates) and these assumptions need to be re-examined in future analyses.
- The Draft Revised Plan may have understated the influence of humans in the historic declines of the wSSL, and therefore the model projections may be overly pessimistic. It is almost certain that at least some of the factors (shooting, entanglement in fishing gear, etc) affecting SSLs during the early 1980s will not occur again due to changes in regulations and in fishing practices. These assumptions drive many of the results of the threats assessment in the current PVA. NMFS should re-evaluate the assumption that the conditions leading to the steep decline through the 1980's are certain to occur again.
- NMFS should modify the 1% in 100 year standard for risk of extinction to 10% over 30 years (3 generations of SSLs). The use of the 1% in 100 years criteria is based on cetaceans, not pinnipeds which have shorter generation times.
- The PVA should be rerun with density dependent effects and the carrying capacity issues featured more prominently.
- The Recovery Plan places more weight on the PVA undertaken by Goodman than on the published PVA's of York (1994), Gerber and VanBlaricom (2001) and Winship and Trites (2006). The assumptions made in the Goodman PVA lead to the most pessimistic population projection but are not consistent with the current understanding of SSL population biology. The Goodman PVA should not be given greater weight within the Recovery Plan than the three published PVAs.

Population Viability Analysis (PVA) - In support of the Goodman PVA:

- Although we agree with the intention to improve the PVA as new information becomes available and to adjust the recovery criteria in the future to reflect the updated PVA, we feel the current Goodman PVA is sufficiently informative to be used for establishing the recovery criteria.
- It should be noted that, rather than being pessimistic, as the Plan implies, Goodman's PVA extinction calculation may present an optimistic view of the future of the western DPS. He was requested by the subgroup responsible for the PVA to include "a relative schedule of prey-competition fishery effects, expressed as instantaneous per capita mortality" (Recovery Plan Appendix) for the period 1968-2000. These equate to an additional mortality of up to 6% in some years. This is a substantial additional mortality for a population whose dynamics are known to be particularly sensitive to changes in mortality. However, there is no justification for these precise levels (or, indeed, any quantified fishery effects) anywhere in the Recovery Plan. If these mortalities were not included in Goodman's calculations, the variations in population growth rate would have been even greater, and the risks of extinction would have been higher.

Other PVAs

- Although NMFS has identified shortcomings of all the PVA models developed so far, it should not abandon the effort to improve them over time because they can be very useful management tools, especially for identifying weaknesses in the existing demographic data sets.
- In assessing the risk of extinction, NMFS should run different PVAs and compare results.

Recovery Criteria

General Comments

- Using vital rates as a criterion for downlisting and delisting is not feasible because of the uncertainties associated with measuring vital rates.
- Choosing a particular recovery scenario is a policy choice.
- Discuss how a decreased carrying capacity would affect the appropriateness of the proposed recovery criteria.
- Given the Goodman PVA results that indicate a high risk of extinction even after a substantial increase in the population, NMFS should increase the length of time and rate of increase required in the downlisting and delisting criteria.
- The downlisting and delisting criteria ignore the fact that the distribution of SSLs may be shifting across its range; it assumes congruence between the current definitions of subpopulations and actual, biological sub-populations; and it assumes that some factors, e.g., fisheries competition, were more likely drivers of past population declines than others. It is insufficient in response merely to state, as NMFS does in its "Peer Review Comments on Steller Recovery Plan (the "Peer Review Comments") (at p. 2) that "if this situation occurs, it would indicate that a significant portion of its range . . . was still in decline and suggest that NMFS has not fully understood or mitigated the threats to the population.".
- The criteria for downlisting or delisting lack scientific justification, seem to be purely arbitrary with little to do with the health of the population as a whole and are essentially without biological basis. They are written in such a way that they will make it difficult, if not impossible, for the Draft Revised Plan to achieve its objectives.
- NMFS should modify the recovery requirements to use time frames more suited to generations of SSLs: 1.5 generations for downlisting (15 years as recommended by the Recovery Team) and three generations (30 years) for delisting.
- The requirement that two adjacent sub-regions can't both be declining significantly also implicates the problem of management of SSL populations found in Russia.
- It is unclear what the starting date is for measuring the percentage decline.

- The Draft Revised Plan should specify the probability level at which the null hypotheses, corresponding to the demographic criteria, would be rejected. In the absence of this information, the demographic criteria are incomplete.
- The process for the 5-year evaluation of recovery criteria should be described in the recovery plan and in the implementation plan.
- The recovery criteria appear overly stringent in comparison with criteria used in other recovery plans. Requiring three generations to achieve full recovery, i.e., delisting, can be viewed as requiring more than is justified by reference to the past practice of NMFS and FWS.
- The recovery criteria should be provisional until new assessments are made regarding two important factors: whether or not the EDPS and wDPS actually form a larger metapopulation, and whether there is a new carrying capacity that would prevent the population from recovering to historical levels.
- The recovery criteria should be reevaluated and revised every five years or as new information becomes available.
- The recovery plan should include a more detailed explanation of the reasons for the recovery criteria and how their attainment will be assessed. It should also emphasize that the recovery criteria are subject to revision as new information becomes available and new analyses are undertaken with regard to extinction risk and population trends.
- There should only be one set of criteria for listing and delisting. A species should remain on the endangered list as long as it meets the criteria for an endangered species, and it should come off of the list when it no longer meets these same criteria.

Western DPS Downlisting

- The measure in the Draft Revised Plan requiring that no two sub-regions be declining is too restrictive. Any reference to sub-regional trends should be excluded from the final recovery plan. This is a recognition that consideration of the subareas as part of the recovery criteria may have nothing to do with the status of the wDPS as a whole. It ignores that the distribution of SSLs may be shifting across its range; it assumes congruence between the current definitions of subpopulations and actual, biological sub-populations; it ties U.S. management to actions in Russia that are beyond US control; and it ignores the possibility that the overall wDPS population could increase to 60-70 thousand animals in US waters but not qualify even for downlisting.
- The Russian population of SSLs should be excluded from all recovery criteria because NMFS has no jurisdiction or mechanism to promote recovery in those areas. The population trends should be an average of all of the U.S. subpopulations only. It is inappropriate to hinge recovery actions taken in U.S. waters on the performance of SSLs in a subregion outside the U.S.
- NMFS should re-evaluate the wDPS SSL recovery criteria so that the criteria are more
 consistent with those of other ESA listed species (citing the Loughlin report to the
 NPFMC). By comparison, the SSLRP criteria seem unreasonably conservative and

almost punitive. NMFS should reassess the requirements for the number of generations with consistent increases and the sub-area criteria.

- The State suggests the wDPS of the SSL be considered for delisting when: (1) the population for the U.S. region has increased at an annual growth rate of 1% per year for 30 years, or 2.5% for 15 years, or 5% for 10 years, based on counts of non-pups (i.e., juveniles and adults); or (2) if the population remains stable for 40 years; or (3) if the population remains stable for 10 years and research demonstrates that the population is at carrying capacity.
- It would be useful to state if it is intended that the 15-year period of average positive growth is associated with an initial reference year.
- Pup counts would substantially increase confidence in population trends. NMFS has been
 unable to maintain comprehensive biennial counts of the US wDPS. It is easy to imagine
 a scenario where a paired set of complete photo count of all the sites 10 years apart could
 show a 5000 animal increase, but because all the intervening surveys were incomplete,
 selected statistical tests would not show 'significance.'
- The criteria for downlisting the wDPS seem overly precautionary and unlikely to apply even if the population remains stable for a number of years.
- The criterion for downlisting wDPS should be modified to allow downlisting of the wDPS if this population continues to remain stable or increases in abundance over a period of 15 years commencing with the year 2000.
- The downlisting criteria for the wDPS is too vague in regard to the meaning of a "statistically significant increasing population" over a 15 year period. This should be clarified.
- The downlisting criteria for the wDPS requires that the increase over 15 years be "statistically significant", and that two adjacent sub-regions not decline "significantly." Even if the population is higher at the end of the 15 years, the ability to meet a statistical test is a function of the number of data points. The ability to downlist may be more dependent on the number of complete surveys that NMFS is able to conduct than on the real world SSL population. No start point is identified for the calculation. It was implied in the team discussions that the start date would be the "inflection point" of 2000.
- The Executive Summary suggests that a non-pup count of approximately 55,000 animals in 2015 would meet the downlisting criterion, but Goodman's analysis suggests that a population of more than 60,000 in 2014 would have a 25% risk of quasi-extinction. It is therefore hard to reconcile the proposed criterion for reclassification with the Team's own definition of endangered status.
- Recognize the choice of statistical test and confidence bounds have policy implications.
- The SSLRP places too much emphasis on the avoidance of local extinctions. Changes in SSL numbers in different regions of their range over time periods of decades to centuries should be considered normal.

Delisting wDPS

- The delisting criteria are not relevant in terms of delisting occurring during the shelf life of this plan. It might seem that no one should 'fall on their swords' over something that appears to have no practical impact.
- The delisting criteria are relevant in to the extent they define "recovery." If "recovery" is defined as a growth rate that yields 107,000 animals by 2030, and that definition of recovery is used to assess "adverse modification" in a future Bi-Op, we may be requiring a carrying capacity of 107,000 animals. An alternative view of recovery is a stable or slowly increasing population in a environment with a lower carrying capacity whether modified by environmental changes or by fishing.
- It is conceivable that Steller sea lions have stabilized around a lower carrying capacity and are not at risk of extinction. The current delisting criteria do not account for a decreased carrying capacity, as opposed to other potential criteria. The carrying capacity of the environment for SSLs may have decreased substantially due to various reasons (e.g. regime shift, fishery removals of prey, growth of competitor populations such as whales and Arrowtooth flounder). The current SSL population may be at equilibrium or close to that new, lower carrying capacity and therefore the delisting criteria of a population at 107,000 would be unattainable.
- The ESA is intended to prevent species from going extinct, not to exceed their current carrying capacity. The recovery goals should be flexible and rewritten to accommodate the potential for a reduced carrying capacity.
- NMFS should use criteria for listing and delisting of species that are closer to international standards (e.g. IUCN criteria). The 1 percent risk of extinction in 100 years standard is unnecessarily conservative and should be closer to a 20 percent risk of extinction in 5 generations (50 yrs).
- The criterion for delisting from the ESA is a 3% increase maintained over 30 years (equivalent to 107,000 animals in 2030). Goodman's analysis suggests that the risk of quasi-extinction for such a population is 9.7%. Again, it seems hard to justify that such a population is no longer threatened with extinction, since it does not even meet the Team's criterion for downlisting from endangered to threatened.
- The criterion for delisting of the wDPS should be modified if this population continues to remain stable or increases in abundance over a period of 30 years commencing with year 2000.

Recovery Actions

Comments on specific recovery actions

Recovery Action 2.1

• Based on 15 years of additional research on the extent to which SSLs use their habitat on a seasonal basis, the priority of Recovery Action 2.1 (maintain and monitor critical

habitat designations) should be changed to 2a, an action that must be taken as first priority

Recovery Action 2.3.2

 Under recovery action number 2.3.2, "Develop stable isotope and fatty acid methodologies to assess prey consumption", NMFS should also incorporate DNA techniques into the Draft Revised Plan. They have been used successfully in a number of laboratory based studies, including some on SSL (Jarman et al. 2004; Deagle et al. 2005; Casper et al. 2006).

Recovery Action 2.4.1

• Under recovery action number 2.4.1, "Assess the relationships between oceanographic profiles or features and sea lion foraging ecology", is research aspect needs to be broader as it is unrealistic to expect strong relationships between physical oceanography and higher predators, particularly at fine scales. Perhaps there should be more emphasis on more proximal factors such as prey and primary production. In order to address this question it would be sensible to use tags to collect oceanographic data on the seals (Lydersen et al. 2002; Lydersen et al. 2004). This will provide oceanographic data at the location and at scale of the seals feeding.

Recovery Action 2.6.6

- Recovery Action 2.6.6 contains sub-task (repeated in 2.6.7) to explicitly account for SSL (and other ecosystem consumers) food requirements in setting ABC. The overall 2.6.6 task is ranked "2a" priority, 2.6.7 is ranked "2b." This task is very similar to a recommendation made in the draft AIFEP for explicit adjustments to OY for predator species. The SSC had concerns reflected in their June minutes, and the Council deleted the recommendation from the AI-FEP based on those concerns
- The paragraph under Recovery Action 2.6.6 that discusses the need to account for SSL food requirements when setting acceptable biological catches of groundfish should be deleted. This action as written infers that fishery management does not account for the nutritional needs of species that utilize fish targeted in commercial fisheries. These needs are in fact deliberately and consciously accounted for in setting ABC and TAC levels for all target species.

Recovery Action 2.6.7

- Retain Recovery Action 2.6.7 as a priority 3 task. Either include cost to the fishing community, or make it more explicit in the text that only agency costs are included, that substantial cost to the fishing community are involved, and why that choice was made not to present those costs.
- In defining Recovery Action 2.6.7 task, draw a clear distinction between accounting for predator needs out of the OY versus out of the ABC.

Recovery Action 2.6.7 (Explore the use of ecosystem-based (multi-species) stock
assessment models to set fishery catch limits to ensure adequate prey resources for a
recovered sea lion population) is already being done in the normal course of the NPFMC
process. The recovery action should be re-written to reflect current practice and be given
a lower priority (priority ranking 3) or removed from the Draft Revised Plan.

Recovery Action 3.2.2

Recovery action number 3.2.2 is, "Reduce threat of illegal shooting by developing and
promoting use of non-lethal deterrents for commercial fisherman". This is the subject of
a great deal of on-going research around the world. The Draft Revised Plan needs to
identify the need (and ways of facilitating) of interactions with other nations to increase
the rate of progress made in these issues.

Recovery Action 5.7.1

Although the priority ranking of 2a for Recovery Action 5.7.1 is appropriate, it is
important to develop a more reliable monitoring scheme for Native subsistence harvest of
SSL, similar to that used by the community of St. Paul.

General Comments

- Because population monitoring is so important to the assessment of recovery actions, NMFS should consider switching from biennial to annual surveys of pup production at key sites. This will be very important to the success of an adaptive management plan.
- Global warming represents one of the gravest threats to the long-term survival of the
 Steller sea lion by threatening to reduce overall ocean productivity (reducing sea lion
 prey availability) and raising sea levels (impacting sea lion haulouts/rookeries). The
 SSLRP should describe explicit measures (recovery actions) to address these threats. At
 the very least, the Draft Revised Plan should recommend that actions be taken to
 significantly reduce anthropogenic emissions of carbon dioxide and other greenhouse
 gases.
- NMFS should give greater effort to securing observer funds for under-observed fisheries.
- NMFS should revisit the recovery planning guidelines and consider adding a category for monitoring activities, which are vital for determining the status of the population but cannot be easily construed as "an action that must be taken to prevent extinction . . ."
- Not enough tasks are focused on the fishery. More studies should focus on manipulating the fishery rather than simply manipulating the SSL. Experimental manipulation of the fishery and assessment of its efforts and effects are critical to the recovery of the wDPS and other species in the same range that have also experienced similar declines. The Draft Revised Plan contains no specific recommendations for how a rigorous, experimental, and adaptive approach to investigating effects of fisheries and making suggestions for appropriate mitigation might be undertaken.

- Recovery actions appear to be given similar weight regardless of the severity of the threat to which they are targeted.
- The Draft Revised Plan relies on research priorities and methodologies that appear to be
 a reiteration of the same approach that has been undertaken for two decades yet appears
 to have provided little more information on the causes of decline.
- The recovery actions described within the Draft Revised Plan are appropriate to meet the recovery goals, and the recovery actions are consistent with the SSL life history information and population dynamics.
- The recovery actions presented in the Draft Revised Plan are consistent with current knowledge of SSL ecology, population dynamics, and threats facing the population and should promote the recovery of the western SSL. However, as the factors limiting recovery are presently poorly understood, it is not certain that there are not other actions that might be appropriate.
- The recovery strategy tends to focus primarily on needed research rather than on necessary management measures.
- The SSLRP does not go far enough to protect SSLs from the effects of fisheries. It should consider other potential measures such as permanent closure of all critical habitat areas to fishing.
- Make annual pup counts at least a 2a priority.

Implementation Schedule and Plan

- On page 79, the Plan notes that unlike the direct take of a species, indirect take through competitive interactions is nearly impossible to either prove or disprove. This should be highlighted in future research priorities, especially through the adaptive management approach. If the magnitude of these indirect ecological interactions can be determined using this approach it will be a huge benefit for the management of the species.
- Implement a rigorous experimental research program that employs a genuinely adaptive management approach to assess the effects of fisheries on SSL and their critical habitat.
- A much greater emphasis needs to be placed on the research required to assess the nature
 and magnitude of the threat from fisheries, and the impact of conservation measures on
 it, before there can be any confidence that the proposed Recovery Plan will actually have
 any effect on the risks of extinction for the western DPS.
- Efforts to obtain a better understanding of changes in vital rates (action 1.2.1) should be a Priority 1 item, along with population monitoring (action 1.1.1) and development of the implementation plan (action 1.5).
- Given the lack of alternative methods for obtaining estimates of demographic vital rates, and their importance to assessing recovery, the branding and re-sighting program should be expanded to include other regions.

- Given what has been learned over the past decade, bioenergetics research (actions 2.5.1-2.5.4) should be changed from priority 2a/2b to priority 3. It is not that such research should not be done, but it seems difficult to justify such expensive research as a recovery action when a case has not been made for how the information would be used to promote recovery.
- In section 3.1.1., "Monitor and evaluate incidental take in commercial and recreation fisheries through observer and self-reporting programs", to what extent can state of the art video monitoring systems be used to provide a better means of obtaining data across a greater proportion of the fleet?
- NMFS must ensure that new and emerging research and analytical techniques are applied to all aspects of Steller sea lion recovery research.
- NMFS should develop the Implementation Plan and prioritize actions around a multiple hypothesis testing framework, rather than the sequential testing technique used in developing the threats assessments in the Draft Revised Plan.
- NMFS should reconsider the top priority ranking for Recovery Action 1.1.1 (estimate trends for pups and non-pups via aerial surveys), and downgrade this priority activity to 2a. Although this action is very important, it does not fit the definition of an action needed to prevent extinction.
- Priority should be focused on the study of adult breeding females to assess the
 hypothesized decrease in reproductive success in the wDPS. Highest priority within tier
 2a should be given to tasks related to (1) the development of capture techniques for
 animals older than 3 years of age, (2) targeted research on the foraging ecology and
 physiological condition of adult females, and (3) removal of MMPA permitting
 impediments.
- Requiring development of a State Habitat Conservation Plan (HCP) is unnecessary and would not benefit SSL. Other laws and mechanisms are already in place to provide protection. This action item should be removed or at least downgraded to priority 3.
- Since the original designation of the western and eastern DPSs, additional genetic research has generally confirmed the strong east-west population structure, but has also shown that there is less distinction when both males and females are included in the analysis. One explanation for this finding is a greater level of male-mediated gene flow than of female gene flow because males tend to disperse further than females. Another important recent finding is that a large fraction of the pups in newly established rookeries in the eastern DPS were born to western DPS females. Given these findings, continued genetic research is likely to pay further dividends.
- The development of the Implementation Plan and an interdisciplinary, interagency team should be raised to a level 1 priority. NMFS should prioritize funding for the creation and maintenance of an implementation team that can assure that research designs are focal, robust and likely to fill important data gaps and/or inform management decisions.

- The Draft Revised Plan does not adequately address the need for an interagency, interdisciplinary team that would be charged with implementing and coordinating research and actions most critical to recovery efforts of the wDPS stock.
- The importance of ecological factors (regime shift) in the decline is unclear. There is a lot of evidence, such as different rates of change in the eastern and western DPSs during the widespread oceanographic changes in the 1970s, which calls the whole regime shift idea into question. The seals have evolved their foraging and life history traits in an environment that apparently contains decadal-scale changes in climate and prey base. Further, the observed changes in population trajectories in the western stock since fisheries control measures have been implemented illustrate that these interactions were an important contributing factor. Admittedly, there may be fundamental differences in environmental factors between the western and eastern stocks, but this seems less likely than fisheries being the under-pinning causal factor in the decline. Focusing on fisheries related factors will be the best value for the money.
- The Recovery Plan should consider density dependent effects in all aspects of ecosystem research and the implementation plan should seek out opportunities to investigate the carrying capacity of the ecosystem to support SSL.
- The top priority should be the development of a focused implementation plan with research objectives that are likely to reduce uncertainty surrounding the threats to recovery.
- We support focused research that would help determine if chronic nutritional stress is impacting reproductive aged animals, and thus population viability.

Critical Habitat

- A heightened priority should be given to redesignation of Critical Habitat that takes into account more recent survey, telemetry, and foraging ecology studies.
- Recovery Task 2.1 (maintain, modify as needed, critical habitat) should be given a priority of 2a instead of 3.
- Research to specifically test whether the wDPS is now under a new, lower natural carrying capacity should be included as a priority 2a action.

Estimates of Recovery Time and Cost

- It should be noted that the reported recovery action costs are projected costs for the
 agency to conduct research and outreach activities as outlined and do not reflect the costs
 (foregone net revenues) to communities and industry.
- NMFS should develop an overall implementation plan as soon as possible that specifies
 conservation and mitigation measures needed for recovery, a monitoring program to
 assess the effectiveness of those conservation measures, and including a program to
 coordinate and conduct research needed to guide recovery actions. This implementation
 plan should be developed by an interdisciplinary and interagency team.

• The cost section of both 2.6.6 and 2.6.7 only include agency costs. Neither the forgone revenue to the fishing community of the maintaining the existing measures, nor the cost of a second tier of explicit set-asides from ABC on top of the implicit set-asides encompassed in "M," are calculated in cost analysis.

Other General Comments

- The Steller Sea lion Recovery Plan provides a comprehensive background of the biology, ecology and historical abundance of the species, factors potentially affecting its conservation status, an objective evaluation of threats and a range of action items designed to ensure delisting of the Western DPS over the next 30 year period. The overall output is very balanced and objective, and the Recovery Team should be congratulated for their efforts.
- The Draft Revised Recovery Plan is well crafted, thorough, and accurately describes the
 threats facing the western DPS of the Steller sea lion as well as the current research and
 protection measures. It should be promptly finalized after making minor changes and
 additions.
- The ecological and biological information presented in the SSLRP is comprehensive, adequate, and scientifically defensible. Where there are divergent views within the scientific community, this is identified and a balanced account of all views presented. There were some areas that would have benefited from additional detail, but these were not common.
- The Draft Revised Plan provides a comprehensive review of what is currently known about the ecology of SSL in both the western and eastern DPS but the way in which the information is presented and reviewed is highly variable. Readers are likely to be confused by the combination of fact, hypothesis and opinion that characterizes some subsections, particularly the section on nutritional stress.
- Given the serious deficiencies with regard to the Draft Revised Plan's treatment of the eastern DPS, that portion of the Draft Revised Plan should be severed from the western DPS plan, significantly revised, and recirculated for public comment prior to finalization.
- To guard against the perception of an unbalanced treatment of the scientific data, a small group of non-agency scientists should be included in a team responsible for preparing a final draft of the recovery plan.
- Independent expert reviews have supported the balance and appropriateness of the SSLRP. The changes made between the 2006 and 2007 drafts are minor and there is no need for further review. The SSLRP should be a "living document" that can be adapted as new information becomes available. NMFS should now focus on quickly finalizing and implementing the SSLRP. NMFS should adopt a final plan that is the same as the revised draft in all key respects.
- NMFS did not respond to specific concerns and comments submitted on the 2006 Draft SSL Recovery Plan. Many of the problems with the current Draft Revised Recovery

Plan, noted in comments on the 2006 draft, have not been remedied. Comments on the 2006 draft therefore should be incorporated by reference.

- The policy arm of NMFS, not the scientists involved in SSL research, should provide a clear statement of NMFS policy with respect to recovery, independent of the SSLRP, based on the legal obligations upon NMFS. NMFS should then establish an independent panel (mainly of scientists, many of whom should not be involved in SSL research) to map the current science into the policy and to produce a new SSLRP to achieve the objectives.
- The SSLRP has been written by a group of stakeholders, all of whom have attempted to manipulate the process in one way or another. This results in the worst of all worlds a plan that has no purpose other than to address the standoffs between the different stakeholder groups.
- NMFS personnel that are making scientific judgments cannot also be making policy regarding the recovery plan. The temptation to manipulate the scientific evidence to support a particular policy view is just too great and the perception is that the SSLRP is seriously infected with this type of bias. NMFS staff should not be allowed, or allow themselves, to get involved in these types of arguments. In the end, NMFS has to sit in judgment on biological arguments and make management decisions. In this case, they are acting as both the judge and the advocate, which is morally and procedurally wrong.
- The decision to convene a Recovery Team whose members held such diametrically opposite views on the main causes for the reduction in abundance of the western DPS of SSL was a bold, but high risk one. It does not appear that this conflicted Team has succeeded in developing an ecologically and biologically defensible recovery strategy for the wDPS. They could not agree on the relative importance of the threats and thus produced a grocery list of research needs that reflect the recent past research efforts. This shotgun approach has failed to provide any clarity to distinguish among the threats and needs to be abandoned in favor of a more focused approach.
- NMFS should designate an SSL research coordinator to reduce the potential for unnecessary or duplicative research.
- NMFS should provide to the NPFMC and the public an annual report on the status of SSLs in the North Pacific. This report would discuss new scientific information, summarize new trends in the population, summarize any actions taken pursuant to the revised recovery plan, and provide information on the status of the population relative to recovery factors and the listing criteria.
- NMFS should revise comments and research priorities in the Recovery Plan that
 unnecessarily undermine or criticize the exceptional management of fisheries in waters
 off the coast of Alaska, including criticism of MSY, F40, OY, and other harvest control
 rules. Alaska fisheries management is the best in the world with regard to ecosystem
 management and the SSLRP should not undermine this exemplary system.
- It is not clear to what the items in parentheses refer (e.g. 55 FR 12645, 50 CFR 226.202, etc.). It would be helpful to provide some explanation.

- NMFS has an unstated objective to put further controls on the fishing industry based on a "belief" that it is necessary, but without the scientific evidence to properly justify it, and has presented information in a way that supports this hidden agenda. The analyses of fishery effects/nutritional stress compared with killer whale predation are notably inconsistent and illustrate a general lack of objectivity in the underlying approach.
- On p88, the suggestion from Williams et al (2004) that a population of 170 mammal eating killer whales could have caused the decline in SSL abundance is incorrect.
 Williams et al. suggested that fewer than 27 mammal-eating killer whales could have caused the decline.
- Pg. 24. "Long-range trips started around 9 months of age and likely occurred most frequently around the time of weaning...". Behavioral observations of sea lions at haulouts suggest the timing of weaning is around 12 months of age, not 9 months of age (Trites and Porter 2002; Trites et al. 2006).
- Pg. 43. par. 1. The correct citation for dietary information of Steller sea lions in Southeast Alaska is Trites et al. (2007a).
- Suggestions are made for improving organization of the document to bring related concepts together.
- The Draft Revised Plan recommends an ESA Section 10 permit be issued for state-managed fisheries that are taking SSLs (p. 161). While such a permit is the proper way to authorize such take, until and unless such a permit is issued, all take of SSL (and other listed species) from state-managed fisheries is unlawful. The final recovery plan should recommend NMFS enforce Section 9 against the state unless and until the state applies for and receives the required permit. Similarly, there is no currently operative permit under Section 101 of the MMPA for any federal fishery that is taking SSLs. As such, those fisheries are operating in violation of both the ESA and MMPA. NMFS should take appropriate enforcement action against these fisheries until they operate in compliance with the law.
- The system used to number paragraphs is irritatingly complex and makes it very difficult to navigate through the document.
- There are a number of suggestions for editorial improvements listed by page number and line or by table and figure number.
- There are many references cited in the text that are missing from Chapter 8, Literature Cited.

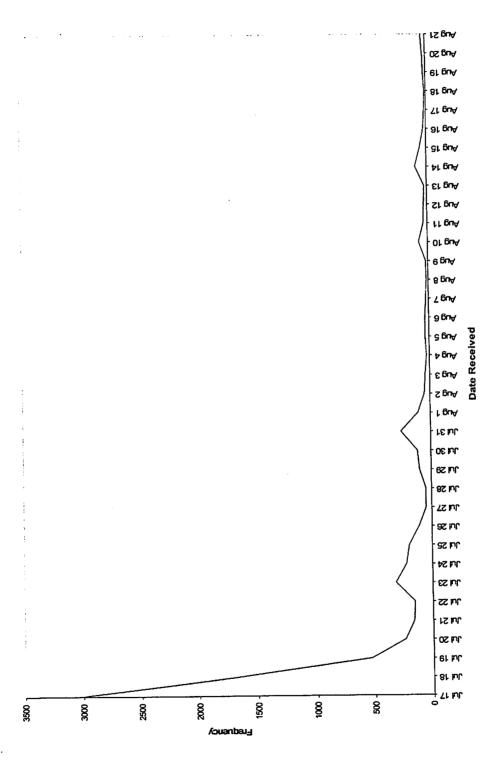
Form Letter Issues

In addition to requesting that NMFS finalize and implement the Draft Revised Recovery Plan, the form letter raised two substantive issues

1) Fishing is the only high-ranked threat identified in the Draft Revised Recovery Plan that has a high feasibility to mitigate impacts.

2) The fisheries conservation measures put in place in the late 1990s appear to be having a positive impact, "demonstrating that there is hope and value in this approach".

Figure 1: Email submissions by date



Ę

Figure 2: Distribution of email submissions: United States (>100)

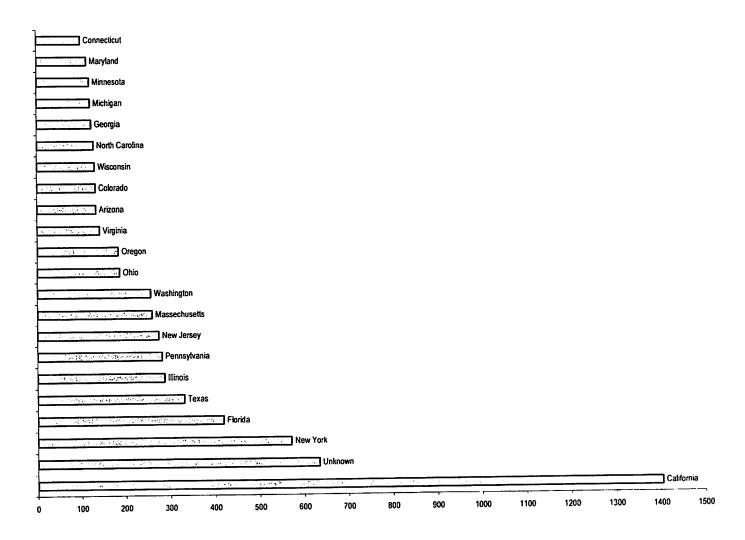


Figure 3: Distribution of email submissions: United States and territories (<100)

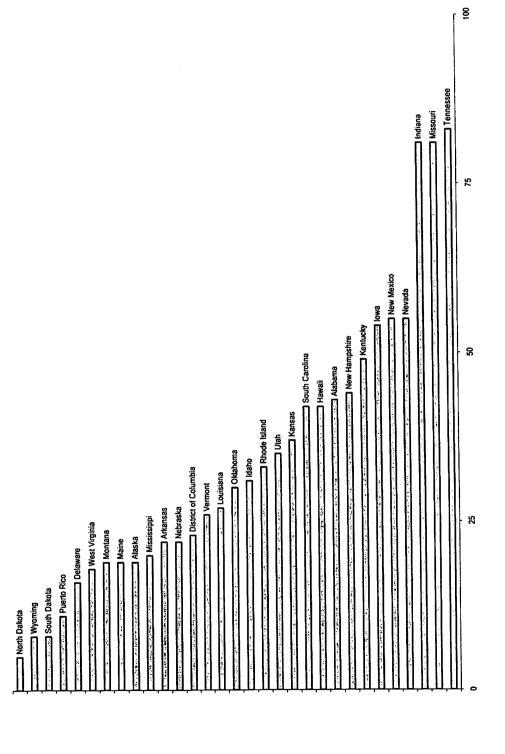
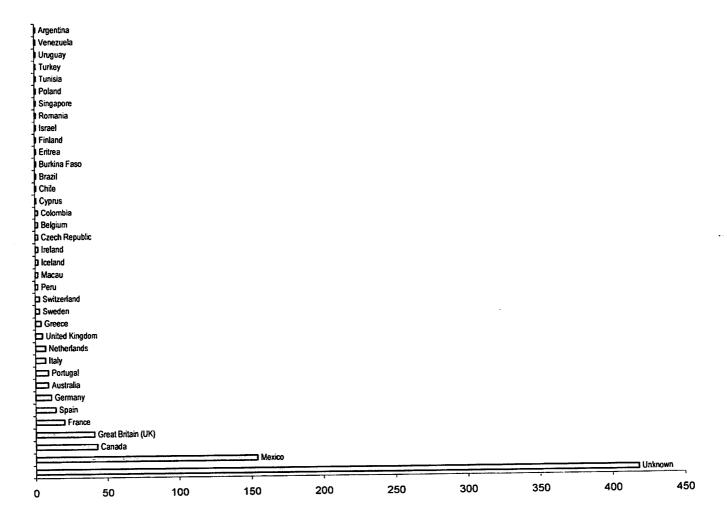


Figure 4: Distribution of email submissions: Foreign countries



responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely proposes to remove an erroneously approved State rule from the SIP, and does not alter the relationship or the distribution of power and responsibilities established in the CAA. This proposed rule also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it is not economically significant. This proposed rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Lead, Nitrogen dioxide, Ozone, Particulate matter, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 et seq.

Dated: October 19, 2007.

Russell L. Wright, Jr.,

Acting Regional Administrator, Region 4.
[FR Doc. E7-21245 Filed 10-26-07; 8:45 am]
BILLING CODE 6560-50-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 070717354-7361-01]

RIN 0648-AV73

Endangered and Threatened Species; Designation of Critical Habitat for the North Pacific Right Whale

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comment.

SUMMARY: We, NMFS, completed a status review of the northern right whale and have determined that the right whale in the North Pacific Ocean is a separate and distinct species from the right whales in the North Atlantic Ocean and southern hemisphere. We also find the species to be described in the North Pacific Ocean, the North Pacific right whale (Eubalaena japonica), is in danger of extinction throughout its range. We have proposed to list this species as endangered

pursuant to the Endangered Species Act of 1973 (ESA). Here we propose to designate critical habitat for this species. Two specific areas are proposed for designation: one in the Gulf of Alaska (GOA) and another in the Bering Sea. Our most recent mapping calculation indicates this area comprises a total of approximately 36,800 square miles (95,325 square kilometers) of marine habitat. We solicited comments from the public on all aspects of the proposal, including information on the economic, national security, and other relevant impacts of the proposed designation. We may revise this proposal and solicit additional comments prior to final designation to address new information received during the comment period.

DATES: Comments on this proposed rule must be received by close of business on December 28, 2007. Requests for public hearings must be made in writing by December 13, 2007.

ADDRESSES: You may submit comments, identified by 0648-AV73, by any one of the following methods:

- Electronic submissions: Submit all electronic public comments via the Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions at that site for submitting comments.
- Mail: Kaja Brix, Assistant Regional Administrator, Protected Resources Division, Alaska Region, NMFS, Attn: Ellen Sebastian, P. O Box 21668, Juneau, AK 99802
- Hand delivery to the Federal Building: 709 W. 9th Street, Juneau, Alaska.
- Fax: (907) 586-7012, Attn: Ellen Sebastian.

Instructions: All comments received are a part of the public record and will generally be posted to http://www.regulations.gov without change.
All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

NMFS will accept anonymous comments. Attachments to electronic comments will be accepted in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only.

The proposed rule, maps, stock assessments, and other materials relating to this proposal can be found on the NMFS Alaska Region website http://www.fakr.noaa.gov/.

FOR FURTHER INFORMATION CONTACT: Brad Smith, (907) 271–3023, or Marta Nammack, (301) 713–1401.

supplementary information: The ESA, as amended [16 U.S.C. 1531 et seq.], grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants, and habitats of such species that have been designated as critical. The U.S. Fish and Wildlife Service and NMFS share responsibility for administering the ESA. Endangered or threatened species under the authority of NMFS are found in 50 CFR parts 223 and 224.

Background

The North Pacific right whale (E. japonica) is a member of the family Balaenidae and is closely related to the right whales that inhabit the North Atlantic and the Southern Hemisphere. Right whales are large baleen whales that grow to lengths and weights exceeding 18 meters and 100 tons, respectively. They are filter feeders whose prey consists exclusively of zooplankton (notably copepods and euphausiids; see below). Right whales attain sexual maturity at an average age of 8-10 years, and females produce a single calf at intervals of 3–5 years (Kraus et al., 2001). Their life expectancy is unclear, but is known to reach 70 years in some cases (Hamilton

et al., 1998; Kenney, 2002).

Right whales are generally migratory, with at least a portion of the population moving between summer feeding

grounds in temperate or high latitudes and winter calving areas in warmer waters (Kraus et al., 1986; Clapham et al., 2004). In the North Pacific, the feeding range is known to include the GOA, the Aleutian Islands, the Bering Sea, and the Sea of Okhotsk. Although a general northward movement is evident in spring and summer, it is unclear whether the entire population undertakes a predictable seasonal migration, and the location of calving grounds remains completely unknown (Scarff, 1986; Scarff, 1991; Brownell et al., 2001; Clapham et al., 2004; Shelden et al., 2005). Further details of

occurrence and distribution are provided below.

In the North Pacific, whaling for right whales began in the GOA (known to whalers as the "Northwest Ground") in 1835 (Webb, 1988). Right whales were extensively hunted in the western North Pacific in the latter half of the 19th century, and by 1900 were scarce throughout their range. Right whales were protected worldwide in 1935 through a League of Nations agreement. However, because neither Japan nor the USSR signed this agreement, both nations were theoretically free to continue right whaling until 1949, when

the newly-created International Whaling Commission (IWC) endorsed this ban. Following this, a total of 23 North Pacific right whales were legally killed by Japan and the USSR under Article VIII of the International Convention for the Regulation of Whaling (1946), which permits the taking of whales for scientific research purposes. However, it is now known that the USSR illegally caught many right whales in the North Pacific (Doroshenko, 2000; Brownell et al., 2001; Ivashchenko, 2007). In the eastern North Pacific, 372 right whales were killed by the Soviets between 1963 and 1967; of these, 251 were taken in the GOA south of Kodiak, and 121 in the Southeastern Bering Sea (SEBS). These takes devastated a population that, while undoubtedly small, may have been undergoing a slow recovery (Brownell et al., 2001).

As a result of this historic and recent hunting, the North Pacific right whale today is among the most endangered of all whales worldwide. Right whales were listed in 1970 following passage of the Endangered Species Conservation Act (ESCA) of 1969, and automatically granted endangered status when the ESCA was repealed and replaced by the ESA. Right whales were also protected in U.S. waters under the Marine Mammal Protection Act of 1972. NMFS issued a Recovery Plan for the northern right whale in 1991 which covered both the North Atlantic and North Pacific (NMFS, 1991).

We have assumed the existence of a single species of right whales in the North Pacific (Hill et al.,1997). However, some authors (e.g., Klumov, 1962; Brownell et al., 2001) have discussed the possibility that North Pacific right whales exist in discrete eastern and western North Pacific populations. In particular, Brownell et al. (2001) pointed to the different catch and recovery histories of the eastern and western management units as support for such a division. During the 1983 IWC right whale workshop (IWC, 1986), the Scientific Committee recommended distinguishing two North Pacific management units, but stated no conclusion can be reached concerning the identity of biological populations. At this writing, sub-division of this species remains equivocal, and we consider all North Pacific right whales to belong to the single species, E. japonica.

In the western North Pacific (the Sea of Okhotsk and adjacent areas), current abundance is unknown but is probably in the low to mid-hundreds (Brownell et al., 2001). There is no estimate of abundance for the eastern North Pacific (Bering Sea, Aleutian Islands, and

GOA), but sightings are rare; most biologists believe the current population is unlikely to exceed a hundred individuals, and is probably much smaller. Prior to the illegal Soviet catches of the 1960s, an average of 25 whales was observed each year in the eastern North Pacific (Brownell et al., 2001); in contrast, the total number of records in the 35 years from 1965 to 1999 was only 82, or 2.3 whales per annum

Since 1996, NMFS and other surveys (directed specifically at right whales or otherwise) have detected small numbers of right whales in the SEBS, including an aggregation estimated at 24 animals in the summer of 2004. Photoidentification and genetic data have identified 35 individuals from the Bering Sea, and the high inter-annual resighting rate further reinforces the idea that this population is small. Right whales have also been sighted in the northern GOA, including a sighting in August 2005 and September 2006, both of which occurred in the same area south of Kodiak Island. However, the overall number of North Pacific right whales using habitats other than the Bering Sea is not known.

The taxonomic status of right whales worldwide has recently been revised in light of genetic analysis (see Rosenbaum et al., 2000; Gaines et al., 2005). Applying a phylogenetic species concept to molecular data separates right whales into three distinct species: Eubalaena glacialis (North Atlantic), E. japonica (North Pacific) and E. australis (Southern Hemisphere). We formally recognized this distinction for the purpose of management in a final rule published on April 10, 2003 (68 FR 17560), but subsequently determined that the issuance of this rule did not comply with the requirements of the ESA, and thus rescinded it (70 FR 1830, January 11, 2005) prior to beginning the process anew. We published a proposed rule on December 27, 2006 (71 FR 77694), to list the North Pacific right whale, E. japonica, separately as an endangered species.

Critical Habitat

Section 3 of the ESA defines critical habitat (CH) as "the specific areas within the geographical area occupied by the species, at the time it is listed, * * * on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed that are determined by the Secretary to be essential for the

conservation of the species." Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms "conserve," "conserving," and "conservation" to mean "to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary."

Section 4 of the ESA requires that before designating CH, the Secretary consider economic impacts, impacts on national security, and other relevant impacts of specifying any particular area as CH. The Secretary may exclude any area from CH if the benefits of exclusion outweigh the benefits of inclusion, unless excluding an area from CH will result in the extinction of the species concerned. Once CH is designated, section 7(a)(2) of the ESA requires that each Federal agency shall, in consultation with and with the assistance of NMFS, ensure that any action authorized, funded, or carried out by such agency is not likely to result in the destruction or adverse modification of CH.

CH for the Northern Right Whale

On July 6, 2006, we published a Final Rule (71 FR 38277) to revise the CH for the northern right whale by designating areas within the North Pacific Ocean as CH under the ESA. Two specific areas were designated, one in the GOA and another in the Bering Sea. These are the same areas being proposed here for the North Pacific right whale. In our 2006 Final Rule (71 FR 38277; July 6, 2006) we stated the critical habitat comprised approximately 36,750 square miles (95,200 sq km) of marine habitat. However, our most recent mapping calculation indicates that the area is approximately 95,325 square miles (36,800 square miles) of marine habitat. A description of, and the basis for, the proposed designation follow.

Geographical Area Occupied by the

The ESA defines CH (in part) as areas within the geographical area occupied by the species at the time it was listed under the ESA. Because this geographical area has not been previously described for the North Pacific right whale, it is necessary to establish this range when proposing to designate CH.

Prior to the onset of commercial whaling in 1835, right whales were widely distributed across the North Pacific (Scarff, 1986; Clapham et al., 2004; Shelden et al., 2005). By 1973, the North Pacific right whale had been

severely reduced by commercial whaling. Sighting data from this remnant population are too sparse to identify the range of these animals in 1973. However, no reason exists to suspect that the right whales that remain alive today inhabit a substantially different range than right whales alive during the time of the Soviet catches; indeed, given the longevity of this species, it is likely that some of the individuals who survived that whaling episode remain extant now. Consequently, recent habitat use is unlikely to be different from that at or before the time of listing.

Both the SEBS and the western GOA (shelf and slope waters south of Kodiak) have been the focus of many sightings

(as well as the illegal Soviet catches) in recent decades. In general, the majority of North Pacific right whale sightings (historically and in recent times) have occurred from about 40° N to 60° N latitude (lat.). There are historical records from north of 60° N lat., but these are rare and are likely to have been misidentified bowhead whales. North Pacific right whales have on rare occasions been recorded off California and Mexico, as well as off Hawaii. However, as noted by Brownell et al. (2001), there is no evidence that either Hawaii or the west coast of North America from Washington State to Baja California were ever important habitats for right whales. Given the amount of

whaling effort as well as the human population density in these regions, it is highly unlikely that substantial concentrations of right whales would have passed unnoticed. Furthermore, no archaeological evidence exists from the U.S. west coast suggesting that right whales were the target of local native hunts. Consequently, the few records from this region are considered to represent vagrants. The geographical area occupied by the North Pacific right whale at the time of ESA listing extends over a broad area of the North Pacific Ocean, between 120° E and 123° W longitude and 40° N and 60° N latitude, as depicted in Figure 1.

BILLING CODE 3510-22-S

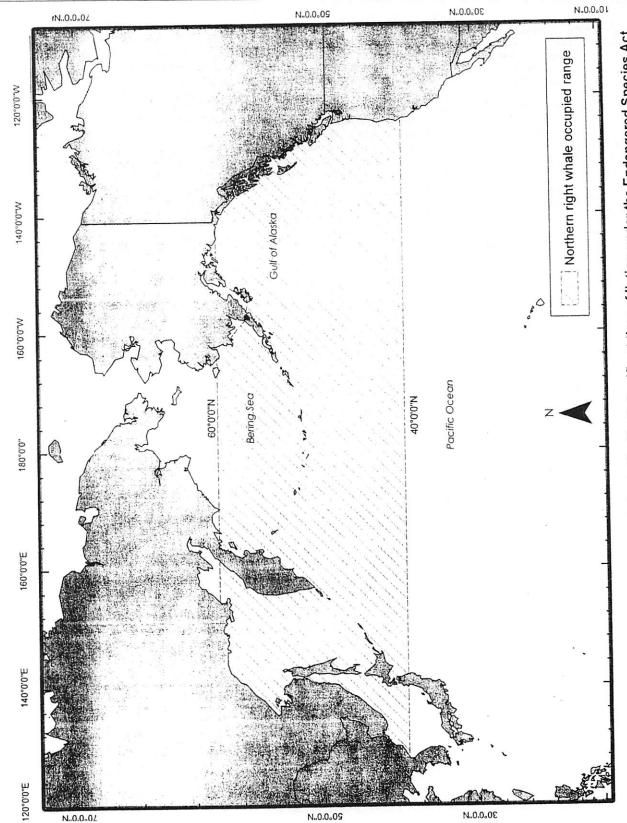


Figure 1. Occupied range of Northern right whales in the North Pacific at time of listing under the Endangered Species Act.

Unoccupied Areas

ESA section 3(5)(A)(ii) further defines CH to include "specific areas outside the geographical area occupied" if the areas are determined by the Secretary to be "essential for the conservation of the species." 50 CFR 424.12(e) specifies that NMFS "shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species." We are not proposing to designate any areas not occupied at the time of listing because any such areas are presently unknown (if they exist), and the value of any such habitat in conserving this species cannot be determined. Future revisions to the CH of the North Pacific right whale may consider new information which might lead to designation of areas outside the occupied area of these whales.

Physical or Biological Features Essential to the Conservation of the Species

In determining what areas are CH, 50 CFR 424.12(b) requires that we "consider those physical or biological features that are essential to the conservation of a given species including space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species." The regulations further direct us to "focus on the principal biological or physical constituent elements . . . that are essential to the conservation of the species," and specify that the "known primary constituent elements shall be listed with the critical habitat description." The regulations identify primary constituent elements (PCE) as including, but not limited to: "roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types." An area must contain one or more PCEs to be eligible for designation as CH; an area lacking a PCE may not be designated in the hope it will acquire one or more PCEs in the future.

NMFS scientists considered PCEs for right whales in the North Pacific during a workshop held during July 2005. Unfortunately, many data gaps exist in our knowledge of the ecology and

biology of these whales, and very little is known about the PCEs that might be necessary for their conservation. The life-requisites for such factors as temperatures, depths, substrates, are unknown, or may be highly variable. One certainty is the metabolic necessity of prey species to support feeding by right whales. Examination of harvested whales in the North Pacific and limited plankton tows near feeding right whales in recent years show these whales feed on several species of zooplankton. We have determined these are described by several species of large copepods and other zooplankton which constitute the primary prey of the North Pacific right whale. The PCEs for the North Pacific right whale are species of large zooplankton in areas where right whale are known or believed to feed. In particular, these are: the copepods Calanus marshallae, Neocalanus cristatus, and N. plumchrus. and a euphausiid, Thysanoessa raschii, whose very large size, high lipid content, and occurrence in the region likely makes it a preferred prey item for right whales (). Napp, pers. comm.). A description of the proposed CH (below) establishes the presence of these PCEs within those areas. In addition to the physical presence of these PCEs within the proposed CH, it is likely that certain physical forcing mechanisms are present which act to concentrate these prey in densities which allow for efficient foraging by right whales. There may in fact be critical or triggering densities below which right whale feeding does not occur. Such densities are not presently described for the right whales in the North Pacific, but have been documented in the Atlantic. Accordingly, the proposed CH encompasses areas in which the physical and biological oceanography combines to promote high productivity and aggregation of large copepods into patches of sufficient density for right whales. The PCEs, essential for the conservation of the North Pacific right whale, and these physical forcing or concentrating mechanisms, contribute to the habitat value of the areas proposed for designation.

Special Management Considerations or Protection

An occupied area may be designated as CH if it contains physical and biological features that "may require special management considerations or protection." 50 CFR 424.02(j) defines "special management considerations or protection" to mean "any methods or procedures useful in protecting physical and biological features of the environment for the conservation of

listed species." We considered whether the copepods and other zooplankton which have been identified as the PCEs for the North Pacific right whale may require special management considerations or protection. The proposed CH areas support extensive and multi-species commercial fisheries for pollock, flatfish, cod, various crabs, and other resources (but not salmon, as salmon fisheries in Alaska are restricted to State waters, except in the case of trolling which is permitted in Federal waters but only immediately adjacent to the Southeast Alaska coastline; these areas are not included in the proposed CH areas). We believe the identified PCEs would not be harmed by these Federally managed fisheries. However, plankton communities and species are vulnerable to physical and chemical alterations within the water column due to both natural processes, such as global climate change or the Pacific Decadal Oscillation, as well as pollution from various potential sources, including oil spills, discharges from oil and gas drilling and production, and fish processing waste discharges. Because of the vulnerabilities to pollution sources, these PCEs may require special management or protection through such measures as conditioning Federal permits or authorizations through special operational restraints, mitigative measures, or technological changes. The 2005 wreck of the M/V Selendang Ayu near Unalaska caused the release of approximately 321,000 gallons (1,215,117 litres) of fuel oil and 15,000 gallons (56,781 litres) of diesel into the Bering Sea. That incident has precipitated recommendations for regulations which would improve navigational safety in the area for the protection of the marine environment. While such protections are not targeted towards copepods or zooplankton per se, they would act to conserve these PCEs.

We request comment on the extent to which the designated PCEs may require special management considerations or protection. The contributions of these management measures are also relevant to the exclusion analysis under section 4(b)(2) of the ESA, and will be considered further in a later section of this notice.

Proposed Critical Habitat

The current abundance of North Pacific right whales is considered to be very low in relation to historical numbers or their carrying capacity (not determined). The existence of a persistent concentration of right whales found within the SEBS since 1996 is somewhat extraordinary in that it may

represent a significant portion of the remaining population. These areas of concentration where right whales feed are characterized by certain physical and biological features which include nutrients, physical oceanographic processes, certain species of zooplankton, and long photoperiod due to the high latitude. We consider these feeding areas, supporting a significant assemblage of the remaining North Pacific right whales, to be critical in terms of their conservation value. We have based our proposed designation of CH on these areas, rather than where right whales have appeared singly, in low numbers, or in transit. We have been able to substantiate this assumption with observations of feeding behavior, direct sampling of plankton near feeding right whales, or records of stomach contents of dead whales. These assumptions underlie the proposed CH areas shown in Figure 2 and described below. Two areas are proposed: an area of the SEBS and an area south of Kodiak Island in the GOA.

Shelden et al. (2005) reviewed prey and habitat characteristics of North Pacific right whales. They noted that habitat selection is often associated with features that influence abundance and availability of a predator's prey. Right whales in the North Pacific are known to prey upon a variety of zooplankton species. Availability of these zooplankton greatly influences the distribution of right whales on their feeding grounds in the SEBS and GOA. Right whales require zooplankton

patches of very high density, and zooplankton are typically small and distributed over space and time (Mayo and Marx, 1990). Typical zooplankton sampling is too broad-scale in nature to detect patches of these densities, and directed studies employing fine-scale sampling cued by the presence of feeding right whales are the only means of doing this (Mayo and Marx, 1990). Accordingly, there may be no obvious correlation between the abundance and distribution of prey copepods and euphausiids (as measured by broadscale oceanographic sampling) and the distribution of right whales (M. Baumgartner, in prep.) In light of this, we must rely upon the whales themselves to indicate the location of important feeding areas in the North Pacific. Aggregations of right whales in high latitudes can be used with high confidence as an indicator of the presence of suitable concentrations of prey, and thus of feeding behavior by the whales. Right whales feed daily during spring and summer, and studies in the North Atlantic have consistently found an association between concentrations of whales and feeding behavior, with dense copepod patches recorded by oceanographic sampling around such groups of whales (Mayo and Marx, 1990; Baumgartner et al., 2003a, 2003b). In the North Atlantic, an analysis of sighting data by NMFS indicated that a density of four or more right whales per 100 nm2 was a reliable indicator of a persistent feeding

aggregation (Clapham and Pace, 2001), and this had been used for Dynamic Area Management fisheries closures to reduce the risk of right whales becoming entangled in fishing gear. While this metric is a reliable indicator of the presence of feeding aggregations in the North Atlantic, it is not necessarily the only metric suitable for application in the North Pacific; the much smaller population of right whales in the eastern North Pacific Ocean typically results in sightings of single animals or pairs. Unlike with larger groups, such small numbers sometimes indicate transient passage through an area and thus cannot be unequivocally linked with feeding behavior. However, while sporadic sightings of right whales in such small numbers generally would not be considered a reliable indication of a feeding area, consistent sightings of right whales - even of single individuals and pairs - in a specific area in spring and summer over a long period of time is sufficient indication that the area is a feeding area containing suitable concentrations of copepods.

Therefore, in the absence of data which describe the densities, as well as presence, of the PCEs themselves, the distribution of right whales is used here as a proxy for the existence of suitably dense copepod and euphausiid patches and thus to identify the areas proposed herein for designation as CH. Figure 2 depicts the proposed critical habitats and the best available sightings data.

BILLING CODE 3510-22-S

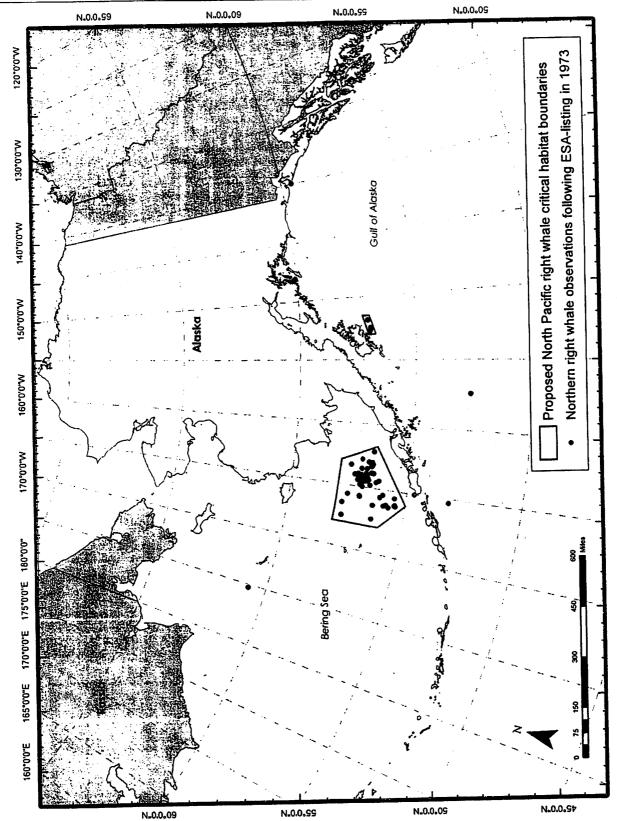


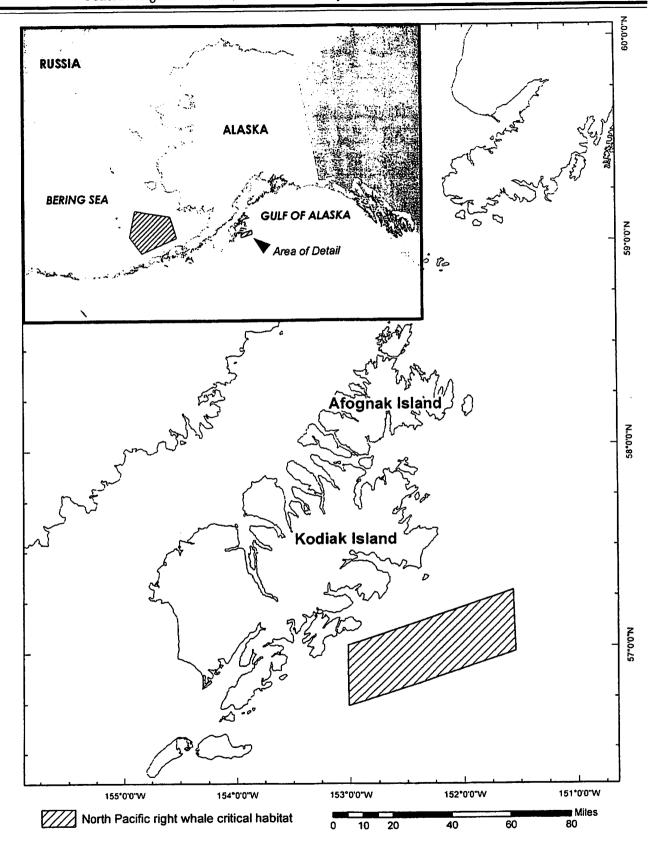
Figure 2. Proposed critical habitat for Northern right whales in the North Pacific.

Gulf of Alaska

We propose to designate CH in the GOA (Figure 3), to be described as an area delineated by a series of straight lines connecting the following coordinates in the order listed: 57°03'

N/153°00' W, 57°18' N/151°30' W, 57°00' N/151° 30' W, 56°45' N/153°00' W, and returning to 57°03' N/153°00' W. The area described by these boundaries lies completely within the waters of the United States and its Exclusive Economic Zone (EEZ) and outside of

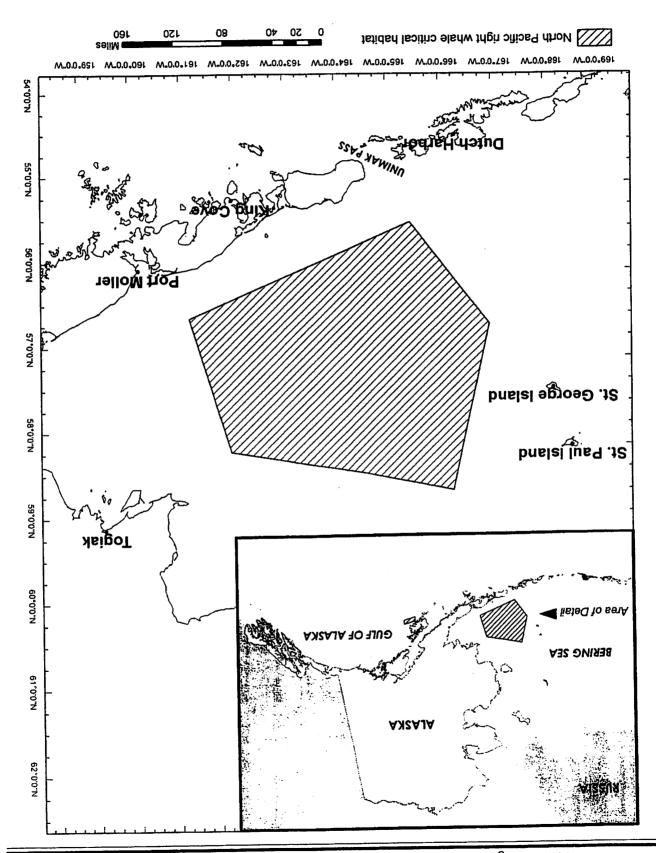
waters of the State of Alaska. State waters extend seaward for 3 nautical miles from the shoreline; very few sightings occurred within state waters. The best available sightings data on right whales in this area totaled 5 out of 14 encounters in the GOA.



Southeastern Bering Sea

We propose to designate CH in the Bering Sea (Figure 4); to be described as an area described by a series of straight lines connecting the following coordinates in the order listed: 58°00′ N/ 168°00′ W, 58°00′N/163°00′ W, 56°30′ N/161°45′ W, 55°00′ N/166°00′ W, 56°00′ N/168°00′ W and returning to 58°00′ N/168°00′ W. The area described by these boundaries lies completely within the waters of the United States and its EEZ and outside of waters of the State of Alaska. State waters extend seaward for 3 nautical miles from the

shoreline. Because very few sightings occurred within 3 nautical miles of shore, State waters are not included in the proposed CH. The best available information on right whale encounters occurring totaled 182 within this area, out of 184 encounters north of the Aleutian Islands.



Physical Processes and the Existence of PCEs Within the Proposed Critical Habitat

Southeastern Bering Sea Slope Waters

The Bering Sea slope is a very productive zone, sometimes referred to as the 'Greenbelt', where annual primary production can exceed that on the adjacent shelf and basin by 60 percent and 270 percent, respectively (Springer et al., 1996). Physical processes at the shelf edge, such as intensive tidal mixing, eddies, and upcanyon flow bring nutrients to the surface, thereby supporting enhanced productivity and elevated biomass of phytoplankton, zooplankton, and fish. Western North Pacific right whales have been observed in association with oceanic frontal zones that produce eddies southeast of Hokkaido Island, Japan, and southeast of Cape Patience (Mys Terpeniya), Sakhalin Island, in the Okhotsk Sea (Omura et al., 1969). Whether the Bering Slope Current, or eddies shed from it, support production or entrain right whale prey is unknown.

From August to October in 1955 and 1956, Soviet scientists observed aggregations of Calanus spp. between the Pribilof Islands and the Aleutian Islands (around 170° W long.) that were identified as C. finmarchicus, though, as mentioned above, were probably C. marshallae (Klumov, 1963). Flint et al. (2002) also report high concentrations of C. marshallae at frontal zones near the Pribilof Islands, with especially high biomass noted for the subthermohaline laver. This oceanographic front effectively separates slope and outer shelf Neocalanus spp. from the inshore middle shelf community of C. marshallae (Vidal and Smith, 1986). Right whales were found on both sides of this frontal zone (that coincides with the shelf break at 170 m) during both the 19th and 20th centuries. This is similar to the habitat described by Baumgartner et al. (2003a) for right whales feeding in the North Atlantic. Six right whales that were caught under scientific permit in late July-early August 1962-63 in Bering Sea slope waters had exclusively consumed N. cristatus (C. cristatus: Omura et al., 1969). Although oceanic species such as Neocalanus spp. usually enter diapause and migrate to depths greater than 200 m by late summer in the slope waters of the Bering Sea (Vidal and Smith, 1986), right whales may still be able to utilize these resources by targeting regions where the bottom mixed layer forces the zooplankton into shallower, discrete layers (e.g. Baumgartner et al., 2003a).

Southeastern Bering Sea Middle-Shelf Waters

The SEBS shelf has been the focus of intense oceanographic study since the late 1970s (e.g. Schumacher et al., 1979; Coachman, 1986; Napp et al., 2000; Hunt et al., 2002a; Hunt et al., 2002b). largely due to the considerable commercial fishing effort in the area (National Research Council, 1996). Coachman (1986) described the now well-established hydrographic domains of the inner-, middle- and outer-shelf, separated by a front or transition zone at roughly the 50 m (inner front) and 100 m (outer front) isobaths. During the 1990s, research focused on these domains demonstrated dynamic advection of nutrient-rich Bering slope water onto the shelf in both winter and summer, via eddies, meanders, and upcanyon flow (Schumacher and Stabeno, 1998: Stabeno and Hunt, 2002). These intrusions of nutrient-rich water, physical factors related to water column stratification, and long summer day length results in a very productive food web over the SEBS shelf (e.g. Livingston et al.,1999; Napp et al., 2002; Coyle and Pinchuk, 2002; Schumacher et al., 2003). Specifically, copepod species upon which right whales feed (e.g., C. marshallae, Pseudocalanus spp., and Neocalanus spp.) are among the most abundant of the zooplankton sampled over the middle shelf (Cooney and Coyle, 1982; Smith and Vidal, 1986). Small, dense patches (to >500 mg/m-3) of euphausiids (T. raschii, T. inermis), potential right whale prey have also been reported for waters near the SEBS inner front (Coyle and Pinchuk, 2002).

Zooplankton sampled near right whales seen in the SEBS in July 1997 included C. marshallae, P. newmani, and Acartia longiremis (Tynan, 1998). C. marshallae was the dominant copepod found in these samples as well as samples collected near right whales in the same region in 1999 (Tynan et al., 2001). C. marshallae is the only "large" calanoid species found over the SEBS middle shelf (Cooney and Coyle, 1982; Smith and Vidal, 1986). Concentrations of copepods were significantly higher in 1994-98 than in 1980-81 by at least an order of magnitude (Napp et al., 2002), and Tynan et al., (2001) suggest that this increased production may explain the presence of right whales in middle shelf waters. However, at least three right whales were observed in 1985 in the same location as the middle shelf sightings reported in the late 1990s (Goddard and Rugh, 1998).

Gulf of Alaska

The central GOA is dominated by the Alaskan gyre, a cyclonic feature that is demarcated to the south by the eastward flowing North Pacific Current and to the north by the Alaska Stream and Alaska Coastal Current (ACC), which flow westward near the shelf break. The bottom topography of this region is rugged and includes seamounts, ridges, and submarine canyons along with the abyssal plain. Strong semi-diurnal tides and current flow generate numerous eddies and meanders (Okkonen et al., 2001) that influence the distribution of zooplankton.

Copepods are the dominant taxa of mesozooplankton found in the GOA and are patchily distributed across a wide variety of water depths. In northern GOA shelf waters, the late winter and spring zooplankton is dominated by calanoid copepods (Neocalanus spp.), with a production peak in May a cycle that appears resistant to environmental variability associated with El Nino Southern Oscillation (ENSO) (Coyle and Pinchuk, 2003). In oceanic waters (50° N lat., 145° W long.), N. plumchrus dominate (Miller and Nielsen, 1988; Miller and Clemons, 1988) and have demonstrated dramatic shifts in the timing of annual peak biomass from early May to late July (Mackas et al., 1998). From late summer through autumn, N. plumchrus migrate to deep water ranging from 200 m to 2000 m depending on location within the GOA (Mackas et al., 1998). The three right whales caught under scientific permit on August 22, 1961, south of Kodiak Island had all consumed N. plumchrus (C. plumchrus: Omura et al., 1969), potentially by targeting areas where adult copepods remained above 200 m (e.g. Baumgartner et al., 2003a).

The area proposed as CH within the SEBS presents several similarities to that proposed within the GOA. Both areas are influenced by large eddies, submarine canyons, or frontal zones which enhance nutrient exchange and act to concentrate prey. These areas lie adjacent to major ocean currents (the ACC and the Aleutian ocean passes) and are characterized by relatively low circulation and water movement (P. Stabeno, pers. com.). Both proposed CH areas contain the designated PCEs and support feeding by North Pacific right whales.

Right Whale Sightings as a Proxy for Locating the PCEs

As noted above, consistent sightings of right whales - even of single individuals and pairs - in a specific area in spring and summer over an extended

period of time can be used with high confidence as an indicator of the presence of the PCEs in a feeding area. We have used recent sighting records to make this determination because these records are a more reliable indicator of current distribution of feeding whales than historical sightings, especially given that most of the latter relate to animals that were removed from the population by whaling and are thus no longer extant. Of the 184 recent right whale sitings reported north of the Aleutian Islands, 182 occurred within the specific area proposed as critical habitat in the Bering Sea. Since 1996, right whales have been consistently sighted in this area over a period of years during the spring and summer feeding seasons. For example, NMFS surveys alone recorded between two and four sightings in 1996 (Goddard and Rugh, 1998), 13 sightings in 2000 (Le Duc et al., 2004) and over 23 sightings in 2004. Single right whales as well as pairs and aggregations of up to five animals were sighted during this period, and all sightings were within 100 nm2 of one another. Based on consideration of these factors, we conclude that the right whale sightings in the specific area in the Bering Sea described in Figure 2 are a suitable proxy for the presence of the PCEs and therefore propose this area as critical habitat for the North Pacific right whale. Recent sightings of right whales are fewer in number in the GOA than in the Bering Sea. However, three individuals were sighted recently in the specific area proposed as critical habitat in the GOA. These sightings occurred at a time when right whales typically feed in the North Pacific Ocean. In July 1998, a single right whale exhibiting behavior consistent with feeding activity was observed among a group of about eight humpback whales (Waite et al., 2003). In August 2004, a NMFS researcher observed a single right whale among a group of humpbacks. In August 2005, a NMFS researcher reported yet another sighting of a right whale within 250 to 500 meters of groups of humpback and fin whales. Acoustic monitoring of the area conducted in summer 2000 recorded what appeared to be right whale calls in the area on September 6 (Waite, Wynne and Mellinger, 2003). Compared to the Bering Sea sightings, the GOA right whale sightings do not provide as strong an indication of feeding right whales. However, individual right whales have been directly observed in 1998, 2004, and 2005 and detected acoustically in 2000 during the spring and summer feeding seasons in the specific area in the GOA described in Figure 2. It is also

instructive that one of these animals was exhibiting feeding behavior at the time it was observed. Based on consideration of these factors, we propose that the right whale sightings in the specific area in the GOA described in Figure 2 are a reasonably reliable proxy for the presence of the PCEs and therefore proposes this area as critical habitat for the North Pacific right whale.

Activities Which may be Affected by This Designation

Section 4(b)(8) of the ESA requires that we evaluate briefly and describe, in any proposed or final regulation to designate critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. A wide variety of activities may affect CH and, when carried out, funded, or authorized by a Federal agency, require that an ESA section 7 consultation be conducted. Such activities include, but are not limited to, oil and gas leasing and development on the Outer Continental Shelf (OCS), Federal management of high seas fisheries in territorial waters and the EEZ of the United States, dredge and fill, mining, pollutant discharges, other activities authorized or conducted by the Army Corps of Engineers and the **Environmental Protection Agency** (EPA), and military training exercises and other functions of the U.S. armed

This proposed designation of CH will provide these agencies, private entities, and the public with clear notification of proposed CH for North Pacific right whales and the boundaries of the habitat. This proposed designation will also assist these agencies and others in evaluating the potential effects of their activities on CH and in determining if section 7 consultation with NMFS is needed.

Exclusion Process

Section 4 (b)(2) of the ESA states that CH shall be designated on the basis of the best scientific data available and after taking into consideration its economic impact, the impact on national security, and any other relevant impact. Any area may be excluded from CH if the benefits of exclusion are found to outweigh those of inclusion, unless such exclusion would result in the extinction of the species. We will apply the statutory provisions of the ESA including those in section 3 that define "critical habitat" and "conservation" to determine whether a proposed action might result in the destruction or adverse modification of CH. Based upon the best available information, it

appears that the probability of oil or gas exploration activities within (or immediately adjacent to) proposed right whale critical habitat is very low, certainly within the 10-year time frame of our assessment. Likewise, there are no commercial production facilities in operation, currently under development, nor 'permitted' for future development, within these critical habitat areas. Unless contrary information emerges suggesting exploration and development are imminent, there is little expectation that Federal actions in the oil and gas sector will have the potential to "destroy or adversely modify" critical habitat as proposed under this action, within the analytical time horizon.

The oil and gas industry has expressed current interest in exploring and developing oil and gas resources in the North Aleutian Basin OCS Planning Area. We also understand that the State of Alaska has announced support for this activity. However, we lack specific information regarding this potential exploration and development activity and have been unable to gather information on these activities. Therefore, we specifically request comment on the type of exploration and development activities under consideration and the likelihood for such activities to occur, a description of the areas in the North Aleutian Basin that may be affected by any such activities, the extent to which the activities may affect the proposed critical habitat, and any other issues that may be relevant to the analysis of impacts and the exclusion process under section 4(b)(2) of the ESA. Any information we acquire and public comments received on these issues will be considered in analyzing the impacts of the designation of critical habitat and in the section 4(b)(2) exclusion process.

While we expect to consult annually on fishery related proposed actions that "may affect" the proposed CH, none of these consultations would be expected to result in a finding of "adverse modification," and thus none would be expected to result in imposition of costs on commercial fishery participants. Because fisheries do not target or affect the PCEs for the North Pacific right whale, it then follows that no fishing or related activity (e.g., at-sea processing, transiting) would be expected to be restricted or otherwise altered as a result of critical habitat designation in the two areas being proposed. We did not find any specific areas in which the costs exceed benefits for activities that may affect CH, and we have therefore not proposed the exclusion of any areas

from designation.

This action is anticipated to result in consultations with EPA on seafood processing waste discharges; with the Department of Defense (DoD) on military "underway training" activities it authorizes; and with the U.S. Coast Guard (USCG) and Minerals Management Service (MMS) on approvals of oil spill response plans, among others. It is unlikely that these activities will result in an "adverse modification" finding, and, thus, no mandatory modifications would be imposed. It must follow then that no "costs" are imposed as a result of designation beyond the small costs attributable to inter-agency (occasionally intra-agency) consultation. As explained in the impacts analysis prepared for this action, some larger benefit accrues to society as a result of designation, including the educational value derived from identification and designation of the critical habitat areas within which the PCEs are found. Thus we believe that the benefits of exclusion are outweighed by the benefits of inclusion. Our analysis (available on the NMFS Alaska Region website http:// www.fakr.noaa.gov/) did not find any specific areas which merit such exclusion in consideration of economics, nor have we determined that national security interests or other relevant impact warrant the exclusion of any specific areas from this proposed designation. We solicit comments on these benefits and costs as well as our determinations.

Public Comments Solicited

We request interested persons to submit comments, information, and suggestions concerning this proposed rule to designate CH for the North Pacific right whale. Comments or suggestions from the public, other concerned governments and agencies, the scientific community, industry, or any other interested party concerning this proposed rule are solicited. Comments particularly are sought concerning:

- (1) Maps and specific information describing the amount, distribution, and use type (e.g., feeding, calving, migration) of the North Pacific right whale;
- (2) Information as to the identification of physical or biological features which may be essential to the conservation of the North Pacific right whale;
- (3) Information on whether the copepods and euphausiids in feeding areas identified by NMFS as PCEs, or any other physical or biological features that may be essential to the conservation of the North Pacific right whale, may

require special management considerations or protection;

(4) Information regarding the benefits of excluding any portions of the proposed CH, including the regulatory burden that designation may impose;

(5) Information regarding the benefits of designating particular areas as CH;

(6) Current or planned activities in the areas proposed for designation, and their possible impacts on proposed CH;

- (7) Any information regarding potential oil and gas exploration and development activities in the North Aleutian Basin OCS Planning Area, including information on the type of exploration and development activities under consideration and the likelihood for such activities to occur, a description of the areas in the North Aleutian Basin that may be affected by any such activities, the extent to which the activities may affect the proposed critical habitat, and any other issues that may be relevant to the analysis of impacts and the exclusion process under section 4(b)(2) of the ESA;
- (8) Any foreseeable economic or other potential impacts resulting from the proposed designation; and

(9) Whether specific unoccupied areas not presently proposed for designation may be essential to the conservation of the North Pacific right whale.

You may submit your comments and materials concerning this proposal by any one of several methods (see ADDRESSES). The proposed rule, maps, fact sheets, and other materials relating to this proposal can be found on the NMFS Alaska Region website at http://www.fakr.noaa.gov/. We will consider all comments and information received during the comment period on this proposed rule in preparing the final rule. Accordingly, the final decision may differ from this proposal.

Public Hearings

50 CFR 424.16(c)(3) requires the Secretary to promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed regulation to designate CH. Requests for public hearing must be made in writing (see ADDRESSES) by December 13, 2007. Such hearings provide the opportunity for interested individuals and parties to give comments, exchange information and opinions, and engage in a constructive dialogue concerning this proposed rule. We encourage the public's involvement in such ESA matters.

Classification

Regulatory Planning and Review

This proposed rule has been determined to be significant for

purposes of Executive Order (E.O.) 12866. As part of our exclusion process under section 4(b)(2) of the ESA, the economic benefits and costs of the proposed critical habitat designations are described in our draft economic report. Data are not available to express all costs and benefits of CH designation in monetary terms. Indeed, many costs and benefits accrue outside of traditional markets and, therefore, are not typically associated with a "monetary" measure (e.g., subsistence activities). In such cases, an effort has been made to "quantify" benefits and costs in measurable units. Finally, some benefits and costs cannot be either monetized, nor quantified, yet are important to a full evaluation and understanding of a proposed action. In these instances, benefits and costs have been fully characterized in "qualitative" terms. Application of a benefit/cost framework is fully consistent with E.O.

In July 2006, NMFS revised the existing critical habitat for northern right whales to include critical habitat in the eastern North Pacific (71 FR 38227, July 6, 2006). Subsequently, it was determined that the North Atlantic and North Pacific populations of northern right whale are, in fact, distinct species. This rule, therefore, proposes as critical habitat for the North Pacific right whale (currently proposed for listing 71 FR 77694, December 27, 2006) the same critical habitat that was finalized in 2006. The proposal would not have any additional effect because the habitat proposed for designation is the same that was designated in the previous rule. The analysis provided largely mirrors the analysis provided in the previous rulemaking, updated as necessary to account for new information, and does not result in any substantive changes to the analytical conclusions.

Regulatory Flexibility Act (5 U.S.C. 601 et sea.)

Under the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996) whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). We have prepared an initial regulatory flexibility analysis (IRFA), and this document is available upon request (see ADDRESSES). This IRFA evaluates the potential effects of

the proposed CH designation on federally regulated small entities. The reasons for the action, a statement of the objectives of the action, and the legal basis for the proposed rule, are discussed earlier in the preamble. A summary of the analysis follows.

The small entities that may be directly regulated by this action are those that seek formal approval (e.g., a permit) from, or are otherwise authorized by, a Federal agency to undertake an action or activity that "may affect" CH for the North Pacific right whale. Submission of such a request for a Federal agency's approval, from a small entity, would require that agency (i.e., the 'action agency') to consult with NMFS (i.e., the

'consulting agency').

Consultations vary, from simple to complex, depending on the specific facts of each action or activity for which application is made. Attributable costs are directly proportionate to complexity. In the majority of instances projected to take place under the proposed CH designation, these costs are expected to accrue solely to the Federal agencies that are party to the consultation. In only the most complex of "formal consultations" might it be expected that a private sector applicant could potentially incur costs directly attributable to the consultation process itself. Furthermore, if destruction or adverse modification of CH is found at the conclusion of formal consultation, the applicant must implement modifications to avoid such effects. These modifications could result in adverse economic impacts

An examination of the Federal agencies with management, enforcement, or other regulatory authority over activities or actions within, or immediately adjacent to, the proposed CH area, resulted in the following list. Potential action agencies may include: the EPA, USCG, DoD. MMS, and NMFS. Activities or actions with a nexus to these Federal agencies which are expected to require consultation include: EPA permitting of seafood processing waste discharges atsea; USCG and MMS oil spill response plan approval, as well as emergency oil spill response; DoD authorization of military training activities in the Bering Sea and Aleutian Islands (BSAI) and GOA; MMS leasing activity, oil and gas exploration and production permitting, and NMFS fishery management actions in the BSAI and GOA.

A 10-year "post-CH designation" analytical horizon was adopted, during which time we may reasonably expect to consult an estimated 27 times on CH-related actions with one or more of the action agencies identified above. The

majority of the consultations are expected to be "informal," projected to represent approximately 52 percent of the total. The more complex and costly "formal" consultations are projected to account for, perhaps, 37 percent; while the simplest and least costly "preconsultations" are expected 11 percent of the time. These figures reflect the best estimates information and experience can presently provide.

can presently provide. On the basis of the underlying biological, oceanographic, and ecological science used to identify the PCEs that define CH for the North Pacific right whale, as well as the foregoing assumptions, empirical data. historical information, and accumulated experience regarding human activity in the BSAI and GOA, it is believed that only one federally authorized activity (among all those identified in the analyses and referenced above) has the potential to "destroy or adversely modify" right whale CH, albeit believed to be a relatively small potential. This one class of activity is OCS oil and gas

exploration and production.

As previously indicated, MMS has authority over OCS oil and gas permitting. An examination of published information from the MMS Alaska Region reveals that three MMS OCS planning areas overlap some portion of the proposed right whale CH areas. Further, MMS sources indicate that in only one of these has there been any exploratory well drilling (i.e., St. George Basin). Ten exploratory wells were permitted, all of which were completed in 1984 and 1985 (with no subsequent associated exploration activity). It appears that there has been no recent OCS oil and gas activity in and adjacent to the areas being proposed for critical habitat designation. MMS reports no planned or scheduled OCS lease sales for these areas through 2007 (the end of the current 5-year Lease-Sale planning cycle). However, both seismic acquisition and leasing took place in the adjacent North Aleutian Basin Planning Area through Sale 92 held in 1988. Leases were held until 1995, when a "buy-back" settlement was reached between leaseholders and the Federal government. There are no current OCS lease holdings in the St. George Basin or North Aleutian Basin Planning Areas. In January 2007, the President modified the Presidential withdrawal for the North Aleutian Basin, allowing the Secretary of the Interior to offer this OCS planning area for leasing during the next 5-year OCS leasing program (2007-2012). The 2007-2012 program now includes a lease sale in the North Aleutian Basin to be held in 2011. MMS may also offer a sale in

the North Aleutian Basin which would be confined to a small portion of the planning area previously offered during lease sale 92 in 1988.

When MMS records were consulted as to the identity of the entities that previously held lease rights to the wells in the St. George Basin, six businesses were listed for the ten permitted exploratory wells. These include: SHELL Western E&P Inc. (2 wells); ARCO Alaska Inc. (3 wells); EXXON Corp. (2 wells); Mobile Oil Corp. (1 well) (now merged with EXXON); GULF Oil Corp. (1 well); and CHEVRON USA Inc. (1 well). MMS records also indicate that the following nine companies submitted bids, jointly or individually. on blocks in the North Aleutian Basin under lease sale 92 held in 1988: Chevron, Unocal, Conoco, Murphy, Odeco, Amoco, Shell, Mobil, and Pennzoil. These data were last updated, according to the MMS website, March 17, 2005. It would appear that none of these entities could reasonably be characterized as "small" for RFA purposes. All are widely recognized multi-national corporations and employ more than "500 full-time, part-time, temporary, or any other category of employees, in all of their affiliated operations worldwide" (the criterion specified by SBA for assessing entity size for this sector).

The preferred alternative was compared to the mandatory 'No Action' (or status quo) alternative. In addition, a third alternative was analyzed and its expected benefits and costs contrasted with the status quo and preferred alternatives. That alternative was based upon the proposed areas of the Bering Sea identified in an October 2000 petition that requested critical habitat be designated for the northern right whale within the North Pacific Ocean.

Because there appear to be no identifiable economic costs to any small entities attributable to the CH designation action, there cannot be an alternative to the proposed action that imposes lesser impacts, while achieving the purpose of the ESA and the objectives of this action, than are reflected in the preferred alternative.

The action does not impose new recordkeeping or reporting requirements on small entities. The analysis did not reveal any Federal rules that duplicate, overlap or conflict with the proposed action.

Military Lands

The Sikes Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to

complete, by November 17, 2001, an Integrated Natural Resource Management Plan. The National Defense Authorization Act for Fiscal Year 2004 (Public Law No. 108-136) amended the ESA to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the ESA (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation." We have determined no military lands would be impacted by this proposed

Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O.) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking any action that promulgates or is expected to lead to the promulgation of a final rule or regulation that (1) is a significant regulatory action under E.O. 12866 and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy

We have considered the potential impacts of this action on the supply, distribution, or use of energy, and we find the designation of critical habitat will not have impacts that exceed the thresholds identified above.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(a) This proposed rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5) (7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal

program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or tribal governments "lack authority" to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition: Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living: Family Support Welfare Services; and Child Support Enforcement.) "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program." The designation of CH does not impose a legally binding duty on non-Federal government entities or private parties. Under the ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify CH under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of CH, the legally binding duty to avoid destruction or adverse modification of CH rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would CH shift the costs of the large entitlement programs listed above to State governments. (b) Due to the prohibition against take

(b) Due to the prohibition against take of this species both within and outside of the designated areas, we do not anticipate that this proposed rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with E.O. 12630, the proposed rule does not have significant takings implications. A takings implication assessment is not required. The designation of CH affects only Federal agency actions. Private lands do not exist within the proposed CH and

therefore would not be affected by this action.

Federalism

In accordance with E.O. 13132, this proposed rule does not have significant federalism effects. A federalism assessment is not required. In keeping with Department of Commerce policies, we request information from, and will coordinate development of, this proposed CH designation with appropriate State resource agencies in Alaska. The proposed designation may have some benefit to State and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the PCEs of the habitat necessary to the survival of the North Pacific right whale are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with E.O. 12988, the Department of the Commerce has determined that this proposed rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the E.O. We are proposing to designate CH in accordance with the provisions of the ESA. This proposed rule uses standard property descriptions and identifies the PCEs within the designated areas to assist the public in understanding the habitat needs of the North Pacific right whale.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This proposed rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that an environmental analysis as provided for under the National Environmental Policy Act of 1969 for CH designations made pursuant to the ESA is not required. See Douglas County v. Babbitt,

48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S.Ct. 698 (1996).

Government-to-Government Relationship With Tribes

The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. E.O. 13175 - Consultation and Coordination with Indian Tribal Governments- outlines the responsibilities of the Federal Government in matters affecting tribal interests.

We have determined the proposed designation of CH for the North Pacific right whale in the North Pacific Ocean would not have tribal implications, nor affect any tribal governments or issues.

None of the proposed CH occurs on tribal lands, affects tribal trust resources, or the exercise of tribal rights. The North Pacific right whale is not hunted by Alaskan Natives for traditional use or subsistence purposes.

References Cited

A complete list of all references cited in this rulemaking can be found on our website at http://www.fakr.noaa.gov/ and is available upon request from the NMFS office in Juneau, Alaska (see ADDRESSES)

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: October 23, 2007.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, we propose to amend part 226, title 50 of the Code of Regulations as set forth below:

PART 226—DESIGNATED CRITICAL HABITAT

1. The authority citation of part 226 continues to read as follows:

Authority: 16 U.S.C. 1533

2. In § 226.203, the section heading and the introductory text are revised; and the headings for paragraphs (a) and (b) are revised to read as follows:

§ 226.203 Critical habitat for right whales.

Critical habitat is designated for right whales in the North Atlantic and North Pacific Oceans as described in paragraphs (a) and (b) of this section. The textual descriptions of critical habitat are the definitive source for determining the critical habitat boundaries. General location maps are provided for critical habitat in the North Pacific Ocean for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

- (a) North Atlantic right whale (Eubalaena glacialis)—* * *
- (b) North Pacific right whale (Eubalaena japonica)—* * *

[FR Doc. 07-5367 Filed 10-26-07; 8:45 am]





AGENDA B-6(g) DECEMBER 2007

Home | Protected Resources | Alaska Whales | Northern Right Whales

North Pacific Right Whales

Several of the following are PDF files which require free Adobe Acrobat Reader software to view, navigate and print. Adobe also offers free tools for the visually disabled.

Stock Status

- 72 FR 61089, October 29, 2007. Proposed rule to list the North Pacific right whale as endangered and designate critical habitat for this species in the GOA and BSAI. Comment period through December 28, 2007 and request for public hearings must be made in writing by December 13, 2007.
- 72 FR 29973, May 30, 2007. Notice of a 90-day finding regarding a petition to list the global populations
 of right whales as a single species under the Endangered Species Act of 1973, as amended. After
 review, NMFS finds the petition does not present substantial scientific or commercial information
 indicating that the petitioned action may be warranted.
- 71 FR 77694, December 27, 2006. Proposed rule to list the North Pacific right whale as an endangered species. Comment period through February 26, 2007.
 - Review of the Status of the Right Whales in the North Atlantic and North Pacific Oceans, December 2006
- Center for Biological Diversity: Lawsuit to protect the North Pacific right whale under the ESA, December 2006; Dismissed - Case No. C-06-7786-BZ
- 71 FR 4344, January 26, 2006. Notice of a 90-day finding regarding a petition to list the North Pacific
 right whale as an endangered species.
- Center for Biological Diversity: Petition to list the North Pacific right whale under the ESA, August 2005
- 70 FR 1830, January 11, 2005. Removal of technical revisions made in April 2003 to the Northern Right Whale listing under the ESA.
- 68 FR 17560, April 10, 2003. Revision to right whale nomenclature and taxonomy.
- Stock Assessment Reports

Critical Habitat

- 72 FR 61089, October 29, 2007. Proposed rule to list the North Pacific right whale as endangered and designate critical habitat for this species in the GOA and BSAI. Comment period through December 28, 2007 and request for public hearings must be made in writing by December 13, 2007.
- 71 FR 38277, July 6, 2006. Final rule to revise the current critical habitat for the northern right whale. Effective August 7, 2006.
 - News Release: June 30, 2006
- Habitat Requirements and Extinction Risks of Eastern North Pacific Right Whales, April 2006
- 71 FR 6999, February 10, 2006. Proposed rule to revise current critical habitat for the northern



Northern right whale in the Bering Sea. Photo: Bob Pitman, Alaska Fisheries Science Center

- right whale. Public hearing scheduled and comment period extended through March 9, 2006.

 70 FR 66332, November 2, 2005. NOAA Fisheries proposes critical habitat areas for endangered northern right whales
 - o Judge Alsup's order to designate Critical Habitat for the northern right whale, June 2005
 - o Order Granting Summary Judgment in Favor of Center for Biological Diversity, June 2005
 - Center for Biological Diversity Notice of Intent to Sue for failing to designate critical habitat, May 2004. 67 FR 7660, February 20, 2002: Response to petition to revise critical habitat
- 70 FR 60285, October 17, 2005. Notice of intent to prepare an EIS to analyze the environmental impacts on endangered northern right whales. Comment period through January 31, 2006.

boston.com

THIS STORY HAS BEEN FORMATTE

Page 1 of 2 AGENDA B-6(h) DECEMBER 2007

ght whales remain rare and elusive

AP Associated Press

By Mary Pemberton, Associated Press Writer | October 10, 2007

ANCHORAGE, Alaska --Scientists searching for what is likely the world's most endangered whale came up empty-handed this summer during a one-month tour of an area in the Bering Sea where Pacific right whales like to feed.

From July 31 to Aug. 28, an international team of scientists surveyed an area almost the size of New York in search of Pacific right whales, which have been teetering on extinction for decades.

"We did not see a single whale the entire time," said Phil Clapham, team leader and chief scientist with the National Oceanic and Atmospheric Administration's Alaska Fisheries Science Center in Seattle. "The bottom line, they were not in the places they had traditionally been in the last six or seven years."

This summer's survey where scientists used high-powered binoculars and underwater listening devices is part of a larger four-year project to assess the seasonal distribution of the whales, their numbers and where they travel in the Bering Sea.

The Minerals Management Service is paying for the surveys at an annual cost of about \$1 million. The research is required under the federal Endangered Species Act because the area where the whales like to spend summers overlaps an area the federal government this year approved for oil and gas development. Lease sales could begin by 2011.

The whales weren't found this summer because it is a "cold pool year" in the Bering Sea, Clapham said. That means the water is colder than normal. The colder water likely affected the distribution of plankton, which is what the large whales feed on, he said

ny scientists considered right whales a lost cause until a few years ago when 23 were spotted, including two with calves, in area of the Bering Sea where they like to feed.

However, numbers remain exceedingly small, making it difficult to find them, Clapham said.

"It is very much like a needle in a haystack given there are so few animals," he said.

Right whales have been listed as endangered since the early 1970s.

Scientists spent two weeks aboard a NOAA research vessel that departed from Dutch Harbor in late July. Scientists from Russia, the Dominican Republic, Brazil and South America joined the NOAA scientists.

For the last two weeks of the survey, the team took up the search in a 155-foot crab boat.

"We had a lot of humpbacks," said Clapham, who for 20 years has hoped to see a right whale. "We saw a lot of fur seals. You kind of get sick of fur seals."

The Bering Sea is changing as rapidly as any ocean on the planet because of global warming, said Brendan Cummings, ocean programs director for the Center for Biological Diversity, which successfully sued the federal government to get critical habitat designated for the whales. Those changes have affected where animals go, he said.

While it will take a longer, wider look to find out what is happening with right whales, some things are apparent now, he said.

"We know ... for the past decade that the southeastern Bering Sea is the most important spot on the planet for North Pacific right whales. We need to not open it up for oil drilling," he said.

the whales, which can grow to more than 60 feet long and weigh 100 tons, have been protected since 1935.

Clapham said this is the first time that there has been dedicated funding to survey the whales, which he described as "arguably the most endangered population in the world."

http://www.boston.com/news/science/articles/2007/10/10/right whales remain_rare_and_elusive?mode=... 10/11/2007

Right whales remain rare and elusive - Boston.com
He said scientists will go out again next year.
"It is very important for a lot of reasons to keep up with them," he said.
On the Net:
http://www.biologicaldiversity.org
http://www.fakr.noaa.gov

http://www.afsc.noaa.gov

Public Hearings

Section 4(b)(5)(E) of the Act requires that a public hearing be held if any person requests a hearing within 45 days of the publication of a proposed rule. In response to a request from the Inyo County Board of Supervisors, the Service will conduct one public hearing on the date and at the address described in the DATES and ADDRESSES sections above.

Oral comments may be limited in length. Persons wishing to make an oral statement for the record are encouraged to provide a written copy of their statement and present it to us at the hearing. In the event there is a large attendance, the time allotted for oral statements may be limited. Oral and written statements receive equal consideration. There are no limits on the length of written comments submitted to us. If you have any questions concerning the public hearing, please contact the Nevada Fish and Wildlife Office (see ADDRESSES section).

Persons needing reasonable accommodations in order to attend and participate in the public hearing should contact Jeannie Stafford at 775–861–6300 as soon as possible. In order to allow sufficient time to process requests, please call no later than one week before the hearing date. Information regarding this proposal is available in alternative formats upon request.

Authority

The authority for this action is the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*).

Dated: September 21, 2007.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. E7-19596 Filed 10-5-07; 8:45 am] BILLING CODE 4310-55-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List the Black-Footed Albatross (*Phoebastria nigripes*) as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding and initiation of status review.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the black-footed albatross (Phoebastria nigripes) as threatened or endangered under the Endangered Species Act of 1973, as amended (Act). We find that the petition presents substantial scientific or commercial information indicating that listing the black-footed albatross may be warranted. Therefore, with the publication of this notice, we are initiating a status review to determine if listing the species is warranted. To ensure that the review is comprehensive, we are soliciting data and other information regarding this species.

DATES: The finding announced in this document was made on October 9, 2007. To be considered in the 12-month finding for this petition, data, information, and comments must be submitted to us by December 10, 2007.

ADDRESSES: The complete supporting file for this finding is available for public inspection, by appointment, during normal business hours at the Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3–122, Honolulu, HI 96813. You may submit data, information, comments, or questions concerning this species or our finding, by any one of several methods:

- 1. By mail or hand-delivery to: Patrick Leonard, Field Supervisor, Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Box 50088, Honolulu, HI 96850.
- 2. By electronic mail (e-mail) to: fw1bfal@fws.gov. Please include "Attn: black-footed albatross" in your e-mail subject header, preferably with your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your e-mail, contact us directly by calling the Pacific Islands Fish and Wildlife Office at 808-792-9400. Please note that the e-mail address above will be closed at the end of the public comment period.
- 3. By fax to: the attention of Patrick Leonard at 808–792–9581.

FOR FURTHER INFORMATION CONTACT: Patrick Leonard, Field Supervisor, Pacific Islands Fish and Wildlife Office (see ADDRESSES); by telephone (808–792–9400); or by facsimile (808–792–9581). Persons who use a telecommunications device for the deaf (TTD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Public Information Solicited

When we make a finding that a petition presents substantial information to indicate that listing a species may be warranted, we are required to promptly commence a review of the status of the species. To ensure that the status review is complete and based on the best available scientific and commercial information, we are soliciting additional information on the black-footed albatross. We request any additional information, comments, and suggestions from the public, other concerned governmental agencies, Tribes, the scientific community, industry, or any other interested parties concerning the status of the black-footed albatross. We are seeking information regarding the species' historical and current status and distribution, its biology and ecology, ongoing conservation measures for the species and its habitat, and threats to the species and its breeding and foraging habitats. Of particular interest is information pertaining to the factors the Service uses to determine if a species is threatened or endangered: (A) Present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence.

We will base our 12-month finding on a review of the best scientific and commercial information available, including all information received during the public comment period. If you wish to comment or provide information, you may submit your comments and materials concerning this finding to the Field Supervisor, Pacific Islands Fish and Wildlife Office (see ADDRESSES section). Please note that comments merely stating support or opposition to the actions under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is a threatened or endangered species shall be made "solely on the basis of the best scientific and commercial data available." At the conclusion of the status review, we will issue the 12-month finding on the petition, as provided in section 4(b)(3)(B) of the Act.

Before including your address, phone number, e-mail address, or other personal identifying information in your comments, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Background

Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.), requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information to indicate that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files at the time we make the determination. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of this finding promptly in the Federal Register.

Our standard for substantial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted" (50 CFR 424.14(b)). If we find that substantial information was presented, we are required to promptly commence a review of the status of the species.

In making this finding, we relied on information provided by the petitioners that we determined to be reliable after reviewing sources referenced in the petition and information available in our files at the time of the petition review. We evaluated that information in accordance with 50 CFR 424.14(b). Our process in making this 90-day finding under section 4(b)(3)(A) of the Act and section 424.14(b) of our regulations is limited to a determination of whether the information in the petition meets the "substantial information" threshold.

Petition

On October 1, 2004, we received a formal petition dated September 28, 2004, requesting that we list the black-footed albatross (*Phoebastria nigripes*) as a threatened or endangered species, and that critical habitat be designated concurrently with listing. The petition, submitted by Earthjustice on behalf of the Turtle Island Restoration Network and the Center for Biological Diversity, identified itself as such and contained

the names, addresses, and signatures of the requesting parties. The petition included supporting information regarding the species' taxonomy and ecology, historical and current distribution, present status, potential causes of decline, and active imminent threats. We sent a letter acknowledging receipt of the petition to Earthjustice on December 3, 2004. In our response, we advised the petitioners that we had determined that emergency listing was not warranted for the species at that time, and owing to a significant number of listing rules due in 2005 under courtorder and court-approved settlement agreements, we had insufficient resources to initiate a 90-day finding at that time. This notice constitutes our 90day finding for the petition to list the black-footed albatross.

Species Information

The seabird family Diomedeidae (albatrosses) contains four genera and as many as 24 species (Robertson and Nunn 1998, pp. 15-19), the majority of which breed and forage in the Antarctic and sub-Antarctic. The black-footed albatross is one of four species in the genus Phoebastria, all but one of which breed and forage exclusively in the North Pacific Ocean (the waved albatross, Phoebastria irrorata, nests on the equator in the Galapagos Islands and forages in the South Pacific along the Peruvian coast). Of the North Pacific albatrosses, the black-footed albatross is the only all-dark species; the plumage is uniformly sooty brown with a whitish ring at the base of the bill and a white patch behind the eye. As they mature, birds develop a white patch above and below the tail (Bourne 1982, cited in Hyrenbach 2002, p. 87). The wingspan of the black-footed albatross is 76 to 85 inches (193 to 216 centimeters) and its average weight is 6.17 pounds (2.30 kilograms) (Whittow 1993, p. 13).

According to the petition, recent breeding population estimates for the black-footed albatross range from 54,500 breeding pairs (The International Union for the Conservation of Nature and Natural Resources (IUCN) Red List 2003) to 64,500 breeding pairs (Brooke 2004). The most recent population assessment in our files falls squarely within this range, with a rough estimate of 61,000 pairs (U.S. Fish and Wildlife Service (USFWS) unpublished data 2006). The petition further states that the bulk of black-footed albatross today nest in the Northern Hawaiian Islands (Brooke 2004). Our information is in agreement, showing that approximately 97 percent of the breeding population nests in the predator-free Northwestern Hawaiian Islands, with most

concentrated on two of these islands, Midway Atoll (35 percent) and Laysan Island (34 percent) USFWS unpublished data 2006). Approximately 3 percent of the world's black-footed albatross population nests on several remote islands in Japan. A few pairs nest on offshore islets in the main Hawaiian Islands, and from 1 to 3 pairs nest or attempt to nest annually on Wake Island in the Central Pacific, and on Guadalupe and San Benedicto Islands in Mexico.

Recent study of the mitochondrial DNA of black-footed albatrosses indicates that Hawaiian and Japanese birds are genetically distinct, and further research may indicate that taxonomic revision is warranted to reflect this difference, according to the petition (Walsh and Edwards 2004). Information in our files agrees with this assessment (Walsh and Edwards 2005, p. 293); however, at present the blackfooted albatross continues to be treated by the taxonomic authorities as a single species (American Ornithologists' Union 2005; Integrated Taxonomic Information System 2007), therefore we treat it as such in this finding

The petition describes the longevity and low reproductive rate of the blackfooted albatross as factors that exacerbate their vulnerability to population impacts (Cousins and Cooper 1999; Walsh and Edwards 2004), and points out that for these reasons the species is highly sensitive to changes in adult survivorship (Lewison and Crowder 2003). Information in our files supports the petition's description of the life-history characteristics of this species. Black-footed albatrosses are long-lived (40 to 50 years) and slow to mature, with first breeding typically occurring at 8 to 10 years of age (Kendall et al. 2005, p. 11). The nesting phenology of the black-footed albatross is summarized by Whittow (1993, pp. 6-8). Pairs mate for life, and breed at a maximum of once each year (pairs skip years irregularly). Birds arrive at their nesting colonies in Hawaii and Japan in October, and most pairs produce their single egg by early December. Eggs hatch in January to February, and chicks fledge by mid to late July. Both adults take part in incubation and in brooding and feeding the chick.

As described in the petition, blackfooted albatrosses that breed in Hawaii
generally forage to the northeast, toward
coastal waters of North America, and
move further north in the summer
(Brooke 2004). Information in our files
agrees with this description of foraging
behavior and range. Black-footed
albatrosses forage throughout the North
Pacific Ocean, frequenting coastal North
America especially during the breeding

season (Fernandez et al. 2001, pp. 4-8). Foraging shifts north during the summer, after the breeding season, and black-footed albatrosses are the most abundant albatross species in the Gulf of Alaska and along the continental shelf south of the Aleutian Islands during this period (Suryan and Balogh 2005, pp. 1-5). The petition describes the blackfooted albatross as a surface feeder and scavenger, seizing food and contact dipping primarily within 3 feet (1 meter) of the ocean's surface (Brooke 2004). The diet of adult albatross is primarily flying fish eggs, but also squid, fish, offal, and human refuse (Brooke 2004). The petition contends that scavenging is the activity that often brings the birds into contact with vessels. According to our files, the species' primary prey items are thought to be squid and eggs of flying fish (Whittow 1993, p. 3), but intensive diet studies are lacking. The information available in our files supports the petition's assertion that albatross are surface feeders and that their foraging behavior may expose them to vessels and fishing gear. Albatrosses scavenge food, will consume dead squid at the ocean surface (Pitman et al. 2004, pp. 162-164) and offal discarded from fishing vessels, pursue baited hooks as fishing gear is deployed, and opportunistically feed on fishery catch (e.g., swordfish; Xiphius gladius) that lies at the surface before it is brought on board (Duffy and Bisson 2006, p. 2).

Threats Analysis

Section 4 of the Act and implementing regulations (50 CFR 424) set forth procedures for adding species to the Federal List of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) Present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. In making this finding, we evaluated whether threats to the blackfooted albatross presented in the petition and other information available in our files at the time of the petition review may pose a concern with respect to the species' survival. Our evaluation of these threats is presented below.

A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

The petition states that the current range of the black-footed albatross represents a significant curtailment of its historic range, and that colonies have been extirpated by feather- and egg-hunters from Johnston Atoll, Wake Island, Taongi Atoll (Marshall Islands), Marcus Island (Minami Torishima), Iwo Jima, and the Northern Mariana Islands (Lewison and Crowder 2003).

Information in our files provides a review of evidence of the former nesting range of the black-footed albatross (Tickell 2000, pp. 217-218). The species' current range and documented extirpations from Marcus, Iwo Jima, and Agrihan (Northern Mariana Islands), and anecdotal observations from Johnston atoll and Wake Island are highly suggestive that the breeding range of the black-footed albatross once comprised a string of small islands spanning the Pacific north of 15 degrees North latitude and predominantly north of the Tropic of Cancer, however, little information exists with which to deduce the original size of the extirpated populations.

Although information presented in the petition, as well as information in our files, indicates that the distribution of the black-footed albatross is now disjunct, the petition does not present substantial scientific or commercial information indicating that the species' range is continuing to contract. Nor does the petition present substantial scientific or commercial information indicating that the species' continued existence may be threatened as a result of past range contraction.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The petition mentions the mass killing of black-footed albatrosses within the last 150 years by feather-hunters causing the extirpation of these birds from several breeding islands (Lewison and Crowder 2003), but concludes that such direct exploitation today is likely quite rare. We are not aware of any information indicating that present-day overutilization of black-footed albatross for commercial, recreational, scientific, or educational purposes is occurring and posing a threat to the species.

As a result, we have determined that the petition does not present substantial scientific or commercial information indicating that the continued existence

of the black-footed albatross is threatened by overutilization.

C. Disease or Predation

The petition states that because the ranges of the short-tailed albatross (Phoebastria albatrus) and black-footed albatross overlap, much of the disease factors affecting black-footed albatross are the same as those described in the July 31, 2000, final listing rule (65 FR 46643) for the endangered short-tailed albatross. The petition states that the final listing rule for short-tailed albatross explains that avian pox has been observed in chicks of albatross species on Midway Atoll. The petition also mentions that currently proliferating pathogens such avian cholera and West Nile virus are a potential risk to black-footed albatross.

The final listing rule for short-tailed albatross states "an avian pox has been observed in chicks of albatross species on Midway Atoll, but whether this pox infects short-tailed albatrosses or may have an effect on the survivorship of any albatross species is unknown (T. Work, D.V.M., U.S. Geological Survey (USGS), Hawaii; 65 FR 46643). The petition presents no evidence that disease may threaten the black-footed albatross. Information in our files indicates that no diseases are known to affect the endangered short-tailed albatross population today (USFWS 2005, p. 14). Chicks of the closelyrelated Laysan albatross (Phoebastria immutabilis) do contract avian pox (Poxvirus avium), a mosquito-borne disease, in certain areas at Midway Atoll where the insects are present, but blackfooted albatrosses do not nest in these areas and their chicks have not been observed with pox lesions (J. Klavitter, USFWS, pers. comm. 2006). A study of this disease in the Laysan albatross found that most chicks with pox lesions recovered and fledged, and that pox infection did not significantly affect fledging success at one colony (Young and VanderWerf 2006). Of a total of 16 black-footed albatross chicks found on Lehua Islet (offshore of Niihau Island, Hawaii) in 2005, two were observed with small pox lesions, but the birds appeared to be healthy and in good condition otherwise, and were presumed to have developed normally and fledged (E. VanderWerf, Service, pers. comm. 2006).

Information in our files indicates that potentially fatal diseases such as avian cholera, avian influenza, and West Nile virus have not been observed in North Pacific albatrosses. No experimental or other data are available with which to assess the susceptibility of black-footed albatrosses to avian cholera or flu, and

no occurrence of either disease has been recorded in Hawaii.

The petition states that predation by naturally occurring and introduced predators pose a threat to the blackfooted albatross. To support this claim the petitioners provide an excerpt from the short-tailed albatross listing rule (65 FR 46643), which mentions predation by sharks on fledgling albatrosses around their natal islands. Although black-footed albatrosses have been subject to predation by sharks, a natural phenomenon throughout their evolutionary history, the petition does not present substantial information indicating that this source of mortality may threaten the species.

We find that the petition does not present substantial scientific or commercial information to indicate that disease or predation threatens the continued existence of the black-footed albatross.

D. Inadequacy of Existing Regulatory Mechanisms

The petition provides credible scientific information that incidental mortality in commercial longline fisheries may threaten the existence of the black-footed albatross (Gales 1998; Cousins and Cooper 2000; Cousins et al. 2000; IUCN Red List 2003; Lewison and Crowder 2003). Mortality is described as resulting from albatross diving on the baited hooks that float on the ocean's surface, and then either swallowing the baited hook or being caught and pulled underwater to drown (National Marine Fisheries Service (NMFS) 2004). Information in our files supports the petition, indicating that albatross have a propensity for pursuing baited fishing gear, especially those deployed by longline vessels, which leads to their being hooked on weighted lines, dragged underwater, and drowned (Tasker et al. 2001, p. 532). Black-footed albatrosses show this tendency, as evidenced by their documented pursuit of baited longline hooks (Melvin et al. 2001, p. 14) and their mortality on longline gear (Melvin et al. 2001, pp. 2, 35; NMFS-Alaska 2006, pp. 9-11 NMFS—Pacific Islands Regional Office (PIRO) unpublished data 2006)

The petition describes the IUCN reclassification of the black-footed albatross from Vulnerable to Endangered in 2003 (BirdLife International 2003). This reclassification was based on observed and estimated mortality in domestic and foreign longline fisheries, extrapolations of total annual mortality, and the predicted population declines resulting from models based on these data and estimates (Cousins et al. 2000; Lewison

and Crowder 2003). Information in our files confirms the estimates of mortality and predictions of population response published by Lewison and Crowder (2003, pp. 748-750) and cited by the petition. This study includes a bounded range of fishery-related mortality estimates, with a best-case scenario (the lower bound of estimated annual mortality) still resulting in a population decline of more than 20 percent over the next 60 years. The results of these modeling efforts indicate that the rate of mortality of black-footed albatrosses may be high enough to result in longterm population decline (Cousins et al. 2000, pp. 166-172; Lewison and Crowder 2003, pp. 748-750). Relevant to this issue is a Service-contracted formal status assessment of the blackfooted (and Laysan) albatross that will include a synthesis and review of all existing data and other information about the species, including an assessment of fishery-related mortality and statistical models of the population status and trajectory. This assessment is currently undergoing peer review in preparation for publication. This population assessment will be useful in critically evaluating the population trend for the black-footed albatross and threats, as part of our 12-month finding.

The petition states that each year commercial fisheries in the North Pacific inadvertently kill from 1 to 5 percent of the global population of the black-footed albatross (Lewison and Crowder 2003). The petition describes the documented mortality of blackfooted albatrosses in U.S.-based fisheries (e.g., Cooper 2000) and satellite telemetry studies that point to overlap between the foraging range of the blackfooted albatross and the operation of foreign-flag longline fisheries (Hyrenbach and Dotson 2003). Data in our files includes new information from satellite telemetry studies and public domain data on fishery distribution and effort since the petition was written, and provides support to the information in the petition that foreign longline fisheries in the North Pacific overlap with the foraging range of black-footed albatrosses and that incidental mortality in these fisheries is likely to occur (e.g., SPC-OFP 2004; Suryan and Balogh 2005, p. 1 and maps; Rivera 2006, pp. 7-9).

The petition includes information on the inadequacy and ineffectiveness of existing regulations to minimize the mortality and injury of black-footed albatrosses in longline fisheries. The petition contends that inadequate regulations include the requirement that seabird deterrents be used in the Hawaii-based longline fishery only

north of 23 degrees North latitude (asserted to be inadequate since blackfooted albatrosses also forage south of this latitude). In addition, the petition explains that the effectiveness of these deterrents has not been established. The petition states that blue dye is a potentially effective deterrent when used on squid bait, but it does not adhere well to the scaly, fin-fish bait that is now required in the shallow-set fishery based in Hawaii (Gilman 2003) and that is commonly used in the deepset sector of that fishery.

Information in our files confirms that the deep- and shallow-set sectors of the Hawaii-based longline fishery operate both north and south of 23 degrees North latitude (NMFS-PIRC unpublished data 2006), and incidental injury and mortality of black-footed albatrosses takes place north and south of 23 degrees North latitude as well (NMFS-PIRO unpublished data 2004). Since the petition was written, new regulations have been published that require the use of seabird deterrents by all shallow-set vessels based in Hawaii regardless of where they fish. However, deep-set vessels, which expend more fishing effort south of 23 degrees North latitude than shallow-set vessels (NMFS-PIRO unpublished data 2006), are not required to use deterrents when fishing south of that latitude (NMFS 2005 (70 FR 75075), p. 75080). Only 20 percent of this sector of the fishery is monitored by observers; therefore, we have incomplete information about compliance with regulations, effectiveness of seabird deterrents, and rates and distribution of albatross mortality and injury.

The petition describes the documented high mortality rate of black-footed albatrosses in Hawaii-based longline fisheries through 2001, especially shallow-set (or swordfishtarget) fisheries. The petition reports mortality estimates of 3,200 black-footed and Laysan albatross a year on average, and indicates that this number may be underestimated by 30 to 95 percent since it does not include birds that drop off hooks or are taken by predators prior to being counted by observers (NMFS 2001b). Information in our files provides fleet-wide estimates of albatross mortality in the Hawaii-based fishery based on a statistical model built from analysis of spatial and temporal patterns in observed interactions between albatrosses and fishing vessels (McCracken 2001, pp. 1-26; NMFS-PIRO unpublished data 2006). Estimated mortality of black-footed albatrosses in the Hawaii-based longline fishery ranged from 1,000 to 2,500 per year in the mid-to late 1990s (McCracken 2001,

pp. 19-20; NMFS-PIRO unpublished data 2006). This mortality dropped beginning in 2001 (NMFS-PIRO, unpublished data 2006; NMFS-PIFSC 2003, p. 3), coincident with the closure of the shallow-set sector of the fishery by a Federal court order intended to protect listed sea turtles (NMFS 2001a (66 FR 31561)). The estimated incidental capture of black-footed albatrosses fleet-wide was 1,339 in 2000 and dropped to an estimated total of 258 in 2001 (NMFS-PIRO unpublished data 2006). When the petition was submitted, the shallow-set fishery had just been reopened on a limited basis after a 3year hiatus, with new measures in place to reduce the take of sea turtles (NMFS 2004a (69 FR 17329)). In the following year, however, the incidental mortality of black-footed albatrosses increased from an estimated 16 in 2004 to an estimated 89 in 2005 (NMFS-PIRO unpublished data 2006). This fishery was closed again in March 2006 (NMFS 2006 (71 FR 14824)) because the limit on incidental capture of sea turtles established through the National Marine Fisheries Service (NMFS) consultation under section 7 of the Act had been reached. This temporary closure remained in effect until December 31, 2006. The shallow-set fishery reopened on January 1, 2007, with the same bycatch reduction measures in place to reduce the take of sea turtles as had been instituted previously.

The petition describes the documented mortality rate of blackfooted albatrosses in Alaska-based demersal longline fisheries, and states that between 1993 and 2002, an observed 1,935 black-footed albatrosses were killed in Alaska-based fisheries (NMFS 2003). Although regulations promulgated in 2004 require measures to reduce the incidental mortality of seabirds in Alaska-based longline fisheries, including a suite of seabird deterrent devices and practices, the petition states that the rate of observer coverage is inadequate to monitor compliance with regulations requiring the use of seabird deterrents. According to information in our files, although all longline vessels greater than 26 feet (8 meters) in length operating out of Alaska are required to use seabird deterrents to minimize the incidental mortality of short-tailed albatrosses and other seabirds, vessels less than 26 feet (8 meters) in length are exempt from these requirements (NMFS 2004b, p. 1947). These seabird deterrents, particularly paired streamer lines, have proven to be highly effective under experimental conditions (Melvin et al. 2001, pp. 15-18), when constructed to

appropriate specifications and deployed correctly (Melvin and Robertson 2000, p. 181). The largest vessels (greater than 125 feet (38 meters) in length; approximately 128 of which operate out of Alaska), are required to carry observers 100 percent of the time. However, the halibut fishery, which in 2004 comprised more than 1,000 smaller demersal longline vessels (J. Gharrett, NOAA Fisheries, pers. comm. 2006), is exempt from observer coverage (Alaska Fisheries Science Center (AFSC) 2006, p. 2).

2006, p. 2). The petition states that the blackfooted albatross remains at considerable risk of mortality from international fleets that are not required to employ the same seabird bycatch mitigation measures as U.S. fisheries, and contends that foreign pelagic and demersal longline fisheries account for a significant portion of the global annual mortality of black-footed albatross (Cooper 2000; Lewison and Crowder 2003). Information in our files indicates that despite progress toward international seabird protection agreements, as of yet there is no binding treaty or law that requires international fleets to employ mitigation measures to reduce the incidental mortality of the black-footed albatross throughout its range (Hall and Haward, p. 183). Although, as the petition describes, direct records of black-footed albatross mortality rates in non-U.S. fisheries are lacking (Cousins and Cooper 2000, p. 62; Tasker et al. 2000, p. 532), references cited by the petitioners and in our files describe the distribution and effort of the largest of these fisheries based on data available from the Secretariat of the Pacific Community (Lewison and Crowder 2003, p. 744; SPC-OFP 2004). Furthermore, as indicated in the petition, data exists describing high rates of black-footed albatross mortality in U.S.-based longline fisheries. Information in our files indicates that non-U.S. longline fisheries combined represent an order of magnitude more fishing effort than the longline fisheries operating out of Alaska and Hawaii (e.g., Cousins et al. 2000, p. 165), and they are known to overlap with the foraging range of the black-footed albatross (e.g., Lewison and Crowder 2003, p. 745; Hyrenbach and Dotson 2003, pp. 396-398, 401), suggesting that the degree of incidental mortality resulting from international fisheries may likely be greater than that observed in U.S.-based fisheries.

Citing the results of studies that extrapolated total estimated mortality of black-footed albatrosses in all North Pacific longline fisheries, the petition states that the rate of mortality in U.S.

and foreign longline fisheries in the North Pacific likely has population-level effects (Cooper 2000; Lewison and Crowder 2003). The petition notes that species with a low reproductive rate such as the black-footed albatross are susceptible to adult mortality, and even small changes in adult survival can affect population dynamics (Cousins and Cooper 2000; Lewison and Crowder 2003). The petition states that loss of breeding adults has a "ripple effect" in two ways: the current year's actual or potential breeding effort is lost (because a single adult cannot raise a chick) and several future years' effort is lost as well as the remaining adult seeks a new mate. Furthermore, incidental mortality of black-footed albatrosses in longline fisheries apparently is female-biased, thus exacerbating potential population level effects of fishery-related mortality on this highly monogamous species (Walsh and Edwards 2004).

The petition states that there are numerous international and multilateral initiatives and advisory groups that have made recommendations for decreasing the incidental mortality of black-footed albatrosses and other seabirds in North Pacific fisheries. However, no binding agreement or international law yet exists that requires or enforces the use of seabird deterrents and minimization of this mortality in high-seas fisheries (e.g., Cousins et al. 2000, pp. 167-168). The petition notes that mortality of black-footed albatrosses occurs incidental to fishing activities although the Migratory Bird Treaty Act of 1918 (MBTA), as amended, specifically prohibits take of migratory birds. The term "take" under the MBTA is defined as to "...pursue, hunt, shoot, wound, kill, trap, capture, or collect... (50 CFR 10.12). The petition contends that the take prohibition of the MBTA has not been enforced, and that incidental take of black-footed albatross by the longline fishing industry has not been adequately regulated.

Although mitigation measures have reduced mortality of black-footed albatrosses in some (U.S.-based) fisheries, the information in the petition indicates that fishery-related threats to the species throughout its range are ongoing. We find that the petition presents substantial scientific or commercial information to indicate that the inadequacy of existing regulatory mechanisms may threaten the continued existence of the black-footed albatross.

E. Other Natural or Manmade Factors Affecting the Species' Continued Existence

The petition describes the high levels of contaminants, such as heavy metals

and organochlorines (e.g., polychlorinated biphenyls (PCBs) and dichloro-diphenyl-trichloroethane (DDT)), found in black-footed albatross tissue (Jones et al. 1994; Ludwig et al. 1998). These substances have been correlated with egg-shell thinning and embryo death in the black-footed albatross and are found in concentrations that have caused reproductive and neurological problems in other species (Jones et al. 1994; Ludwig et al. 1998).

Information in our files indicates that black-footed albatross are exposed to contaminants via their diet (Finkelstein et al. 2006, p. 681). Contaminants such as organochlorines and mercury biomagnify up the marine food chain and are at higher concentrations in longlived marine predators (Finkelstein et al. 2006, pp. 678-679). Biomagnified concentrations of organochlorines and mercury are higher in North Pacific albatrosses than in species in the Southern hemisphere (where ambient levels of these contaminants are lower overall) (Guruge et al. 2001, p. 392). In the North Pacific, concentrations of these contaminants are higher in blackfooted than in Laysan albatrosses (Guruge et al. 2001, p. 392; Finkelstein et al. 2006, p. 680). As described in the petition, the organochlorine and mercury levels found in black-footed albatrosses in 1992 and 1993 were high enough to pose a toxicological risk and interfere with reproduction (Ludwig et al. 1998). Information in our files supports the petition's contention that these contaminants may pose a threat to black-footed albatross. Since the petition was written, new information indicates that concentrations of PCBs and dichloro-diphenyl-dichloroethylene (DDE) in black-footed and Laysan albatrosses were reported to be 160 to

360 percent higher in samples from 2000 and 2001 than in samples from 1992 and 1993 (Finkelstein et al. 2006, p. 684). The proportional increase found in the black-footed albatross over this time period was twice that observed in the Laysan albatross (Finkelstein et al. 2006, p. 684). Results of recent studies indicate that these contaminant levels are associated with altered immune function in black-footed albatrosses (Finkelstein et al., in review). In addition, black footed albatrosses are carrying organochlorine burdens at concentrations that have caused endocrine disruption and altered immune function in gulls and terns from the Great Lakes (Myra Finkelstein, University of California at Santa Cruz, pers. comm. 2006).

We find that the petition presents substantial scientific or commercial information to indicate that the ingestion of a variety of contaminants, such as organochlorine compounds and heavy metals, may pose a threat to the continued existence of the black-footed albatross.

Finding

We have reviewed the petition, literature cited in the petition, and information in our files. The petition presents reliable information to indicate that the lack of adequate regulatory mechanisms to minimize incidental mortality in commercial fisheries and the ingestion of environmental contaminants may threaten the blackfooted albatross. The information in our files at this time supports the petition's statements regarding these threats to the black-footed albatross. Thus, on the basis of our review, we find that the petition presents substantial scientific or commercial information indicating that listing the black-footed albatross as threatened or endangered may be

warranted, and we are initiating a status review of the species. At the conclusion of the status review which will involve a review of the information in, and results of, our status assessment currently being peer reviewed, we will issue a 12-month finding, in accordance with section 4(b)(3)(B) of the Act, as to whether or not the Service believes a proposal to list the species is warranted.

We have reviewed the available information to determine if the existing and foreseeable threats pose an emergency. We have determined that although there are apparent threats to the species, they do not appear to be of such a magnitude as to pose an immediate and irreversible threat to the species such as to warrant emergency listing at this time. However, if at any time we determine that emergency listing of the black-footed albatross is warranted, we will seek to initiate an emergency listing.

References Cited

A complete list of all references cited herein is available, upon request, from the Pacific Islands Fish and Wildlife Office (see ADDRESSES section above).

Author

The primary author of this notice is the staff of the Pacific Islands Fish and Wildlife Office (see ADDRESSES section above).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Dated: September 27, 2007.

Kenneth Stansell,

Deputy Director, Fish and Wildlife Service. [FR Doc. E7-19690 Filed 10-5-07; 8:45 am] BILLING CODE 4310-55-P

4.0 RESPONSES TO COMMENTS

To assist the public in finding responses to their substantive comments, a submission index (Appendix B) was created that lists all submissions alphabetically by the last name of the person, associated organization (if any), where the comment came from, what form it was submitted in, and which SOCs respond to their specific comments. So if a commenter would like to read responses to a summary of their comment (SOC), they would find their name in Appendix B, note which SOCs are listed by their name, and then read those SOCs in Section 5.0. For organizations that submitted comments, the public can also search Table 8 below which provides the Submission IDs associated with their specific letters. To find the SOCs that respond to comments from an organization, search for the Submission ID listed in the second column of Appendix B and the SOCs are listed to the right.

Table 8. List of Organizations and SOCs That Address Their Comments

Organization	Submission ID
Agrium	161
Alaska Center for the Environment	217, 220
Alaska Community Action on Toxics	194
Alaska Department of Commerce, Community and Economic Development	309
Alaska Department of Environmental Conservation	309
Alaska Department of Fish and Game	272
Alaska Department of Natural Resources	309
Alaska Forest Association, Inc.	198
Alaska Miners Association, Inc.	200
Alaska Native Marine Mammal Hunter Committee	125,232,256,257,281
Alaska Oil and Gas Association	248
Alaska State Chamber of Commerce	131,215
Alaska State Legislature	146
Alaska Trucking Association	147
Alaska Watch	269
Anchorage Chamber of Commerce	195,230
Anchorage Water and Wastewater Utility	187,226
Animal Welfare Institute	185,317
Audubon Society	214
Beholdance	123
Cascadia Wildlands Project	179
Center for Biological Diversity	306
Center for Water Advocacy	182
Cetacean Society International	181
Chugach Electric Association, Inc.	327
CIRI	180,266
City of Kenai	132,292
Conoco Phillips	326
Cook Inlet Keeper	261,303
Cook Inlet Marine Mammal Council	238
Cook Inlet Region Citizens Advisory Council	287

Organization	Submission ID
Defenders of Wildlife	231,
Friends of Alaska Wildlife Refuges	315
Friends of Anchorage Coastal Wildlife Refuge	218,223,328,329
Government of Canada	334
Governor's Office	242,260,312
Horizon Lines	148
Horizon Shipping	240
Humane Society of the United States	199
Kenai Chamber of Commerce	186
Kenai Peninsula Borough	162,201,275,300
LGL	279
Map Consulting	228
Marine Mammal Commission	330
Mat-Su Borough	258,275
Municipality of Anchorage	174,275,279
Native Village of Eklutna	229
Natural Resources Defense Council	235,286,306,314
North Gulf Oceanic Society	294
North Star Terminal and Stevedore Co. LLC	134
Northrim Bank	189
Ocean Conservancy	190,310
PacRim Coal	207
Resource Development Council for Alaska, Inc.	191,227,249,259,301
Sierra Club	243
State of Alaska	271,274,285,331
Tesoro Alaska Company	192,299
The Shellfish Network	177
Senator Ted Stevens	208
University of Alaska Fairbanks	188
University of Hawaii	164
Usibelli Coal Mine, Inc.	193
Whale and Dolphin Conservation Society	133,136

5.0 STATEMENTS OF CONCERN

ALASKA NATIVE ISSUES

- AKN 01 Researchers do not make adequate use of Traditional Knowledge from Native hunters and even when Native wisdom is used and put in books, credit is given to the people that have the PhD's.
- AKN 02 Hunters blamed for the decline in the Cook Inlet beluga population were not of Cook Inlet tribes. The indigenous science of the Kenaitze/Dena'ina of Cook Inlet does not allow over harvest or environmental toxins to be purposely emitted onto sacred lands and waters.
- AKN 03 Industrial effects on the ecosystem may be contaminating traditional food sources and research shows that without traditional foods, Cook Inlet Native peoples become sick. Increased rates of thyroid problems and cancer have been noticed in the Kenaitze/Dena'ina peoples.
- AKN 04 The Cook Inlet beluga is an important cultural and subsistence resource for Alaska Native people who consider it sacred, including CIRI shareholders. It is important to preserve this resource for future generations.
- AKN 05 The importance of preserving the Cook Inlet beluga whale as a cultural resource is matched by the importance of the financial success of CIRI so that it can generate financial and social returns for its shareholders.
- AKN 06 Because the Cook Inlet beluga is sacred to Alaska Natives, allowing sewage and waste dumping without the best possible treatment is disregarding their traditional way of life.
- AKN 07 Native hunters have been cooperative in dealing with the declining population, and in doing so, deprive themselves of their traditional hunting and their traditional way of life.
- AKN 08 Subsistence users bear all the restrictions, while the petrochemical industry and the military industrial complex receive more incentives like oil and gas leases and little to no sanctions for dumping toxic waste into waters that are sacred to Native peoples.
- AKN 09 We support the judicial decision granting preference in favor of Tyonek in the event of a shortage of beluga whales.

Ecosystem; Marine Ecosystem

- ECO 01 The Cook Inlet ecosystem needs to be protected, and Beluga whales are a critical part of this ecosystem. When one member of the ecosystem suffers, the health and well-being of the other members, including humans, is threatened. The fact that the Beluga population has declined shows that the Cook Inlet ecosystem is in danger. A decline in Belugas, which are important apex predators, can lead to substantial change and instability in the ecosystem. Actions taken to protect Belugas will benefit the entire Cook Inlet ecosystem, including our fisheries and the people that rely on them.
- Rising temperatures caused by global warming represents a significant threat to Belugas and the Cook Inlet ecosystem. Increased siltation in the Inlet from glacier melt could affect Beluga habitat and prey availability, as a result of decreased water quality. Global warming will likely have a negative impact on the Inlet's fish-bearing streams by increasing the incidence of disease within fish populations, thereby decreasing the amount of prey available to Beluga whales. Rising sea levels can alter Beluga feeding areas, and building sea walls and beach armoring can modify important Beluga habitat. NMFS needs to recognize the potential negative consequences of global warming on the Beluga population as it finalizes the listing rule and makes management goals.
- The Cook Inlet ecosystem is thriving. The fact that salmon runs have been consistently good over the past few decades shows that the Inlet's most plentiful fish has not been adversely affected by human activities, and that Belugas have an adequate food supply. Humans and Belugas have successfully coexisted for decades, and more than half of Alaska's population lives along the shores of Cook Inlet. Human activities, except for hunting, are not the cause of the Cook Inlet Beluga population decline.
- ECO 04 Increasing siltation from the melting glaciers may have caused a decline in the Inlet's carrying capacity for Belugas. The increased frequency of dredging Cook Inlet has been documented. The Inlet may no longer be able to support historic numbers of Beluga whales.

Effects of Activities on Beluga Whales; Analysis of Effects; Direct/Indirect Effects

- EFF 01 Unregulated subsistence harvest and over-harvest in the 1990s has had lingering adverse effects on the CI beluga population.
- Contrary to NMFS expectations, subsistence harvest regulations have proven inadequate to stop the decline or allow recovery of the CI beluga population. Other factors must now be examined and addressed.
- Subsistence harvest is the only factor that has been identified as a cause for the decline of the CI beluga population. ESA listing is unnecessary because the subsistence harvest is now regulated. There is no evidence that other potential factors such as pollution, noise, or habitat degradation have played a role in their decline or lack of recovery.
- EFF 04 NMFS does not know why the CI beluga population has failed to recover as expected after subsistence harvest was controlled. The agency should conduct more research on other potential factors and population dynamics but an ESA listing is not warranted at this time. Existing laws and regulations are sufficient to protect this population.
- CI belugas face cumulative threats from multiple human-based threats (e.g. hunting, pollution, noise, vessel traffic, habitat degradation, competition with fisheries) as well as natural factors (e.g. killer whale predation, mass strandings, disease, climate change). They need the protection of the Endangered Species Act to address these multiple threats and help them recover.
- Anthropogenic noise and pollution from various sources can create stress in the whales, which makes them more susceptible to disease and other stressors in their environment, and cause other behavioral and physiological changes that may have population-level effects.
- As their population has declined and their range has become more restricted, CI belugas are much more susceptible to disease, mass strandings, oil spills, and other factors that can adversely affect a large percentage of the population and push it towards extinction.
- EFF 08 The existence of a thriving beluga population during the peak of oil and gas development in C1 (1960s through 1980s) indicates that it has no major effect on the whales.
- EFF 09 Coal mining, shipping, and transfer facilities would have very minor effects on belugas and those impacts can be mitigated through existing regulations and best management practices.
- Dumping of sewage and wastewater into Cook Inlet from multiple sources, in combination with uncontrolled runoff from urban areas and seepage from toxic waste sites, has polluted the marine habitat of belugas and is likely contributing to their lack of recovery through adverse toxicological effects. NMFS should try to stop such pollution.
- EFF 11 Anchorage's wastewater treatment facilities meet all federal and state water quality standards and pose no threat to belugas or their habitat.

- EFF 12 Contaminant levels of various toxins are lower in the prey and body tissues of Cook Inlet belugas than in any other beluga population tested, indicating that pollution is not problem in Cook Inlet waters.
- EFF 13 The various populations of fish used as prey by CI belugas fluctuate from year to year but are all healthy stocks. There is no evidence that commercial or sport fishing has had any adverse effects on the availability of prey for belugas.
- EFF 14 The beluga population is not healthy because the fish stocks they rely on have been weakened due to fishing pressures and human-caused and natural degradation of fish habitat.
- EFF 15 Mortality of belugas from interactions with fishing gear has been documented in the past and likely continues at present but monitoring efforts are inadequate.
- EFF 16 Killer whale predation may be a serious problem for belugas, especially since the populations of alternative killer whale prey (e.g. Steller sea lions) have declined and the beluga population is depressed, making each predation event more important to the population.
- EFF 17 The carrying capacity of Cook Inlet has declined because of increased siltation from melting glaciers. The beluga population may not be able to recover to historical levels.
- EFF 18 Marine vessel traffic has adverse effects through noise, harassment, and injury/mortality by direct strikes. Vessels that pursue whales into shallow waters are especially dangerous.
- EFF 19 Whale-watching tourism does not affect belugas because there are no water-based guiding services offered in Cook Inlet.

Endangered Species Act

- We support listing Cook Inlet beluga whales as endangered under the ESA. Please list this species as endangered and designate their critical habitat. Listing the whales as endangered will ensure they are alive for generations to come.
- We do not support listing Cook Inlet beluga whales as endangered under the ESA as it will have a detrimental effect on Alaska commerce and those who depend on jobs in industry, transportation and fisheries. A listing will only lead to permitting hurdles and increased costs to the community without corresponding benefits to the recovery of Cook Inlet belugas. The unintended consequences of listing the beluga whale under ESA could have substantially more negative impact than the intended beneficial consequences of the listing.
- ESA 03 The Cook Inlet beluga whale is an important part of life in southcentral Alaska and should be protected for generations to come. The only way to protect these whales is to list them as endangered under the ESA. Only the ESA listing will protect their critical habitat and enable recovery. Please adhere to the ESA procedures and deadlines for listing and designating their critical habitat.
- ESA 04 Listing the Cook Inlet beluga whales as endangered under the ESA is the only mechanism left that will provide the necessary framework and adequate funding for research to determine what is causing the population to decline so rapidly. The Cook Inlet belugas face a complex set of threats to habitat and health which may indicate a broader problem in the Cook Inlet ecosystem which we also depend on for our health as well as fisheries and tourism.
- ESA 05 NMFS claims that inadequate funding have prevented protection of the Cook Inlet beluga whales should no longer delay compliance with the requirements of the ESA. NMFS should list Cook Inlet beluga whales as endangered.
- ESA 06 Research by the Massachusetts Institute of Technology and others have shown that listing a species under the ESA does not curtail economic development. According to the U.S. General Accounting Office, since ESA's passage in 1973, less than one-tenth of one percent of development projects have been halted due to ESA considerations.
- ESA 07 We encourage the agency to comply with ESA's requirement to utilize the best available scientific and commercial data in making the decision whether to list the Cook Inlet beluga whales.
- There is no doubt the Cook Inlet beluga whales are a distinct population and meet all five of the criteria of an endangered species under the ESA. The MMPA has been inadequate protection and there should be no further delay in listing this species under ESA and taking the actions necessary to prevent their extinction.
- ESA 09 Specific actions under ESA must be taken in order to protect Cook Inlet beluga whales including: appointment and funding of a recovery team of experts to develop a recovery plan; funding of research of life history, habitat use, health, food availability, acoustics, and predation; identification of critical habitat areas; consultation on development activities that may affect beluga behavior and habitat. Listing Cook Inlet beluga whales under the ESA is the only way to ensure these things are done.

- ESA 10 NMFS has admitted that current regulations have not succeeded in protecting the Cook Inlet beluga whales from development projects and hence continuing to decline. This species desperately needs to be listed under the ESA as endangered and critical habitat must be designated.
- ESA 11 ESA requires the consideration of economic impact of a critical habitat designation and the Secretary has the authority to exclude areas as part of critical habitat if the benefits of such exclusion outweigh the benefits of specifying the area as critical habitat. Inclusion of the entire Cook Inlet can not be scientifically justified and is in complete conflict with the mitigation and regulatory measures already in place under MMPA.
- ESA 12 Without further scientific research, listing the Cook Inlet beluga whales as endangered under the ESA so soon after NMFS' original designation as 'depleted' under MMPA will only lead to additional burdens on the economic and community development in and around Cook Inlet with no corresponding benefit to the beluga population.
- ESA 13 Recent studies show the population of Cook Inlet beluga whales is increasing. The species should not be listed as endangered until further research can be conducted and NMFS is certain the population isn't already increasing.
- ESA 14 Listing Cook Inlet beluga whales as endangered is not warranted given that the sole reason for the decline was the subsistence harvest, which NMFS has limited. It is not clear what benefit the ESA would provide given the current co-management agreement limits on harvest. The other two known causes for beluga mortality are killer whale predation and mass strandings. NMFS has no evidence to show that these events are caused by human activity, thus listing belugas will have no impact or benefit for belugas with regard to predation or strandings.
- What good is the ESA if it does not protect animals such as Cook Inlet beluga whales? Those who oppose listing the whales as endangered are only concerned with money and inconvenience when in fact, what will be more costly is to continue to pollute the whales' habitat. There is more at stake than economic gain protection of unique, sacred wildlife.
- ESA 16 The criteria for designating a distinct population segment (DPS) are so broad that almost any geographic population could be considered a DPS. The broad authority of the ESA over local populations (DPS) and subspecies, needs to be openly acknowledged by NMFS so the public can decide if they approve of the expansion of federal authority over traditionally state jurisdiction of wildlife management. The inclusion of DPS was not to allow listing of any local population for which an agency or private group has concerns. One subpopulation of beluga whales is not critical to the survival of the entire species that is otherwise abundant.
- We do not feel that sufficient time has passed, nor that anything has changed for the worse since the court ruling in 2000 (Civil Case No. 00-1017), when Cook Inlet beluga whales were listed as depleted under the MMPA. Although the 2000 rule was sound, the 2000 assumptions for predicting a recovery were too optimistic. A population with a low reproductive rate, such as belugas, will require many years to recover from mortality of large proportion. Therefore, Cook Inlet beluga whales do not warrant listing as endangered under the ESA.
- Without substantial change to the habitat designation process and better data on the whales, an ESA listing would simply be used to increase funding to do more of the same research that has apparently failed in recovering the whales. Using the listing as a way to secure funding is irresponsible on NMFS' part and not the intent of ESA.

- We urge NMFS to pursue additional funding, research, and cooperative conservation work with the Mayors of Anchorage, Matanuska-Susitna, and Kenai Peninsula Boroughs before making an unwarranted ESA decision. ESA listing will divert NMFS' limited resources by requiring consultation for every federal decision that permits, funds, or conducts any activity in Cook Inlet.
- We do not believe there is any way NMFS could lawfully conclude that the Cook Inlet beluga does not warrant full protection under the ESA. Relevant legal precedents indicate that reliance on best available scientific data, as opposed to scientific certainty, is in keeping with congressional intent that an agency take preventative measures before a species is conclusively headed for extinction. In addition, the "best available science" standard gives the benefit of the doubt to the species.
- ESA 21 Listing the Cook Inlet beluga whales as endangered under the ESA will provide the necessary mechanisms to require the Anchorage Sewage Treatment Plant to upgrade its facility to meet basic federal sewage treatment standards. Moreover, in processing the Plant's 301(h) waiver request, listing will require NMFS to ensure under Section 7(a)(2) of the ESA, that any extension or renewal of the waiver by EPA is not likely to jeopardize continued existence of the Cook Inlet beluga or adversely modify its critical habitat.
- ESA 22 The IUCN generates assessments on worldwide populations using criteria that are not comparable to ESA determinations. Because the IUCN criteria are based on different factors and are not subject to ESA requirements, the IUCN assessment is a concern but has no bearing on this ESA-listing decision.
- Although the 2006 Status Review provides a fairly comprehensive review of information on the Cook Inlet beluga whale stock, the 2007 proposed rule reflects omissions, errors and unsubstantiated interpretations. For example, statements made regarding killer whale predation and disease cannot be substantiated by best available data and NMFS conclusions about whether predation or disease are contributing to their decline are contradictory. We note that some include incorrect statements or unresolved comments that were provided by the State and public on the earlier Draft Status Review and Draft Conservation Plan. This new determination is based entirely on unsupported population modeling predictions of a continued decline and unsubstantiated speculation on possible increases in threats. We urge NMFS to reconsider these hypothetical and arbitrary conclusions and affirm its earlier conclusions that an ESA listing is not warranted at this time.
- ESA 24 The 2007 proposed rule concludes that the proposed ESA listing only applies to beluga whales found in Cook Inlet and not those found outside the Inlet in the Gulf of Alaska. There is no discussion of how a listing will affect Section 7 consultation requirements when the population expands and theoretically increases dispersals and movements throughout the Gulf coastline.

26

Habitat

- HAB 01 It is essential that the Cook Inlet beluga whale be granted immediate protection under the Endangered Species Act (ESA), so appropriate funds can be allocated to designate critical habitat, so it can be protected. Critical habitat designation ensures that section 7 consultations will occur for federal actions that may affect such habitat.
- HAB 02 Specific actions under an ESA listing are needed: the appointment and funding of a recovery team of experts and stakeholders to develop, immediately, an appropriate recovery plan; funding for research into life history, habitat use, health, food availability, acoustics, predation, and other areas identified by the experts; identification and protection of critical habitat areas; consultation on development activities that may affect beluga behavior and habitat areas.
- HAB 03 All of Cook Inlet should be designated as Critical Habitat for the Cook Inlet beluga.
- HAB 04 Degradation of habitat and water quality in Cook Inlet from human development, urban and agricultural runoff, industrial and military activity, utilitarian, toxic dumping and industry should be suspect in the decline of the Cook Inlet beluga. The habitat for the beluga could be improved by closing the Agrium fertilize plant and stopping further oil and gas lease sales because they adversely affect the water quality of Cook Inlet.
- HAB 05 Commercial and other fishing in Cook Inlet will be harmed by listing the beluga and designation of its critical habitat.
- HAB 06 The historic range of the Cook Inlet beluga should be designated as Critical Habitat for the Cook Inlet beluga, not just upper Cook Inlet.
- HAB 07 The summer range of belugas has contracted significantly and this is likely as a result of the degradation of habitat in combination with other factors such as shifts in abundance and distribution of prey.
- HAB 08 We are concerned that reproductive rates and fitness of the Cook Inlet beluga population may have been affected by over-harvesting of certain ages or sexes and/or influenced by habitat degradation.
- HAB 09 The decline of the beluga is a barometer of the habitat in Cook Inlet. Our belugas are just showing the signs of what our fisheries will show and I think there's been enough studies on the wastes that are coming from processed waters, the viruses that are coming from sewage that goes out into the Inlet
- HAB 10 The Cook Inlet beluga population is exposed to the largest industrialized coastal area, and the largest human component, in Alaska and as a result, the current threats to beluga whale habitat include both habitat loss from development, and habitat loss through displacement from conflict with other human-caused activities. These activities also habitat for the Cook Inlet beluga whale prey species (largely salmon and eulachon).
- HAB 11 NMFS must designate critical habitat, pursuant to 16 U.S.C. § 1533(a)(3)(A), for the Cook Inlet beluga whale population at the same time that it is listed under the ESA.

- HAB 12 Increasing siltation in Cook Inlet from glacier melt, increased ocean acidification, and increase in water temperatures caused by global warming could alter habitat and prey availability.
- HAB 13 The best available scientific evidence demonstrates that belugas are highly sensitive to a range of anthropogenic sounds, including broadband sounds whose energy is concentrated in the low frequencies. There is no evidence to indicate that the Cook Inlet beluga has habituated to present levels of noise and noise could be adversely affecting the behavior of belugas in Cook Inlet, and adversely modifying their habitat, apart from any loss of habitat through abandonment. Anthropogenic noise represents a current and growing threat to the Cook Inlet beluga, its prey species and its habitat.
- HAB 14 The Anchorage Sewage Plant's discharge of primary treated effluent into the Knik Arm is of particular concern because of the high volume of discharges and because this area is heavily used by beluga whales and is an important feeding area for beluga whales during much of the summer months. Belugas could be exposed to harmful bacteria from eating fish, benthic invertebrates, and sediment that accumulate the bacteria. The effluent also contains metals, including lead, selenium, mercury, cadmium, copper, and zinc, which can bioaccumulate. Other pollutants include PAHs, PCBs, pesticides, and other harmful substances.
- HAB 15 The observations of tagged belugas, some of which were followed for nearly eight months, provide a much more synoptic picture of habitat use than aerial sightings, and they clearly show that north Kalgin Island beluga whales use the entire Inlet, not just coastal waters.
- HAB 16 The ecology of beluga whales has not been studied in the offshore and southern regions of the inlet, where tagged animals were observed, but primary constituent elements (PCEs) in those areas must include physical and biological features such as access to space, water, air, and food; shelter and protection from disturbance and predation; and sites for breeding, reproduction, and the rearing of offspring.
- The Marine Mammal Commission recommends that the Service identify and designate **HAB 17** critical habitat for Cook Inlet beluga whales as soon as possible. Based on the available scientific information described above, the Commission suggests that a reasonable designation would include all waters of Cook Inlet from Kalgin Island northward to the headwaters of Knik and Turnagain Arms, and all coastal waters less than 18 m deep in the remaining portions of the Inlet. This corresponds to three key habitat types identified in the draft conservation plan for Cook Inlet beluga whales: high value/high sensitivity habitats (type I), high value habitats (type 2), and winter habitat areas, secondary summering sites, and historic habitat sites (type 3). In its 24 April 2006 letter, the Commission recommended that the Service consider designating as critical habitat all areas identified in the draft conservation plan as high value/high sensitivity and high value habitats. Upon further consideration of the need to protect winter habitat, secondary summer habitat, and habitat that was used historically and will likely be reoccupied if and when the population recovers, the Commission has added those areas to our recommendation for critical habitat. We consider those areas to be essential for the conservation and recovery of the Cook Inlet beluga whale population.
- HAB 18 Critical habitat designations will pose negative impacts to human activities in and around Cook Inlet to shipping, oil and gas exploration, development and production, wastewater utility discharges, commercial and industrial coastal development, and commercial, sport, and personal use fishing. The designation could severely impact the Port of Anchorage expansion, the Knik Arm bridge construction, the Chuitna coal project, the Agrium Blue Sky Initiative,

seismic and other oil and gas activities, as well as add unnecessary delays and stipulations to other existing activities, such as military operations, transportation, and the Anchorage water and wastewater utility. All without providing a corresponding benefit to the whales.

- HAB 19 The peak population of beluga whales in the 70s is one that grew with all of the current activities in the Inlet: oil and gas exploration and development, municipal discharge, vessel traffic and sport and commercial fishing. The habitat in Cook Inlet is better than areas which have healthy beluga populations and there is no evidence that habitat modification has impacted these whales. Over 15 million acres of protected land in and around Cook Inlet helps to protect whale habitat. The habitat in Cook Inlet supports healthy populations of fish on which beluga whales prey.
- HAB 20 Inclusion of the entire Cook Inlet can not be scientifically justified and is in complete conflict with the mitigation and regulatory measures already in place under the MMPA.
- HAB 21 The Agrium Expansion project would have very limited impacts on beluga whales in Cook Inlet during construction and operation. Temporary habitat loss associated with new wharf facilities is not expected to impact beluga whales since habitat within the middle Cook Inlet is not classified as high value
- HAB 22 There is concern that critical habitat will be designated with incomplete and inappropriate information and there appears to have been little directed work to identify the Primary Constituent Elements (PCEs) needed to determine critical habitat.
- HAB 23 NOAA Fisheries should defer designation of critical habitat for the whales. That deferral should last until solid information is in hand, not until an arbitrary deadline is set in regulation
- HAB 24 We encourage the exclusion of the entire Cook Inlet as critical habitat as it is clear with the mitigation and regulatory measures already in place under the MMPA, the extinction of the species will not likely occur.
- HAB 25 NMFS should employ a cost-effectiveness framework that is designed to find the least-cost means to achieving the ESA-mandated objective of designating and protecting habitat that is essential for species conservation. The approach of rank ordering habitat segments is highly appropriate to a process of determining the least-cost combination of habitat areas that are essential to the conservation of the CIB.
- HAB 26 Due to reduced numbers, the Cook Inlet beluga whales may be utilizing a smaller portion of their range due to reduced numbers than they used historically. NMFS should draw from this information that the Cook Inlet beluga whale population is not limited by the availability of habitat and that humans are not "encroaching" on habitat that the whales need to increase and thrive.
- HAB 27 If NMFS does designate critical habitat for beluga whales in upper Cook Inlet, Chugach Electric Association encourages NMFS to exclude the existing cable field areas from that designation. These seem to be areas that belugas only pass through without congregating.
- HAB 28 Beluga whales have been sighted in the Gulf of Alaska, Sitka, Kodiak, and the Prince William Sound, yet these sightings are discounted from the Cook Inlet beluga under the Proposed Rulemaking.

HAB 29 The proposed rule fails to acknowledge that the important and comprehensive regulatory measures enacted in the 2000 decision will continue to provide environmental protection so that ongoing and future developments and activities do not affect beluga whale habitat.

Management

- MGT 01 Belugas have been inadequately managed by the State of Alaska and local municipalities. The State of Alaska, the Municipality of Anchorage, the Matanuska-Susitna Borough and the Kenai Peninsula Borough have failed to take action to protect Cook Inlet Belugas or their habitat. The fact that the State has close ties with industry prevent it from responsibly managing wildlife. The recent weakening of environmental protections has made it harder to protect Cook Inlet Belugas. The Anchorage Coastal Management Plan and the former Alaska Coastal Management Program no longer provide the buffer between development and conservation that once existed. The State ignored NMFS' advice on restricting eulachon harvests for the benefit of Belugas. The Beluga population needs the help of the Federal government to recover.
- Future management of Belugas should include: evaluating the potential for small boat strikes and establishing speed limits; policy reform to prevent further production and use of bioaccumulative toxins that are associated with numerous harmful effects; a peer review process, that includes experts from public and private sectors, to review all issues and data; searching for stranded and dead Belugas along the shores of Cook Inlet, and performing a complete necropsy as soon after death as possible.
- MGT 03 There has been a history of delayed or insufficient action to protect Belugas. The management that has occurred has not been effective at stopping the population decline. The fact that the Beluga population has not rebounded after hunting was prohibited provides evidence that the existing regulatory mechanisms are inadequate. Actions need to be taken now to protect this species, before it is too late.
- MGT 04 Precautions need to be taken to make sure that development, industry and recreation are not causing further harm to Belugas and their habitat. There has been little effort to limit the number of projects that are contributing to the sedimentary, chemical, or noise pollution that is degrading Beluga habitat. NMFS needs to obtain additional funding to accomplish their objectives, and to monitor illegal takes. They need to deny permits that would endanger the Beluga population. No level of government should be able to put development needs over the needs of a species to survive.
- MGT 05 Subsistence harvesting of Belugas was voluntarily stopped, but why has a harvest management plan and implementing regulations not been published?
- MGT 06 The existing regulatory process is inadequate to protect the Beluga whale. Sewage treatment facilities are allowed to discharge millions of gallons of primary treated sewage into the Cook Inlet each day, exposing a struggling population of Belugas to pollutants, pathogens, and metals. The Alaska Sewage Plant failed to meet certain requirements to obtain a 301 (h) waiver, assuring the protection of wildlife, yet the EPA granted the Plant a waiver anyway. The EPA has also failed to reassess the impacts of the waiver on the marine environment every five years, as is required by federal law. Since the Plant's application was submitted, nearly a decade ago, new scientific information has been published on the population decline and contaminant effects on Beluga whales.

Marine Mammal Protection Act

- MMPA 01 Although a Draft Conservation Plan was released in 2005, the plan has still not been finalized. It does not seem reasonable to propose listing this species under ESA before completing and implementing a Final Conservation Plan as currently required under MMPA. Finalization and implementation of a fully funded Conservation Plan will provide significant management protection for belugas short of an ESA designation.
- MMPA 02 Despite the protection by its status as 'depleted' under MMPA and despite the restrictions on the subsistence harvest, Cook Inlet belugas continue to decline which suggests the current regulatory mechanisms for protecting the species are inadequate. To date, NMFS has not exercised the regulatory authority to protect belugas through consultation requirements or through adoption of other protective measures. The recent listing of Cook Inlet belugas on the Critically Endangered IUCN Red List of Threatened Species provides additional support for further conservation measures.
- MMPA 03 From 1999 to 2006, only five whales were taken for subsistence and though the agency expected the population to increase, they have continued to decline about four percent per year. Despite continued decline of the stock, NMFS has not moved to change the status of the stock or even finalize the Conservation Plan. The current protection under MMPA is not working.
- MMPA 04 The public was asked to comment on the Draft Conservation Plan released in 2005. It is not clear how public comments were treated or interpreted and now we are being asked to comment on a proposed ESA listing before knowing what happened to the Draft Conservation Plan.
- MMPA 05 The 'depleted' status under MMPA provides adequate protection for Cook Inlet beluga whales and provides NMFS the authority to shield this species from harvest and other specific activities that may impinge on their habitat. Several development projects have successfully been completed with belugas in the vicinity and due to protections from MMPA and permit stipulations, belugas were not adversely impacted. We ask that you find an ESA listing unwarranted and continue to pursue efforts under MMPA.

Population of Beluga Whales; Genetically Distinct Population

- POP 01 The low abundance of Cook Inlet beluga whales makes them fragile and more susceptible to habitat perturbations, stochastic variables, as well as intentional or unintentional mortality. It is estimated that there is a 26% chance they may become extinct within the next 100 years.
- POP 02 The Cook Inlet beluga is genetically distinct, geographically isolated, and is considered a distinct population segment for purposes of listing under the Endangered Species Act, and based on their precipitous decline, should be listed.
- POP 03 The Cook Inlet beluga population was once estimated at 1,300, but according to NMFS's 2006 survey, it now hovers around 300 animals. Their numbers have declined more than 50% in the last 10 years and show no signs of recovery.
- POP 04 Since the cessation of significant subsistence hunting of the belugas, the whale population is showing signs of recovery. A recent study has shown over 40% of the population is classified as sub-adult, and not yet capable of reproduction. Growth within the population could not reasonably be expected until the breeding age component of the population stabilized (5 to 7 years from the end of unsustainable hunting) and would not be as rapid as previously estimated.
- POP 05 The peak population of beluga whales in the 70's, as identified by NMFS, is one that grew with all of the current activities in the inlet: oil and gas exploration and development, municipal discharge, vessel traffic, sport and commercial fishing. These activities are therefore not likely having a significant effect on the beluga population.
- POP 06 Despite a halt to unregulated harvests, the Cook Inlet beluga population continues to decline at a rate of over 4% per year.
- POP 07 Aerial surveys show an increase in Cook Inlet belugas from 278 to 302 between 2005 and 2006, an increase of approximately nine percent. The raw counts from 2007 indicate a further increase.
- POP 08 At least 500 belugas are needed to maintain the genetic diversity for their long-term survival as a species.
- POP 09 The population of Cook Inlet belugas is presented as genetically distinct and reproductively isolated from other populations without proper scientific qualification. It would be more appropriate to state that there is limited gene flow between other populations on generational time scales.
- POP 10 Beluga whales exist throughout Alaskan coastal waters and by no means are they in danger of extinction throughout all or a significant portion of their range as defined by the ESA. In fact, to this day their identification as a distinct population segment (DPS) is questionable.
- POP 11 NMFS should remove the belugas occurring near Yakutat or outside Cook Inlet waters from the historic count of Cook Inlet belugas.

- POP 12 Research shows that when a localized population of belugas is lost for whatever reason, other belugas do not come back into those areas. This has been shown near Kotzebue.
- POP 13 DPS status is based upon two factors: 1) persistence in an ecological setting that is unique; and 2) whether the loss of the DPS would result in a significant gap in the range of the species. The Cook Inlet beluga fits both criteria significantly.
- POP 14 The best available science does not concur with the PVA models and the Marine Mammal Commission model by Goodman, estimating extinction risk in the Status Review. Both of these analyses of probability are based on assumptions that need revision to reflect 2007 data and to eliminate the 1999 and 2000 data, when the population was declining directly due to the overharvest effects on calf survival.
- POP 15 Following the recent Ninth Circuit Court of Appeals decision regarding the Washington grey squirrel and the 04/16/2007 Dept. of the Interior Solicitor guidance regarding "significant portion of its range," the Cook Inlet stock of beluga whale does not meet the current standards for DPS designation. This designation should be reevaluated.
- POP 16 The 1979 estimate was made with "unspecified confidence." It should not be relied upon and is misleading in depicting trends.
- POP 17 Averaging in counts that show a precipitous decline before excessive hunting was restricted in 1999 is inappropriate. The important numbers are those since 1999, which indicate a stable trend.
- POP 18 The Population Viability Analysis (PVA) in the NMFS' 2006 Status review does provide a reasonable biological model of belugas. The extinction risk probabilities are supported by the PVA.

34

Research

- RES 01 Listing the whales as endangered under the ESA is the prudent mechanism to provide the necessary framework and funding to conduct the scientific research necessary to determine what is actually causing the population to decline so rapidly and how recovery can be enhanced. Whatever is causing the continued decline and preventing recovery undoubtedly fits within the scope of the five listing factors set forth in section 4(a)(1) of the Endangered Species Act and analyzed in the proposed rule.
- There needs to be formal scientific studies on the health effects that industry pollution, urban and agricultural run-off, industrial and military activity, municipal sewage and waste discharged at Point Woronzof has had on humans, marine mammals, other animals, plants and aquatic life. For example, we have noticed an unproportionately high rate of thyroid problems and cancer among the Kenaitze/Dena'ina people.
- RES 03 Basing the carrying capacity for Cook Inlet Belugas on the one historical data point that is 20 years separated from the more current annual surveys as a baseline for population modeling is questionable. The methodology of the 1979 study, which determined an estimate of 1,293 animals, should be discarded. The survey's methodology is completely different than what is currently used.
- The NMFS should consider all reliable data sources in its determination of whether to make an ESA designation. The count methodologies of the industry-funded studies (LGL) should be reviewed to determine whether they provide a more accurate indication of the immature whale component of the Cook Inlet Beluga population. Given the similarity in color between the immature whales and the upper Cook Inlet water color, aerial surveys probably significantly undercount immature whales. The counts made by LGL may be a good start to getting complimentary data on belugas population numbers.
- RES 05 NMFS must be proactive on protecting unique Cook Inlet Beluga Whale from extinction by providing a comprehensive Cook Inlet ecosystems assessment and funding the scientific research with a strong citizens' oversight.
- RES 06 Comparatively little research has been conducted on the long-term effects of exposure to bioaccumulative chemicals has been done with the Cook Inlet beluga population. We are also concerned about the potential adverse effects of industrial chemicals and pesticides currently in use, including the brominated flame retardant chemicals (used in plastics, household products, and foams), current use pesticides such as trifluralin and endosulfan, fluorinated compounds (PFOS-- perfluorooctansulfonate and other perfluorinated compounds)(used as a stain resistant chemical). Very little is known about the effects of these chemicals on Cook Inlet beluga.
- RES 07 Cook Inlet RCAC will financially support research for analyzing blubber and liver tissue samples from Cook Inlet beluga whales.
- RES 08 The photo identification as a means to count Belugas used in the industry-funded study by LGL is undoubtedly not reliable. Time is not on the side of the Cook Inlet Beluga whale population, and we cannot afford to make critical mistakes in population counts.
- RES 09 It does not make sense to allow industry-sponsored groups a permit to take belugas for research, as the learning process itself will unnecessarily endanger more belugas. If anyone

- will be doing this, it should be NMFS teams, or teams under their direct & careful supervision of NMFS.
- RES 10 Conduct stranding studies to better understand the potential causes. Develop a comprehensive database of all groundings with all associated information regarding time of day, climatic, tide, location, salmon present, etc. Research should also be focused on necropsies. Dead CIBs must be systematically located so that the necropsy, tissue sampling & evaluation can be increased to achieve a more statistically significant relevance.
- RES 11 More research should be focused on the effect of industrial and other anthropogenic noise on beluga whales.
- RES 12 There is no known scientific research that has found evidence that human factors other than subsistence hunting have affected the whale population. Rather than proceed with an uninformed ESA listing, NMFS should identify the gaps in its understanding of the whales, fund appropriate scientific research to address those information shortfalls.
- NMFS lacks sufficient data to justify a listing at this time. We do not have a clear understanding of the factors that impact the Beluga population or their habitat. The identification and ranking of habitat areas in the 2005 Cook Inlet beluga conservation plan is a good start to identify critical habitat, but insufficient for identifying PCEs and for subsequent critical habitat designation under the ESA. More scientific research is needed.
- The quality of the NMFS's population censuses of the belugas in Cook Inlet in terms of methods, number of surveys, the timing of surveys, and their accuracy in counting the entire population is questionable. Consequently, there is insufficient knowledge of the population numbers, age and sex ratios, rates of immigration/emigration, predation, and seasonal ranges to definitively characterize the population as endangered or not. The proposed rule that an average rate of decline of 4.1% has been observed since 1999. This is not true within the 95% confidence interval, and is therefore not able to he used to show an increasing, stable, or decreasing growth trend The lack of knowledge makes declaration of the population as endangered, or not endangered, equally valid (and equally speculative)
- RES 15 The amount of immigration into, and emigration out of, Cook Inlet on seasonal and permanent scales by Cook Inlet belugas is not known and additional research is needed on gene flow and population mixing between belugas in other parts of Alaska.
- RES 16 With such as small population, the probability of inbreeding and the loss of genetic variability affecting the survival of the Cook Inlet beluga needs to be researched.
- RES 17 The methodology for converting the raw aerial counts and the accompanying video footage of the beluga whales to the final population estimate are derived in part from methodologies used in Bristol Bay, where there is significantly higher clarity to the water column. This counting methodologies and subsequent conversions need to be revised.
- RES 18 The structure and incorporation of uncertainty of modeling was adequate, but the assumptions used and interpretations made relative to the timing of recovery are not, for the following reasons: Used insufficient time during the recovery period (1999+) to assess the true trajectory of the population Risk of extinction in the near term (50 years) for all reasonable models was zero, indicating high uncertainty in the trajectory of the population. The models referenced in the proposed rule indicating a 26% chance for extinction over the next 100

- years are non-defensible. Insufficient and questionable data will lead to poor results from modeling.
- NMFS and the State should conduct cooperative studies of predation and movements of killer whales and their effect on recovery of Cook Inlet belugas. Utilize local drift net and set net fishermen as part of the data collection process to obtain factual examples of orca/beluga interaction.
- RES 20 Fluctuations in the number of salmon and localized stream depletions may have an impact on beluga populations. This and other aspects of beluga behavior need to be researched before considering whether to list.
- We urge the Service to join the November 2006 request by the mayors of Anchorage, Matanuska-Susitna Borough, and Kenai Peninsula to combine efforts to pursue funding for three to five years in order to fully study these whales.
- RES 22 It would seem important to focus efforts on assuring that there is not a challenge to the reproductive fitness of the population either via sex and age ratio biases or/and that habitat degradation will not contribute to adverse reproductive effects.

Socioeconomics; Socioeconomic Effects

- SOCIO 01 An ESA listing will have unspecified negative impacts on the economy of Alaska, and southcentral Alaska in particular, without corresponding benefits to Cook Inlet belugas.
- SOCIO 02 An ESA listing will have significant negative impacts to specific sectors or industries (e.g. transportation, oil & gas, commercial fishing), industrial activities (e.g. exploration) or specific projects (e.g. Knik Arm Crossing, Pebble Mine, Port of Anchorage expansion).
- SOCIO 03 Specific projects will be made impractical or uneconomic and will be cancelled. Future projects may not be considered at all.
- SOCIO 04 There will be significant impacts to utilities, specifically wastewater treatment plants, with unnecessary costs for upgrades to facilities, and these costs will ultimately be borne by ratepayers.
- SOCIO 05 Additional environmental restrictions, regulations and permitting requirements, will add be onerous.
- SOCIO 06 There will be increased costs due to litigation; the money would be better spent on conservation.
- SOCIO 07 NOAA Fisheries has not identified any specific development activity that impacts the whales.
- SOCIO 08 There is a requirement to include both economic and scientific data in making the determination to list a species under the ESA. The methods used in the analysis of economic impacts of an ESA listing should be discussed.
- SOCIO 09 The economic impacts of designation the Cook Inlet as critical habitat will be severe. We encourage the exclusion of the entire Cook Inlet; it can not be scientifically justified. The ESA requires the consideration of economic impact of critical habitat designation and the Secretary has the authority to exclude areas from critical habitat designation "if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat...".
- SOCIO 10 There will be impacts to the Permanent Fund and Permanent Fund Dividend program because of decreased revenue to the state from curtailment of economic activity.
- SOCIO 11 Commercial interests and political pressure carry more weight than environmental or subsistence considerations.
- SOCIO 12 There is sufficient data to show that economic development has not been curtailed by an ESA listing
- SOCIO 13 The evidence that an ESA listing does not curtail economic development is weak.
- SOCIO 14 Economic development and maintaining a population of beluga whales can co-exist
- SOCIO 15 Economic gain from commercial development will be short-lived
- SOCIO 16 An ESA listing will have a positive effect on the economy.

- SOCIO 17 The negative economic impacts of an ESA listing will be insignificant
- SOCIO 18 The proposed rule omitted consideration of Executive Order 13211 which requires agencies to prepare "Statements of Energy Effects" if an agency action will affect energy supplies, distribution or use. AN ESA listing and critical habitat designation will likely be accompanied by restriction on oil and gas exploration and development as well as coal and shipping.
- SOCIO 19 If we do not know what is causing the decline of the belugas, how can we be sure that our health, the health of the surrounding fisheries and tourism that Alaskans depend on are not being impacted?



United States Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service Alaska Fisheries Science Center National Marine Mammal Laboratory 7600 Sand Point Way NE Seattle WA 98115

206-526-4246 FAX: 206-526-6615 15 October 2007 F/AKC3:lwf

Memorandum For: The Record

From: Lowell Fritz, Erin Kunisch, Kathryn Sweeney and

Tom Gelatt, NMML

Morgan Lynn and Wayne Perryman, SWFSC

Subject: Survey of Adult and Juvenile Steller Sea Lions, June-July 2007

An aerial survey to assess trends in numbers of western stock (wDPS) adult and juvenile (non-pup) Steller sea lions in Alaska was conducted by NMFS from 9 June to 6 July 2007. As in 2004 (Fritz and Stinchcomb 2005) and 2006, the 2007 survey was conducted using medium format (5-inch film), vertically-oriented photography with forward motion compensation. The 2007 survey also employed simultaneous digital, vertically-oriented photography (with forward motion compensation); both cameras were mounted side-by-side in a single belly port of a NOAA Twin Otter aircraft (NOAA, Aircraft Operations Center, Tampa FL). The 2007 survey was the first test of a digital camera (Canon EOS-1DS Mark II) with forward motion compensation in the aerial survey for adult and juvenile Steller sea lions.

Methods

Aerial surveys for non-pups are conducted in mid-late June, when the greatest proportion of adults is onshore to give birth and breed. The primary objective in 2007 was to survey all terrestrial rookery and haulout sites within the Alaskan range of the wDPS from Cape St. Elias (145°W) to Attu Island (172°E). However, due to lost survey days caused by weather and maintenance requirements of the aircraft, the 2007 survey did not result in a complete assessment of numbers at trend sites across the Alaskan range of the wDPS of Steller sea lion (Tables 1, 2, and 3). Trend sites are those that have been consistently surveyed since the mid-1970s (1970s trend sites) or 1991 (1990s trend sites).

In 2007, we were able to survey 65 of the 87 trend sites from the 1970s, and 124 of the 161 trend sites from the 1990s. Between 2000 and 2004, counts of non-pups at wDPS trend sites in Alaska increased 11-12%, and this was the first increase observed across 3 surveys (2000, 2002, and 2004) since the late 1970s. Because of the incomplete nature of the 2006 and 2007 aerial surveys, there is limited information to update the non-pup abundance trend for the entire western stock of Steller sea lions in Alaska.

While it was not possible to survey the entire range of the wDPS in Alaska in 2007, all or all but one of the 1990s trend sites were surveyed in four of the six Alaskan sub-areas:

- All in the eastern Gulf of Alaska (E GULF: 145°-150°W; N=13)
- Missing one (Long Island) in the central Gulf of Alaska (C GULF: 150°-157°W; N=32 of 33)
- Missing one (Kak Island) in the western Gulf of Alaska (W GULF: 157°-163°W; N=19 of 20) and
- Missing one (Umnak/Cape Aslik) in the eastern Aleutian Islands (E ALEU: 163°-169°W; N=26 of 27) (Tables 1 and 3).

There was no survey effort in the western Aleutian Islands (W ALEU: 172°-177°E) in 2007, while in the central Aleutian Islands (C ALEU: 169°W – 177°E), survey effort was limited to the eastern portion between Yunaska and Tanaga Islands (170.5°-178°W), with very little effort occurring west of Amchitka Pass. This enabled the creation of an eastern portion of the C ALEU sub-area for comparison of 2004 and 2007 counts at all 1990s trend sites except Chagulak. In addition, trends within eastern and western portions of the C ALEU were compared.

Two researchers working independently counted all adult and juvenile Steller sea lions at each terrestrial site photographed during the 2007 survey. Each researcher counted all sea lions on both the digital and medium format film images. Each of the following series of paired counts was statistically compared using paired sample *t*-tests (Snedecor 1946):

- Counter 1 digital vs. film: N = 45; t = 0.16; P = 0.88
- Counter 2 digital vs. film: N = 45; t = 0.97; P = 0.35
- Digital Counter 1 vs. Counter 2: N = 95; t = 1.50; P = 0.14
- Film Counter 1 vs. Counter 2: N = 62; t = 1.61; P = 0.12.

None of the paired counts were statistically different (all P>0.1), indicating that counts by either counter using either media were independent estimates of the true count. Consequently, counts listed in Table 1 are the means of all available counts for each site (N=2 if images from only one media type were available, otherwise N=4). Values of the *t*-statistic indicate that differences between counters for a single media type were larger than differences between media for a single counter. This suggests that individual counter differences in recognizing sea lions in photographic images were greater than any differences in resolution between the two media types, though none of the differences were statistically significant.

Results from the 2007 digital vs. medium format film count comparison are different than the comparison of counts from oblique 35 mm and vertical medium format images, where medium format image counts were significantly higher than those from 35 mm slides (Fritz and Stinchcomb 2005). Differences in resolution between 35 mm and medium format film required an adjustment factor of -3.64% be applied to all vertical medium format counts in order to properly analyze sub-area time series trends that include counts from 35 mm oblique images; this adjustment factor is applied to all vertical digital counts from 2007 as well (Figures 1 and 2).

Results and Discussion

Counts of non-pup sea lions in the C GULF and W GULF increased by 540 (13%) and 431 (8%) between 2004 and 2007, and by 163 (3%) in the E ALEU (Table 3). The 2007 count in the C GULF is the first showing an increase since the beginning of the time series, and is similar in magnitude to the 2000 and 2002 counts (Figure 1). Increases

in both the W GULF and E ALEU continue the increasing trends observed in both subareas between 2000 and 2004, though at lower rates (Figure 1).

The 2007 count of non-pups in the E GULF was 265 lower (-8%) than the 2004 count, which is opposite of the increasing trend observed here between 2000 and 2006 (Table 3, Figure 1). In the eastern portion of the C ALEU, the 2007 non-pup count was 859 lower (-20%) than the 2004 count. Counts in the eastern C ALEU had increased 49% between 1996 and 2004 (Figure 2). Because counts in the western portion of the C ALEU declined steadily between 1991 and 2002, increasing counts in the eastern C ALEU were responsible for the relatively stable counts observed in the C ALEU as a whole since the mid-1990s (Figures 1 and 2). Counts in 2004 and 2006 in the western C ALEU and the W ALEU suggest that the western Steller sea lion population between Amchitka Pass and Attu Island continues to decline.

Although counts at some trend sites are missing for both 2006 and 2007, available data indicate that the size of the adult and juvenile portion of the western Steller sea lion population throughout much of its range (Cape St. Elias to Tanaga Island, 145°-178° W) in Alaska has remained largely unchanged between 2004 (N=23,107) and 2007 (N=23,118; Table 3). This conclusion was also reached following the incomplete survey of 2006. However, there are significant regional differences in recent trends: increases between 2004 and 2007 in the E ALEU, W GULF and C GULF have largely been offset by decreases in the eastern C ALEU and E GULF. Recent trends (through 2004 and 2006) in the western C ALEU and W ALEU have been negative, suggesting that the overall trend for the wDPS in Alaska (through 2007) is either stable or declining slightly.

Literature Cited

Fritz, L. W., and C. Stinchcomb. 2005. Aerial, ship, and land-based surveys of Steller sea lions (Eumetopias jubatus) in the western stock in Alaska, June and July 2003 and 2004. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-153, 56 p.

Snedecor, G. W. 1946. Statistical Methods. Iowa State College Press, Ames, IA. 485 p.

Table 1. Counts of adult and juvenile (non-pup Steller sea lions) at TREND ROOKERIES AND HAUL-OUTS from medium-format aerial photographs taken in June 2004 and June 2006, and medium format or digital aerial photographs taken in June-July 2007. Trend Sites surveyed regularly since the 1970s, 1990s, and those that are rookeries are noted. Rookeries labeled Y* are 'new' rookeries, which were not included as rookeries in the designation of critical habitat (CH) in 1993 but have produced at least 50 pups since 1975. Rookeries labeled N* are listed CH rookeries, but have not record of at least 50 pups since 1975. Counts are unadjusted.

•		70s	90s				
SITENAME	REGION	TREND	TREND	Rookery	2004	2006	2007
CAPE ST. ELIAS	E GULF	Χ	X		318	414	728
CAPE HINCHINBROOK	E GULF		Χ		496	237	95
SEAL ROCKS	E GULF	X	X	Υ	841	1,119	803
WOODED (FISH)	E GULF	X	X	Υ	523	619	282
GLACIER	E GULF	X	X		620	466	531
THE NEEDLE	E GULF	X	X		123	127	145
POINT ELRINGTON	E GULF	X	X		132	58	37
CAPE PUGET	E GULF		Х		0	0	0
CAPE FAIRFIELD	E GULF		X		0	0	10
RUGGED	E GULF	X	X		0	0	0
AIALIK CAPE	E GULF		Х		1	103	161
CHISWELL ISLANDS	E GULF	X	X	Y*	72	71	74
SEAL ROCKS (KENAI)	E GULF	X	X		3	4	2
OUTER (PYE)	C GULF		X	Υ	222	251	268
GORE POINT	C GULF		X		0	0	0
EAST CHUGACH	C GULF		X		0		0
PERL	C GULF		X		49		241
NAGAHUT ROCKS	C GULF		X		1		2
ELIZABETH/CAPE ELIZABETH	C GULF		X		28		0
SUGARLOAF	C GULF	Х	Χ	Y	667	733	662
USHAGAT/NW	C GULF	Х	Χ		3	0	0
USHAGAT/SW	C GULF	Χ	Χ	Y*	101	141	74
USHAGAT/ROCKS SOUTH	C GULF	Χ	Χ		8	9	0
LATAX ROCKS	C GULF	Χ	Χ		56		115
SEA OTTER	C GULF		Х		127		100
RK NEAR SEA OTTER	C GULF		Х		10		0
AFOGNAK/TONKI CAPE	C GULF		Χ		0		0
SEA LION ROCKS (MARMOT)	C GULF	Χ	Х		2		1
MARMOT	C GULF	X	Х	Υ	703	686	551
LONG ISLAND	C GULF	Х	Х		32		
KODIAK/CAPE CHINIAK	C GULF	Х	Х		87		241
UGAK	C GULF		Х		0		0
KODIAK/GULL POINT	C GULF		Х		109		148
KODIAK/CAPE BARNABAS	C GULF	Х	Х		0		140
TWOHEADED	C GULF	Х	X		266		228
SITKINAK/CAPE SITKINAK	C GULF	X	Х		80		104
KODIAK/CAPE UGAT	C GULF		Х		2	167	248
KODIAK/STEEP CAPE	C GULF		X		0	14	61
SHAKUN ROCKS	C GULF		X		104	67	113

TAKLI C GULF X 85 157 92 PUALE BAY C GULF X 58 2 1 UGAIUSHAK C GULF X X 0 0 0 2 SUTWIK C GULF X X 206 1114 127 CHOWIET C GULF X X 206 1114 127 CHOWIET C GULF X X Y 541 424 CHIRIKOF C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 111 153 152 KAK W GULF X Y 111 153 152 KAK W GULF X X 17 24 MITROFANIA W GULF X X 182 103 116 SPITZ W GULF X X 182 103 116 SPITZ W GULF X X 110 111 KUPREANOF POINT W GULF X X 12 103 116 SPITZ W GULF X X 153 116 53 CASTLE ROCK W GULF X X 70 15 38 ATKINS W GULF X X 70 15 38 ATKINS W GULF X X 102 99 83 NAGAIMOUNTAIN POINT W GULF X X 80 56 1683 585 THE HAYSTACKS W GULF X X 80 56 148 SEA LION ROCKS SCHUMAGINS) W GULF X X 80 56 148 SEA LION ROCKS CHUMGAINS) W GULF X X 9 111 1,167 1,057 CLUBBING ROCKS W GULF X X 9 111 1,067 1,057 CLUBBING ROCKS W GULF X X 9 111 1,067 1,057 CLUBBING ROCKS W GULF X X 9 111 1,067 1,057 CLUBBING ROCKS W GULF X X 9 111 1,067 1,057 CLUBBING ROCKS W GULF X X 9 111 1,067 1,057 CLUBBING ROCKS W GULF X X 9 111 1,037 1,063 CHERNI W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,1037 1,063 CHERNI W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 111 1,167 1,057 CLUBRING ROCKS W GULF X X 9 1	Table 1 (continued) SITENAME	REGION	70s TREND	90s TREND	Rookery	2004	2006	2007
PUALE BAY			IIICIID		ROOKETY			
USAIUSHAK								
SUTWIK C GULF X X Y 541 424 CHOWIET C GULF X X Y 541 424 CHIRIKOF C GULF X X Y 541 424 CHIRIKOF C GULF X X Y 303 300 NAGAI ROCKS C GULF X X Y 330 300 NAGAI ROCKS C GULF X X Y 330 300 CHERNABURA W GULF X X Y 828 1,228 LIGHTHOUSE ROCKS W GULF X Y 111 153 152 KAK W GULF X X 17 111 153 152 KAK W GULF X X 182 103 116 SPITZ W GULF X X 53 116 53 CASTLE ROCK W GULF X X 70 115 38 ATKINS W GULF X X 70 15 38 ATKINS W GULF X X 9 651 663 555 THE HAYSTACKS W GULF X X 9 651 663 555 THE HAYSTACKS W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE WHALEBACK W GULF X X 9 651 663 555 THE W GULF X X 9 111 1,037 1,053 CHERNI W GULF X X 9 111 1,037 1,053 CHERNI W GULF X X 9 111 1,037 1,053 CHERNI W GULF X X 9 111 1,037 1,063 CHERNI W			X					
CHOWNET C G GULF C G G GULF C G G GULF C G GULF C G G GULF C G GULF C G G GULF C G G G GULF C G G GULF C G G GULF C G G GULF C G								
CHIRIKOF NAGAI ROCKS C GULF X X 303 300 NAGAI ROCKS C GULF X X Y 303 300 A499 CHERNABURA CHERNABURA W GULF X X Y* 111 153 152 KAK W GULF X X 17 24 MITROFANIA W GULF X X 1182 103 116 SPITZ W GULF X X 1182 103 116 SPITZ W GULF X X 13 10 11 KUPREANOF POINT W GULF X X 53 116 53 CASTLE ROCK W GULF X X 53 116 53 CASTLE ROCK W GULF X X 53 116 53 CASTLE ROCK W GULF X X 53 116 53 CASTLE ROCK W GULF X X 53 116 53 ATKINS W GULF X X 70 15 38 ATKINS W GULF X X 38 1 41 THE WHALEBACK W GULF X X 38 1 41 THE WHALEBACK W GULF X X 38 1 441 THE WHALEBACK W GULF X X 38 1 441 THE WHALEBACK W GULF X X 38 1 441 THE WHALEBACK W GULF X X 38 1 441 THE WHALEBACK W GULF X X 264 UNGA/ACHEREDIN POINT W GULF X X 264 UNGA/ACHEREDIN POINT W GULF X X 74 101 11,167 1,057 CLUBBING ROCKS W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 1,011 1,167 1,057 CLUBGING ROCK W GULF X X Y 1,011 1,037 1,053 CHERNIN 1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,0					Υ			
NAGAI ROCKS C GULF X 330 449 CHERNABURA CHERNABURA W GULF X X Y* 111 153 152 KAK W GULF X X Y* 111 153 152 KAK W GULF X MITROFANIA W GULF X MITROFANIA W GULF X MITROFANIA W GULF X MULF MULF X MULF MU								
CHERNABURA LIGHTHOUSE ROCKS W GULF X Y 828 1,228 LIGHTHOUSE ROCKS W GULF X MITROFANIA W GULF X MUPREANOF POINT W GULF X TO 116 53 CASTLE ROCK W GULF X TY 661 663 585 THE HAYSTACKS W GULF X M GULF M GUTF M GULF M GUTF M GULF M GUTF M GULF M GUL			^		•			
LIGHTHOUSE ROCKS	NAGAI ROOKS	0 000		^				
LIGHTHOUSE ROCKS	CHERNARIIRA	WGULF	X	X	Υ	828		1,228
KAK W GULF X 17 24 MITROFANIA W GULF X 182 103 116 SPITZ W GULF X X 1 10 111 KUPREANOF POINT W GULF X X 1 0 115 KUPREANOF POINT W GULF X X 70 15 38 ATKINS W GULF X X Y 651 663 585 THE HAYSTACKS W GULF X X 102 99 83 NAGAI/MOUNTAIN POINT W GULF X X 80 56 148 NAGAI/MOUNTAIN POINT W GULF X X 80 56 148 SEA LION ROCKS (SHUMAGINS) W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 36 142 229 JUDE W GULF X X 7 101 1,167 1,057 CLUBBING ROCKS W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 1,011 1,167 1,057 CHERNI W GULF X X Y 1,011 1,167 1,057 SOUTH ROCKS W GULF X X 7 1,011 1,037 1,083 CHERNI W GULF X X 5528 320 457 BIRD W GULF X X 5528 320 457 BIRD W GULF X X 5528 320 457 ROCK W GULF X X 17 33 410 220 SEA LION ROCK (AMAK) E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 1,304 1,319 1,493 TIGALDA/BOCKS NE E ALEU X X Y 1,304 1,319 1,493 TIGALDA/SOUTH SIDE E ALEU X X Y 1,304 1,319 1,493 TIGALDA/SOUTH SIDE E ALEU X X Y 307 338 523 TIGALDA/SOUTH SIDE E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172			• •				153	
MITROFANIA WITROFANIA					•			
SPITZ W GULF X X 1 1 0 11 KUPREANOF POINT W GULF X X 53 116 53 CASTLE ROCK W GULF X X 70 15 38 ATKINS W GULF X X Y 651 663 585 THE HAYSTACKS W GULF X X 102 99 83 NAGAI/MOUNTAIN POINT W GULF X X 80 56 148 SEA LION ROCKS (SHUMAGINS) W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 264 152 229 JUDE W GULF X X Y 911 1,1037 1,063 CHERNI W GULF X X Y 911 1,1037 1,063 CHERNI W GULF X X Y 911 1,1037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,167 1,057 ROCK W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 91 1,037 1,063 CHERNI W GULF X X Y 1,007 1,07 1,07 1,07 1,07 1,07 1,07 1,0								116
KUPREANOF POINT KUPREANOF POINT CASTLE ROCK W GULF X X X 70 15 38 ATKINS W GULF X X Y 661 663 585 THE HAYSTACKS W GULF X X 38 1 41 THE WHALEBACK W GULF X X 102 99 83 NAGAI/MOUNTAIN POINT W GULF X X 80 56 148 SEA LION ROCKS (SHUMAGINS) W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 366 142 44 UNGA/ACHEREDIN POINT W GULF X X 264 152 229 JUDE W GULF X X Y 474 338 445 PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X 528 320 457 BIRD W GULF X 528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X X 733 410 220 UNIMAK/CAPE SARICHEF E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X 7 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X Y 1,304 1,319 1,493 AIKTAK E ALEU X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249			X					
CASTLE ROCK			^					
ATKINS			Y					
THE HAYSTACKS					v			
THE WHALEBACK NAGAI/MOUNTAIN POINT SEA LION ROCKS (SHUMAGINS) W GULF W GUL			^		•			
NAGAI/MOUNTAIN POINT W GULF X X 80 56 148 SEA LION ROCKS (SHUMAGINS) W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X Y* 474 338 445 PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X 528 320 457 BIRD W GULF X X 528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 250 6 0 AMAK+ROCKS E ALEU								
SEA LION ROCKS (SHUMAGINS) W GULF W G			v					
(SHUMAGINS) W GULF X X 36 142 44 UNGA/ACHEREDIN POINT W GULF X X 264 152 229 JUDE W GULF X Y* 474 338 445 PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X 528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 250 6 0 AMAK+ROCKS E ALEU X X 733 410		W GOLF	^	^		00	50	170
UNGA/ACHEREDIN POINT W GULF X Y* 474 338 445 PINNACLE ROCK W GULF X X Y* 474 338 445 PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X 0 0 0 0 0 SOUTH ROCKS W GULF X X 528 320 457 BIRD W GULF X X 5528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 141 202 236 ROOTOK E ALEU X 141 202 236 ROOTOK E ALEU X 141 202 236 ROOTOK E ALEU X 141 202 336 ROOTOK E ALEU X 141 202 336 AKUTAN/REEF-LAVA E ALEU X X 196 96 141 TANGINAK E ALEU X X 196 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 96 96 141 TANGINAK E ALEU X X 199 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 2 20 88 154		WGHE	Y	Y		36	142	44
JUDE W GULF X Y* 474 338 445 PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X X 0 0 0 0 SOUTH ROCKS W GULF X 528 320 457 BIRD W GULF X 577 62 97 ROCK W GULF X 577 62 97 ROCK W GULF X 373 410 20 SEALEU X X 250 6 0 AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493			^					
PINNACLE ROCK W GULF X X Y 1,011 1,167 1,057 CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X 0 0 0 0 SOUTH ROCKS W GULF X 528 320 457 BIRD W GULF X 57 62 97 ROCK W GULF X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X 250 6 0 AMAK+ROCKS E ALEU X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 <t< td=""><td></td><td></td><td></td><td></td><td>V*</td><td></td><td></td><td></td></t<>					V *			
CLUBBING ROCKS W GULF X X Y 911 1,037 1,063 CHERNI W GULF X 0 0 0 0 SOUTH ROCKS W GULF X 528 320 457 BIRD W GULF X 57 62 97 ROCK W GULF X X 250 6 0 UNALASKA/CAPE SARICHEF E ALEU X X 7 334 410 220 SEA LION ROCK			Y					
CHERNI W GULF X 528 320 457 BIRD W GULF X X 528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X X 101 111 43 TIGALDA/SOUTH SIDE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 141 202 236 ROOTOK E ALEU X 141 202 236 TOOTOK E ALEU X 141 202 236 ROOTOK E ALEU X 141 202 236 AKUN/BILLINGS HEAD E ALEU X 146 83 105 ROOTOK E ALEU X 147 307 338 523 AKUTAN/CAPE MORGAN E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X 1102 11,249 1,172 OLD MAN ROCKS E ALEU X X 1102 11,249 1,172 OLD MAN ROCKS E ALEU X X 10 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 20 88 154						•		
SOUTH ROCKS W GULF X 528 320 457 BIRD W GULF X X 57 62 97 ROCK W GULF X X 57 62 97 ROCK W GULF X X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X X 17 0 0 AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83			^		•			
BIRD W GULF X X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X 250 6 0 AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X X 101 111 43 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 7 101 112 81 EGG E ALEU X X 7 1021 1,249 1,172 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
ROCK W GULF X 17 0 0 UNIMAK/CAPE SARICHEF E ALEU X 250 6 0 AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X 119 103 57 <td< td=""><td></td><td></td><td>v</td><td></td><td></td><td></td><td></td><td></td></td<>			v					
UNIMAK/CAPE SARICHEF			^					
AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X 119 103 57 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 71 <t< td=""><td>RUCK</td><td>W GULF</td><td></td><td>^</td><td></td><td>17</td><td>Ū</td><td>Ū</td></t<>	RUCK	W GULF		^		17	Ū	Ū
AMAK+ROCKS E ALEU X X 733 410 220 SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X 119 103 57 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 71 <t< td=""><td>UNIMAK/CAPE SARICHEF</td><td>E ALEU</td><td></td><td>Х</td><td></td><td>250</td><td>6</td><td>0</td></t<>	UNIMAK/CAPE SARICHEF	E ALEU		Х		250	6	0
SEA LION ROCK (AMAK) E ALEU X X Y 456 447 385 UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X 119 103 57 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 EGG E ALEU X X			Х			733	410	220
UGAMAK COMPLEX E ALEU X X Y 1,304 1,319 1,493 AIKTAK E ALEU X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 0 0 0 OUTER SIGNAL E ALEU X 0 0 0 </td <td></td> <td></td> <td></td> <td></td> <td>Υ</td> <td>456</td> <td>447</td> <td>385</td>					Υ	456	447	385
AIKTAK E ALEU X 101 111 43 TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X 7 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 7 1112 81 EGG E ALEU X X 7 5 0 0 OUTER SIGNAL E ALEU X X 0 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 0 UNALASKA/BISHOP POINT E ALEU X 2 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154	· · · · · · · · · · · · · · · · · · ·				Υ	1,304	1,319	1,493
TIGALDA/ROCKS NE E ALEU X 141 202 236 TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X X 71 112 81 EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154							-	
TIGALDA/SOUTH SIDE E ALEU X 46 83 105 ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154						141	202	236
ROOTOK E ALEU X 96 96 141 TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X 71 112 81 EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154							83	105
TANGINAK E ALEU X 4 6 4 AKUN/BILLINGS HEAD E ALEU X X Y 307 338 523 AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X 71 112 81 EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
AKUN/BILLINGS HEAD								_
AKUTAN/REEF-LAVA E ALEU X X 119 103 57 AKUTAN/CAPE MORGAN E ALEU X X Y 1,021 1,249 1,172 OLD MAN ROCKS E ALEU X 71 112 81 EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154			X		Y			523
AKUTAN/CAPE MORGAN					·			
OLD MAN ROCKS E ALEU X 71 112 81 EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154					Y			
EGG E ALEU X 5 0 0 OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154			^		•			
OUTER SIGNAL E ALEU X 0 0 0 UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
UNALASKA/CAPE SEDANKA E ALEU X 0 0 0 UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
UNALASKA/BISHOP POINT E ALEU X 265 285 186 UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
UNALASKA/MAKUSHIN BAY E ALEU X 20 88 154								
OIAVEVOIANI/COOLIIA DVI								
THEOLOGICAL CONTRACTOR OF THE	UNALASKA/SPRAY CAPE	E ALEU		X				

Table 1 (continued) SITENAME	REGION	70s TREND	90s TREND	Rookery	2004	2006	2007
UNALASKA/CAPE IZIGAN	E ALEU		Х		238	329	304
BOGOSLOF/FIRE ISLAND	E ALEU	Х	Χ	Υ	380	358	405
UMNAK/CAPE ASLIK	E ALEU	Х	Х		119	73	
POLIVNOI ROCK	E ALEU		X		91	42	96
THE PILLARS	E ALEU		X		4	0	0
OGCHUL	E ALEU	Х	X	Υ	139	132	152
VSEVIDOF	E ALEU	X	X		48	41	35
ADUGAK	E ALEU	X	X	Υ	259	429	473
ULIAGA	C ALEU		Х		0	99	
KAGAMIL	C ALEU	Х	Х		1	0	
CHUGINADAK	C ALEU	Х	X		129	79	
CARLISLE	C ALEU	Х	X		0	0	
HERBERT	C ALEU	Х	Χ		38	66	
YUNASKA	C ALEU	X	X	Υ	260	255	279
CHAGULAK	C ALEU	X	X		0	13	
AMUKTA+ROCKS	C ALEU	X	X		2	18	56
SEGUAM/FINCH POINT	C ALEU	X	X		2		0
SEGUAM/SW RIP	C ALEU	X	X		40		31
SEGUAM/SADDLERIDGE	C ALEU	X	X	Υ	923		668
SEGUAM/TURF POINT	C ALEU	X	X	•	58		8
SEGUAM/LAVA COVE	C ALEU	X	X		0		0
SEGUAM/LAVA POINT	C ALEU	X	X		5		0
SEGUAM/WHARF POINT	C ALEU	X	X		90		121
AGLIGADAK	C ALEU	X	X	N*	61		15
AMLIA/EAST CAPE	C ALEU	X	X	, • •	34		55
AMLIA/SVIECH. HARBOR	C ALEU	•	X		144		113
TANADAK (AMLIA)	C ALEU	Х	X		1		0
SAGIGIK	C ALEU	X	X		30		10
ATKA/NORTH CAPE	C ALEU	X	X		383	279	140
ATKA/CAPE KOROVIN	C ALEU	X	X		4	0	30
SALT	C ALEU	X	X		Ö	•	0
KASATOCHI/NORTH POINT	C ALEU	X	X	Υ	667	610	613
OGLODAK	C ALEU	^	X	•	86	111	58
IKIGINAK	C ALEU	Х	X		0	8	16
FENIMORE	C ALEU		x		30	10	9
ANAGAKSIK	C ALEU	Х	X		2	52	14
GREAT SITKIN	C ALEU	^	X		0	0	0
LITTLE TANAGA STRAIT	C ALEU	Х	X		49	·	15
KAGALASKA	C ALEU	^	x		48	0	3
	C ALEU	Х	x	Υ	1,008	·	779
ADAK KANAGA/N CAPE	C ALEU	^	x	•	7,000	13	2
KANAGA/CAPE MIGA	C ALEU		X		0	0	0
KANAGA/CAPE MIGA KANAGA/SHIP ROCK	C ALEU		x	Y*	229	J	331
TANAGA/BUMPY POINT	C ALEU		x	1	33		33
TANAGA/CAPE SASMIK	C ALEU		x		122		63
GRAMP ROCK	C ALEU		x	Υ	679		00
	C ALEU		x	•	25		
UGIDAK	O ALEU	^	^		20		

Table 1 (continued) SITENAME	REGION	70s TREND	90s TREND	Rookery	2004	2006	2007
TAG	C ALEU	X	X	Y	242		
KAVALGA	C ALEU	X	X	•	56		
UNALGA+DINKUM ROCKS	C ALEU	X	X		19		
ULAK/HASGOX POINT	C ALEU	X	X	Y	531		
AMATIGNAK/KNOB POINT	C ALEU		X		1		0
AMATIGNAK/NITROF POINT	C ALEU	Х	X		76	38	
SEMISOPOCHNOI/POCHNOI	C ALEU		X	N*	55	41	
AMCHITKA/CAPE IVAKIN	C ALEU	Х	X		0	0	0
AMCHITKA/EAST CAPE	C ALEU	X	X	N*	178	103	
AMCHITKA/ST. MAKARIUS	C ALEU		Х		0	0	0
AMCHITKA/COLUMN ROCK	C ALEU		X	Y	85		
AYUGADAK	C ALEU	Х	X	Υ	152		
RAT	C ALEU		Х		45		
SEA LION ROCK (KISKA)	C ALEU		Χ		0		
TANADAK (KISKA)	C ALEU		X		34		
KISKA/SOBAKA-VEGA	C ALEU		Х		101		
KISKA/CAPE ST STEPHEN	C ALEU	Х	Χ	Y	210		
KISKA/LIEF COVE	C ALEU	Χ	Х	Y	170		
KISKA/PILLAR ROCK	C ALEU		X		0		
BULDIR	W ALEU	X	Х	Y	108		
SHEMYA	WALEU	•	X		17	18	
ALAID	WALEU	Х	X		125	86	
AGATTU/CAPE SABAK	WALEU	X	X	Υ	325	282	
AGATTU/GILLON POINT	WALEU	X	X	Y	374	308	
ATTU/MASSACRE BAY	WALEU		X		0	0	
ATTU/CHIRIKOF POINT	WALEU		X		75	30	
ATTU/CHICHAGOF POINT	WALEU		X		54	13	
ATTU/KRESTA POINT	WALEU		X		0	0	
ATTU/CAPE WRANGELL	WALEU		X	Υ	257	260	
1990s Trend Site Counts Other Site Counts (Table 2) Total Count					27,437 1,600 29,037	19,058 2,231 21,289	23,118 3,018 26,136

Table 2. Counts of adult and juvenile (non-pup) Steller sea lions at NON-TREND HAUL-OUTS from medium-format aerial photographs taken in June 2004 and June 2006, and medium format or digital aerial photographs taken in June-July 2007. Counts are unadjusted.

SITENAME	REGION	2004	2006	2007	Comment
HOOK POINT	E GULF	96	101	132	
STEEP POINT	E GULF	1	11	0	
MIDDLETON	E GULF	4	0	0	
POINT ELEANOR	E GULF		0	0	
PERRY	E GULF		218	437	
PLEIADES	E GULF		0	0	
POINT LaTOUCHE	E GULF	0	0	0	
DANGER	E GULF	12	10	119	
PROCESSION ROCKS	E GULF	36	67	77	
CAPE JUNKEN	E GULF	0	0	0	
CAPE RESURRECTION	E GULF	3	0	12	
GRANITE CAPE	E GULF	1	89	25	
Rocks b/n Steep and Rabbit	E GULF			90	
RABBIT	E GULF	0	0	0	
					2006 count of 103 and 2007 count of
	- 0				161 applied to
NEAR AIALIK CAPE	E GULF		50		Aialik Cape
HOOF POINT	E GULF		52		
FLAT	C GULF	4		44	
SHAW	C GULF	81	162	1	
NUKA POINT	C GULF	0	0	0	
PERL ROCKS	C GULF	0		0	
WEST AMATULI	C GULF	0	0	0	
SUD	C GULF	0	0	0	
KODIAK/CAPE PARAMANOF	C GULF	0	0	0	
CAPE DOUGLAS	C GULF	0	0	0	
KODIAK/MALINA POINT	C GULF	0	0	0	
NOISY	C GULF	0	0	0	
KODIAK/CAPE KULIUK	C GULF	0	0	0	
CAPE NUKSHAK	C GULF	0	0	0	
CAPE UGYAK	C GULF	0	0	0	
KODIAK/SUNDSTROM	C GULF	0		0	
CAPE GULL	C GULF	0	0	0	
CAPE KULIAK	C GULF		0	4	
KODIAK/CAPE ALITAK	C GULF	0		0	
KODIAK/CAPE UYAK	C GULF		Ó	0	
KODIAK/STURGEON HEAD	C GULF		0	0	
KODIAK/CAPE IKOLIK	C GULF	108	52	33	
KODIAK/TOMBSTONE ROCKS	C GULF	0	0	0	
KILOKAK ROCKS	C GULF	85	144	198	
AIUGNAK COLUMNS	C GULF	1	24	7	
AGHIYUK	C GULF	27	5	9	

Table 2 (continued) SITENAME	REGION	2004	2006	2007	Comment
OLGA ROCKS NE	W GULF	11	28	36	
OLGA ROCKS SW	W GULF	117	102	95	
SUSHILNOI ROCKS	W GULF	290	327	289	
CATON	W GULF	109	368	416	
ATKULIK	W GULF	0	0		
CHANKLIUT	W GULF	0	0		
SEAL CAPE	W GULF	0	0		
BIG KONIUJI	W GULF	0	0	0	
TWINS	W GULF	0	0	0	
NAGAI/RK W OF CAPE WEDGE	W GULF	0	0	0	
EGG (SAND POINT)	W GULF	0	0	0	
UNGA/CAPE UNGA	W GULF	0	0	0	
OMEGA	W GULF	0	1	0	
WOSNESENSKI	W GULF	166	113	110	
HUNT	W GULF	0	0	0	
HAGUE ROCK	W GULF	0	0	0	
SOZAVARIKA	W GULF	0	0		
SANAK	W GULF	0	0	0	
UMGA	W GULF	0	0	0	
2					
UNIMAK/CAPE LAZAREF	E ALEU	0		0	
UNIMAK/OKSENOF POINT	E ALEU			269	
UNIMAK/CAPE LUTKE	E ALEU	0	0	0	
UNIMAK/SCOTCH CAP	E ALEU	0	0	0	
Rock b/n Unimak/Sennett Point and					
Unimak/Cape Sarichef	E ALEU		19	6	
KALIGAGAN	E ALEU	1	0	6	
UNIMAK/SENNETT POINT	E ALEU	0	1	0	
BASALT ROCK	E ALEU	1	4	0	
AKUN/AKUN BAY	E ALEU	0	0	18	
AKUN/JACKASS POINT	E ALEU	0	0	0	
AKUN/AKUN HEAD	E ALEU	0	0	0	
AKUTAN/BATTERY POINT	E ALEU	0	0	0	
AVATANAK	E ALEU		15	42	
BABY	E ALEU	0	4	0	
INNER SIGNAL	E ALEU	38	0	47	
UNALASKA/PRIEST ROCK	E ALEU	0	1	3	
UNALASKAWHALEBONE CAPE	E ALEU	0	0	0	
UNALASKA/CAPE WISLOW	E ALEU	0	0	0	
UNALASKA/CAPE STARICHKOF	E ALEU	0	0	0	
Unlisted Rock b/n Bishop and Kovrizhka	E ALEU			10	
UNALASKA/KOVRIZHKA	E ALEU	0	0	0	
					2006 count of 60
					applied to Unalaska/Makushin
UNALASKA/RK NEAR MAKUSHIN	E ALEU				Bay
	E ALEU		0	0	•
UMNAK/CAPE IDAK	E ALEU	0	J	0	
EMERALD	E ALEU	U	0	U	
UMNAK/REINDEER POINT	LALEO		U		

Table 2 (continued)					
SITENAME	REGION	2004	2006	2007	Comment
UMNAK/CAPE CHAGAK	E ALEU		0		
UMNAK/AGULIUK POINT	E ALEU		0		
SAMALGA	E ALEU	1	0	0	
TACALAK	C ALEU	91	134	162	
TAGALAK SILAK	C ALEU	38	32	88	
ADAK/CAPE MOFFET	C ALEU	0	0	0	
ADAK/ARGONNE POINT	C ALEU	35	12	10	
	C ALEU	49	21	10	
BOBROF SEMISOPOCHNOI/PETREL	C ALEU	49 0	43		
SEMISOPOCHNOI/FETREL SEMISOPOCHNOI/SW KNOB	C ALEU	17	0		
	C ALEU	0	0		
SEMISOPOCHNOI/TUMAN POINT	C ALEU	U	1		
SEGULA/GULA POINT	C ALEU	21	ı	72	
AMLIA/CAPE MISTY	C ALEU	0	0	0	
KONIUJI/NORTH POINT		-	_	_	
CHUGUL	C ALEU	39	69 0	73 0	
IGITKIN/SW POINT	C ALEU	0	U	U	
ADAK/CRONE ISLAND	C ALEU	0		82	
KANAGA/CAPE CHUNU	C ALEU	9		02	
ILAK	C ALEU	45			
SKAGUL/S. POINT	C ALEU	1			
OGLIUGA	C ALEU	49	•	•	
AMCHITKA/OMEGA POINT	C ALEU	0	0	0	
AMCHITKA/CHITKA POINT	C ALEU	0		0	
AMCHITKA/BIRD	C ALEU	0		0	
TWIN ROCKS (KISKA)	C ALEU	13	_		
KISKA/SOUTH HEAD	C ALEU	0	0		
KISKA/WITCHCRAFT POINT	C ALEU	0	_		
KISKA/GERTRUDE-BUKHTI	C ALEU	0	0		
INGENSTREM ROCKS	W ALEU	0	1		
NIZKI	WALEU	0	0		
DAN'S ROCKS	WALEU	0	0		
TOTAL OTHER SITES	% * *	1,600	2,231	3,018	

Table 3. Summary of trend sites surveyed (A& B) and counts of adult and juvenile (non-pup) Steller sea lions at 1990s Trend Sites (C & D) within the range of the western stock from medium-format aerial photos taken in June 2004 and June 2006, and medium format or digital photos taken in June-July 2007. Counts are unadjusted.

A. Number of 1	1970s Trend	Sites Sur	<u>veyed</u>					990s Trend Sites
				Only Complete	ely Surveyed	Sub-Areas	3	
Sub-Area	2004	2006	2007	Sub-Area	2004	2006	2007	
E GULF	9	9	9	E GULF	3,129	3,218	2,865	
C GULF	16	7	15	C GULF	4,180			
W GULF	9	8	9	W GULF	5,431			
E ALEU	11	11	10	E ALEU	6,217	6,259		
C ALEU	38	15	22	C ALEU	7,145			
WALEU	4	3	0	W ALEU	1,335			
Total	87	53	65	Total	27,437			
	1990s Trend	Sites Sur	veved	D. Counts of	Non-Pu <u>p Ste</u>	ller Sea L	ions at 1	990s Trend Sites
B. Number of	<u>1990s Trend</u>	Sites Sur	veyed	D. Counts of	Non-Pup Ste	ller Sea L	ions at 1	990s Trend Sites es (removed from all years)
B. Number of				D. Counts of Includes sub-a Sub-Area	Non-Pup Steareas missing 2004	ller Sea L 1 or more 2006	ions at 1 trend site 2007	990s Trend Sites es (removed from all years) Comments
B. Number of '	2004	2006	2007	Includes sub-a Sub-Area	areas missing	1 or more	trend site	es (removed from all years)
B. Number of ' Sub-Area E GULF	2004 13	2006 13		Includes sub-a	areas missing 2004	1 or more 2006	trend site 2007	es (removed from all years) Comments
B. Number of 'Sub-Area E GULF C GULF	2004 13 33	2006 13 14	2007 13 32	Includes sub-a Sub-Area E GULF	areas missing 2004 3,129	1 or more 2006	trend site 2007 2,865	es (removed from all years) Comments No missing sites Missing Long Missing Kak
B. Number of ' Sub-Area E GULF C GULF W GULF	2004 13 33 20	2006 13	2007 13	Includes sub-a Sub-Area E GULF C GULF	areas missing 2004 3,129 4,148	1 or more 2006	e trend site 2007 2,865 4,688	es (removed from all years) Comments No missing sites Missing Long Missing Kak Missing Umnak/Cape Aslik
B. Number of ' Sub-Area E GULF C GULF W GULF E ALEU	2004 13 33 20 27	2006 13 14 19	2007 13 32 19	Includes sub-a Sub-Area E GULF C GULF W GULF	areas missing 2004 3,129 4,148 5,414	1 or more 2006 3,218	2007 2,865 4,688 5,845	es (removed from all years) Comments No missing sites Missing Long Missing Kak
B. Number of ' Sub-Area E GULF C GULF W GULF E ALEU C ALEU	2004 13 33 20 27 58	2006 13 14 19 27	2007 13 32 19 26	Includes sub-a Sub-Area E GULF C GULF W GULF E ALEU	areas missing 2004 3,129 4,148 5,414 6,098	1 or more 2006 3,218	2007 2,865 4,688 5,845 6,261 3,460	es (removed from all years) Comments No missing sites Missing Long Missing Kak Missing Umnak/Cape Aslik
B. Number of ' Sub-Area E GULF C GULF W GULF E ALEU	2004 13 33 20 27	2006 13 14 19 27 24	2007 13 32 19 26 34	Includes sub-a Sub-Area E GULF C GULF W GULF E ALEU	areas missing 2004 3,129 4,148 5,414 6,098	1 or more 2006 3,218	2007 2,865 4,688 5,845 6,261	es (removed from all years) Comments No missing sites Missing Long Missing Kak Missing Umnak/Cape Aslik

Figure 1. Counts of adult and juvenile (non-pup) Steller sea lions at 1990s Trend Sites (Table 1) by sub-area in the range of the western stock in Alaska, 1991-2007. Sea lions in 2004, 2006, and 2007 were counted on medium format or digital photographs taken vertically over trend sites; sea lions in all other years were counted on 35 mm slides shot obliquely from side windows of aircraft. Region totals for 2004, 2006, and 2007 reflect a reduction of 3.64% from the actual medium format count to reflect the higher resolution and higher counts obtained on vertical medium format-digital vs. oblique 35 mm photographs (Fritz and Stinchcomb 2005).

- A. In the Gulf of Alaska, only the E GULF has a complete time-series of trend sites counts (1991-2007); in the C GULF, counts at Long Island are omitted, while in the W GULF, counts at Kak Island are omitted (2006 counts are not plotted for both sub-areas).
- B. In the Aleutian Islands, the C ALEU has a complete time series of trend site counts only through 2004; in the E ALEU counts at Umnak/Cape Aslik are omitted; in the W ALEU, counts at Buldir Island are omitted and there are no counts for 2007.

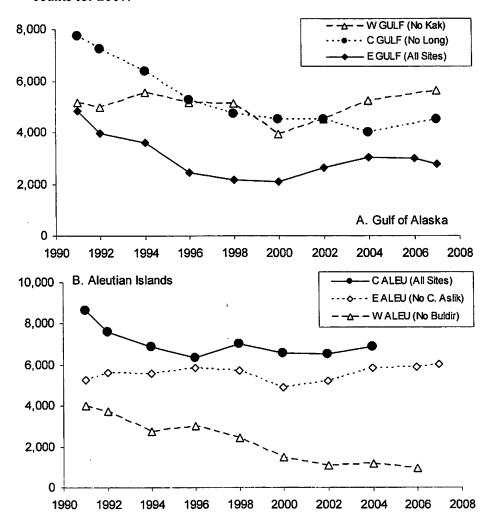
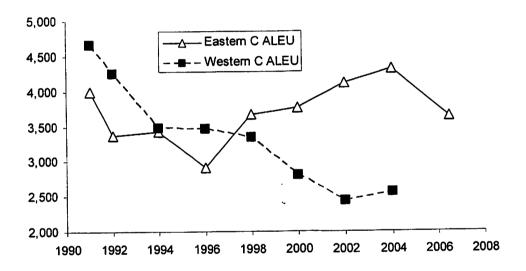
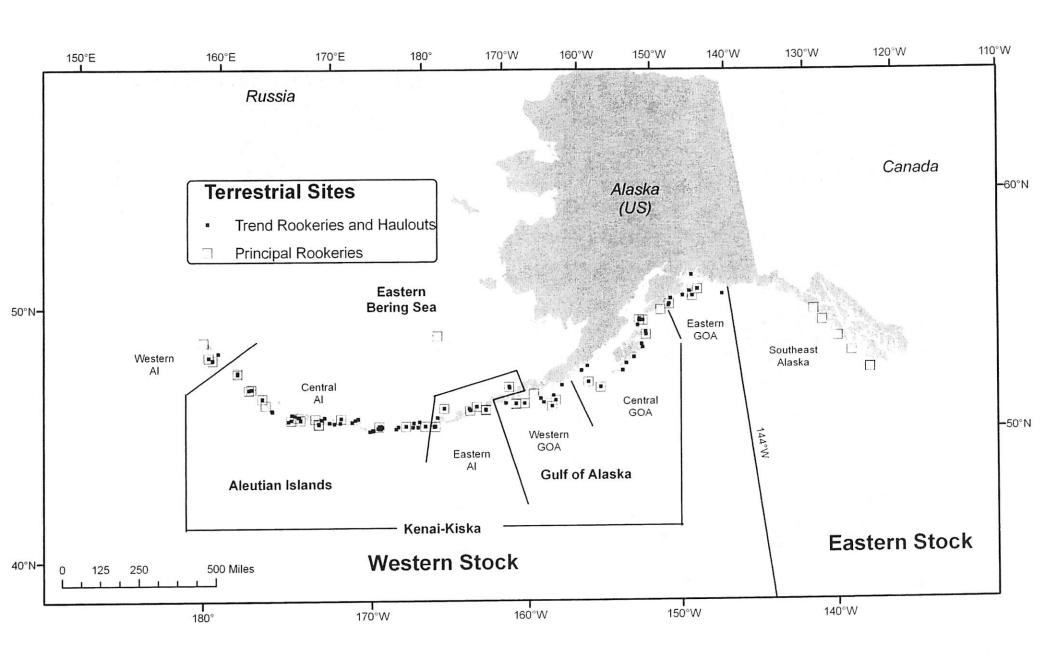


Figure 2. Counts of adult and juvenile (non-pup) Steller sea lions at 1990s Trend Sites (Table 1) in the eastern and western portions of the C ALEU sub-area, 1991-2007. Sea lions in 2004, 2006, and 2007 were counted on medium format or digital photographs taken vertically over trend sites; sea lions in all other years were counted on 35 mm slides shot obliquely from side windows of aircraft. Region totals for 2004, 2006, and 2007 reflect a reduction of 3.64% from the actual medium format count to reflect the higher resolution and higher counts obtained on vertical medium format-digital vs. oblique 35 mm photographs.

Eastern C ALEU includes all trend site counts between 169°-178°W (Islands of Four Mountains through Tanaga Island); counts for 2006 and 2007 were pooled by averaging and plotted at year = 2006.5. Western C ALEU includes all trend site counts between 177°E and 178°W (Attu Island through the Delarof Islands).





as NMFS observers, however, at the time of the experiment. The "sea samplers" would conduct the data collection and perform other observer duties that would normally be required for vessels directed fishing for pollock.

The activities under the EFP are not expected to have a significant impact on the marine environment, but the potential effects on the marine environment will be further analyzed during review of the application.

In accordance with § 679.6, NMFS has determined that the proposal warrants further consideration and has initiated consultation with the Council by forwarding the application to the Council. The Council will consider the EFP application during its April 4-11, 2005, meeting which will be held at the Hilton Hotel in Anchorage, AK. The applicants have been invited to appear in support of the application, if the applicants desire. Interested persons may comment on the application at the Council meeting during public testimony. A notice announcing the upcoming meeting will be published in the Federal Register.

A copy of the application is available for review from NMFS (see ADDRESSES).

Authority: 16 U.S.C. 1801 et seq.

Dated: March 15, 2005.

Alan D. Risenhoover,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service. [FR Doc. E5-1186 Filed 3-17-05; 8:45 am] BILLING CODE 3510-22-S

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 031505F]

Fisheries of the Exclusive Economic Zone Off Alaska; Application for an Exempted Fishing Permit

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; receipt of amended application for an exempted fishing permit.

SUMMARY: NMFS has received an amended application for an exempted fishing permit (EFP) from William Thornton Smith of the North Pacific Longline Association (NPLA). If granted, this EFP would authorize the applicant to conduct an experiment to evaluate the integrated weight groundline as a potential seabird avoidance measure in the 2005 Pacific cod hook-and-line

fishery in the Bering Sea and Aleutian Islands Management Area (BSAI). The project is intended to promote the objectives of the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP) by reducing fishery interactions with the endangered short-tailed albatross (Phoebastria albatrus) and other seabird species.

addresses: Copies of the EFP application may be requested from Sue Salveson, Assistant Regional Administrator for Sustainable Fisheries, Alaska Region, NMFS, Attn: Lori Durall by: mail to P.O. Box 21668, Juneau, AK 99802; fax to 907–586–7557; or email to Lori.Durall@noaa.gov.

FOR FURTHER INFORMATION CONTACT: Kim Rivera, 907–586–7424 or Kim.Rivera@noaa.gov.

SUPPLEMENTARY INFORMATION: NMFS manages the domestic groundfish fisheries in the BSAI under the FMP. The North Pacific Fishery Management Council (Council) prepared the FMP under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing the groundfish fisheries of the BSAI appear at 50 CFR parts 600 and 679. The FMP and the implementing regulations at §§ 679.6 and 600.745(b) authorize the issuance of EFPs to allow fishing that would otherwise be prohibited. Procedures for issuing EFPs are contained in the implementing

regulations. In June 2004, the Council approved the application for an EFP for this experiment which was submitted by the Washington Sea Grant Program (WSGP). The WSGP was unable to secure vessels for the work, and an EFP was not issued in 2004. In February 2005, NMFS received an amended application for this EFP from the NPLA. The purpose of this EFP is to authorize experimental fishing using integrated weight groundline to evaluate its effectiveness as a potential new seabird avoidance measure. The application calls for testing integrated weight groundlines against unweighted groundlines, with and without paired streamer lines. This proposed experiment builds on work that was completed in Alaska in 2002, and compliments efforts taking place in other fisheries. Information from this experiment could ultimately result in better and more effective seabird avoidance measures. The hook-and-line fishing industry appears especially interested in this experiment, because it may provide a better tool with which to avoid the incidental catch of the endangered short-tailed albatross and other seabird species. In addition, the

integrated weight groundline may improve fishing efficiency with better gear handling characteristics and increased target catch rates resulting from getting baited hooks down more quickly. The U.S. Fish & Wildlife Service issued a Biological Opinion (September 2003) that includes a conservation recommendation for NMFS to support research efforts to develop new and novel deterrent technologies such as integrated weight groundlines. This experiment would fulfill such a recommendation.

The goal of the experiment is to reduce the incidental catch of the endangered short-tailed albatross and other seabird species in ways that are consistent with Magnuson-Stevens Act National Standard 9 which requires conservation and management measures to minimize bycatch and bycatch mortality and that the effects on birds should be considered when selecting these measures. A preliminary WSGP investigation in 2002 evaluated four weightings of integrated weight groundline (25g/m, 50g/m, 75g/m and 100 g/m). The four weighting treatments were compared to a control of unweighted groundline in the sablefish fishery in the Aleutian Islands and the Pacific cod fishery in the Gulf of Alaska. Preliminary results strongly suggest that 50g/m line was the optimal weighting. It was the most practical gear in terms of operational performance in mechanical baiting (auto-bait) hook-andline systems, and it sank quickly beyond the range of seabirds.

Based on these initial results, NPLA proposes to continue this work by comparing the catch rates of all species, the abundance and behavior of seabirds, and the sink rate of groundlines under three scenarios: 50g/m integrated weight groundline, and un-weighted groundlines with and without paired streamer lines. Regulations at § 679.24(e)(4)(ii)(c) require the use of paired streamer lines by vessels greater than 55 ft (16.8 m) length overall (LOA). Because vessels used in the experiment would be greater than 55 ft (16.8 m) LOA, an EFP is necessary to conduct the experimental control treatments that call for the experimental gear to be deployed in the absence of paired streamer lines. Work will take place on two freezer-longliner vessels using autobait systems in the Pacific cod fishery in the BSAI during 2005 and 2006, if unforeseen circumstances prohibit completion of the work in 2005.

Amendments to the application approved in June 2004, include: (1) starting the experimental fishing a month earlier (July 15, 2005 instead of August 15, 2005), (2) allocating

specified amounts of Pacific cod and bycatch species to participating vessels, (3) harvesting Pacific cod beyond the total allowable catch and acceptable biological catch amounts specified for 2005, and (4) exemption from improved retention/improved utilization regulations at § 679.27.

These levels of harvest and manner of harvest are not expected to have a significant impact on the marine environment, but the potential effects on the marine environment will be further analyzed during review of the

application.

In accordance with § 679.6, NMFS has determined that the application warrants further consideration and has initiated consultation with the Council by forwarding the amended application to the Council for consultation. The Council will consider the application during its April 4-11, 2005 meeting which will be held at the Hilton Hotel in Anchorage, AK. While the applicant has been invited to appear in support of the application, all interested parties may comment on the application at the meeting during public testimony. A notice announcing the upcoming meeting will be published in the Federal Register.

The vessels that would conduct the experimental fishing were not identified on the application, but would be identified on the EFP, once they have been selected for the project. The NMFS Regional Administrator may consider and attach additional terms and conditions to the EFP that are consistent with the purpose of the experiment. Public comment may help determine such conditions.

A copy of the amended application is available for review from NMFS (see

Authority: 16 U.S.C. 1801 et seq.

Dated: March 15, 2005.

Alan D. Risenhoover,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service. [FR Doc. E5-1193 Filed 3-17-05; 8:45 am] BILLING CODE 3510-22-S

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 122104A]

Vessel Monitoring Systems; Approved Mobile Transmitting Units for use in the South Atlantic Rock Shrimp **Fishery**

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of vessel monitoring systems; approval.

SUMMARY: This document provides notice of vessel monitoring systems (VMS) approved by NOAA for use by vessels participating in the Rock Shrimp Fishery of the South Atlantic Region and sets forth relevant features of the VMS, and supersedes all previous type approval notices for the South Atlantic Rock Shrimp Fishery.

ADDRESSES: To obtain copies of the list of NOAA-approved VMS mobile transmitting units and NOAA-approved VMS communications service providers, or to obtain information regarding the status of VMS systems being evaluated by NOAA for approval, write to NOAA Fisheries Office for Law Enforcement (OLE), 8484 Georgia Avenue, Suite 415, Silver Spring, MD 20910.

To submit a completed and signed checklist, mail or fax it to NOAA Enforcement, 9721 Executive Center Drive North, Koger Building, St. Petersburg, FL 33702, fax 727-570-5355. For more addresses regarding approved VMS, see the SUPPLEMENTARY INFORMATION section, under the heading VMS Provider Addresses.

FOR FURTHER INFORMATION CONTACT: For current listing information contact Mark Oswell, Outreach Specialist, phone 301-427-2300, fax 301-427-2055. For questions regarding VMS installation, activation checklists, and status of evaluations, contact Jonathan Pinkerton, National VMS Program Manager, phone 301-427-2300, fax 301-427-2055. For questions regarding the installation checklist, contact Beverly Lambert, Southeast Division VMS Program Manager, NMFS Office for Law Enforcement, phone 727-570-5344.

The public may acquire this notice, installation checklist, and relevant updates via the OLE website http:// www.nmfs.noaa.gov/ole/vms.html. Telephone requests can be made by calling 301-427-2300.

SUPPLEMENTARY INFORMATION:

I. VMS Mobile Transceiver Units

A. Inmarsat-C Transceivers

The Inmarsat-C satellite communications VMS transmitting units that meet the minimum technical requirements for the Rock Shrimp Fishery are the Thrane & Thrane Fishery "Capsat" (part number TT-3022D-NMFS) and the Thrane & Thrane Fishery "Mini-C" (part number TT-3026-NMFS). The address for the Thrane & Thrane distributor (Thrane & Thrane) dealer contact is provided in

this notice under the heading VMS Provider Addresses.

Thrane & Thrane TT-3022D-NMFS features: The transceiver consists of an integrated GPS/Inmarsat-C unit in the wheelhouse and an antenna mounted atop the vessel. The unit is factory preconfigured for NMFS VMS operations (non-Global Maritime Distress & Safety System (non-GMDSS)). Satellite commissioning services are provided by

Thrane & Thrane personnel.

Automatic GPS position reporting starts after transceiver installation and power activation onboard the vessel. The unit is a car-radio-sized transceiver using a floating 10 to 32 VDC power supply. The unit is configured for automatic reduced position transmissions when the vessel is stationary (i.e., in port). It allows for port stays without power drain or power shut down. The unit restarts normal position transmission automatically when the vessel goes to sea.

The outside antenna, model TT– 3005M, is a compact omni-directional Inmarsat-C/GPS antenna, providing operation down to +/-15 deg. angles.

A configuration option is available to automatically send position reports to a private address, such as a fleet management company. Another available option is the ability to send and receive private e-mail and other messages with the purchase and installation of an input device such as a laptop, personal computer, or message display terminal.

Thrane & Thrane TT-3026-NMFS features: The transceiver consists of an integrated GPS/Inmarsat-C unit mounted atop the vessel. The unit is factory pre-configured for NMFS VMS operations (non-Global Maritime Distress & Safety System (non-GMDSS)). Satellite commissioning services are provided by Thrane & Thrane

personnel.

Automatic GPS position reporting starts after transceiver installation and power activation onboard the vessel. The unit is an integrated transceiver/ antenna/GPS design using a floating 10 to 32 VDC power supply. The unit is configured for automatic reduced position transmissions when the vessel is stationary (i.e., in port). It allows for port stays without power drain or power shut down. The unit restarts normal position transmission automatically when the vessel goes to sea.

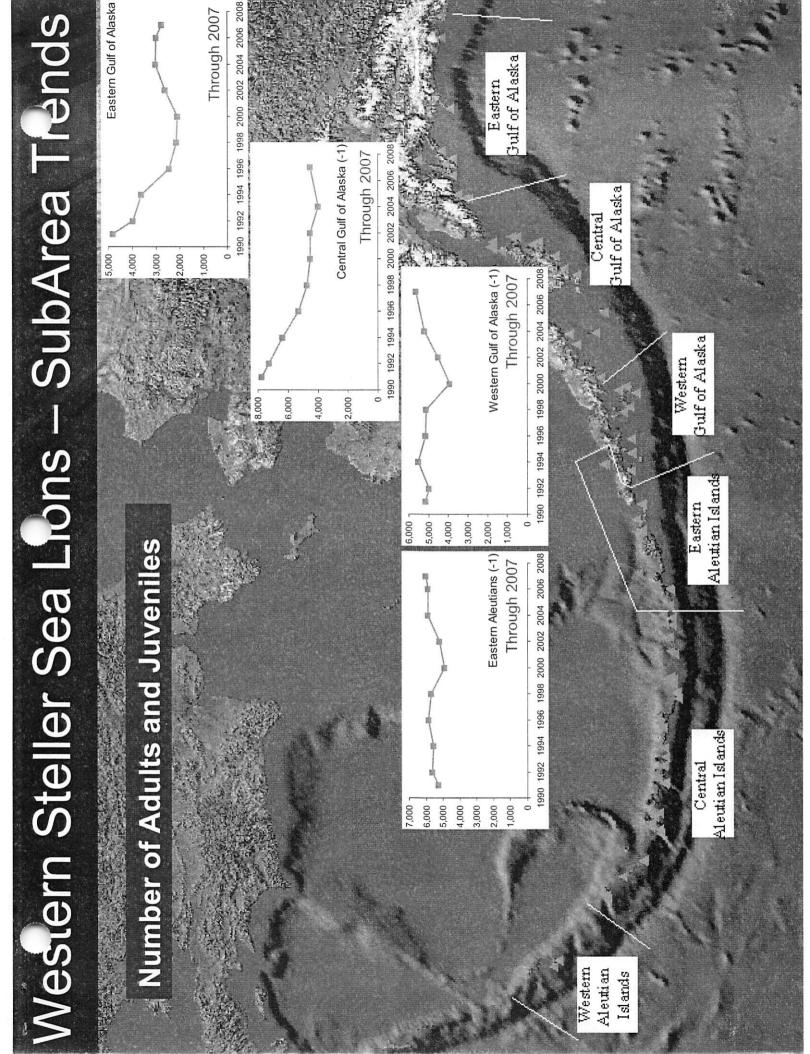
The TT-3026-NMFS provides operation down to +/-15 degree angles. Although the unit has the capability of two-way communication to send and receive private e-mail and other messages, it can only use this capability when additional equipment - not

Draft Steller Sea Lion Measures Development Timeline (11/14/07) - assumes that all key events and document releases occur on schedule and that key staff are available to accomplish analytical workload.

						2008						
SSL Project Components	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Council Meetings		SSLMC status report on proposals		Review final Recovery Plan and SSLMC progress report		Review Status Quo BiOp, SSLMC recommendations, and EIS scoping report and recommend (1) range of alternatives for EIS analysis and (2) preliminary preferred alternative for Action BiOp						
SSLMC Review Proposals and Recommend Alternatives	Proposi	al analysis	(2) Review final recovery plan and compare with proposal		(2) Review Status Quo BiOp and finalize recommendations							
ESA Documentation			(1) NOA and Release Final Recovery Plan		(1) Release draft Status Quo BiOp - May 1	Develop Action Biological prelim prefe	Assessment base rred alternative	d on Council	Dev	elop draft Action E	BiOp	Release draft Action BiOp
NEPA, Regulatory Flexability Act, and EO 12866 Documentation				NOI for EIS, 30- day scoping period	Develop scoping report	Scoping report to Council - June 1			Develop draft	EIS/RIR/IRFA		
Rule making												

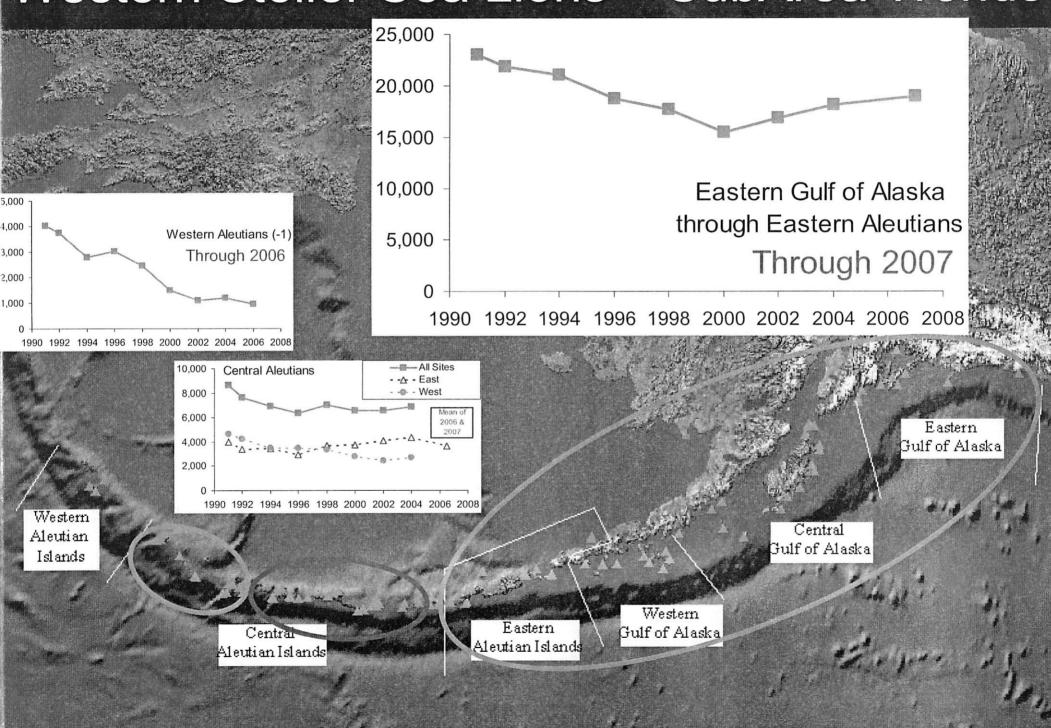
B.6 NPFMC

					*							
					2009							2010
jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan
	(1) Review preliminary DEIS/RIR/IRFA, draft Action BiOp, SSLMC comments, and CIE review and (2) Chose preferred alternative				Take final action based on final Action BiOp, DEIS/RIR/IRFA, and CAR							
SSLMC review of draft Action BiOp												
CIE Review		Complete fina	al Action BiOp	Final Action BiOp to Council								
Preliminary DEIS/RIR/IRFA to Council			IR/IRFA, 45-day nt period	Develop Comment Analysis Report (CAR) and submit to Council		Revise EIS/R	IR/IRFA to inco final act	rporate final ac	ition, CAR, and	Publish Final EIS/RIR/IRFA	Sign ROD with final rule	
					Develop propo	osed rule	Publish prope day public co	osed rule, 30- mment period		comments and p final rule	Publish final rule	Final rule effective



Western Steller Sea Lions – SubArea Trends Gulf of Alaska Eastern 3ulf of Alaska 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 through Eastern Aleutians Through 2007 Eastern Gulf of Alaska Gulf of Alaska Aleutian Islands Eastern Aleutian Islands Juveniles 15,000 10,000 5,000 25,000 silubA Western Islands Aleutian

Western Steller Sea Lions - SubArea Trends



Western Steller Sea Lions – SubArea Trends

		Alculaii isiaiids	2	9)	GUII OI AIASKA		
	ern	Central	Eastern	Western	Central	Eastern	Total
I Edi NO DE	No Buldir	East Only	No C Aslik	No Kak	No Long	AII	No W Aleu
2004 1,227	27	4,318	860'9	5,414	4,148	3,129	23,107
2006 997			6,186			3,218	
2007		3,460	6,261	5,845	4,688	2,865	23,118
Diff			163	431	540		11

