OCEANA – OCEAN CONSERVANCY – GREENPEACE USA –
WORLD WILDLIFE FUND

SUBMITTED VIA EMAIL AND HAND DELIVERY

September 3, 2010

Jim Balsiger
Regional Administrator
Alaska Region, NMFS
Attn: Ellen Sebastian
P.O. Box 21668
Juneau, AK 99802

Re: Endangered Species Act—Section 7 Consultation Draft Biological Opinion

Dear Dr. Balsiger:

Thank you for the opportunity to comment on the National Marine Fisheries Service's (NMFS) Draft Biological Opinion (BiOp) evaluating the impacts of the Bering Sea/Aleutian Islands and Gulf of Alaska groundfish fisheries on endangered species. As the Draft BiOp makes clear, the current management of those fisheries is likely to cause jeopardy to the Western Distinct Population Segment (DPS) of Steller sea lions and adverse modification of their critical habitat. Accordingly, NMFS is not—and likely has not been—complying with the Endangered Species Act (ESA). The agency must take action to bring those fisheries into compliance with the law. Management changes are long overdue and must be implemented for the 2011 fisheries, if not before.

The status of the population of Steller sea lions is an appropriate lens through which to evaluate our progress toward a healthy ocean ecosystem that includes sustainable fisheries and supports vibrant communities. NMFS and the North Pacific Fishery Management Council (Council) have taken important steps to further this goal, including preparing the Aleutian Islands Fishery Ecosystem Plan (AIFEP) and implementing the Arctic Fishery Management Plan. *See* Aleutian Islands Fishery Ecosystem Plan 32-33, *available at* http://www.fakr.noaa.gov/npfmc/current_issues/ecosystem/AIFEP12_07.pdf; 74 Fed. Reg. 56734 (Nov. 3. 2009). At the same time, however, NMFS has authorized fisheries that remove millions of pounds of important prey for Steller sea lions from the ocean. The continued decline and failure to recover the population of Steller sea lions is clear evidence that those fisheries, as currently managed, are not sustainable.

As the Draft BiOp makes clear, the western stock of Steller sea lions has declined precipitously, and the current population represents a decline of approximately 80% since the 1960s. *See* BiOp at 77. Moreover, the population as a whole is not recovering and continues to decline sharply in the western Aleutian Islands. The 2008 Recovery Plan for the Steller Sea Lion establishes very clear demographic criteria for recovery. To be considered for delisting, the population must have "increased (statistically significant) for 30 years (at an average annual growth rate of 3%), based on counts of non-pups (i.e., juveniles and adults)." Recovery Plan for the Steller Sea Lion V-21, *available at* http://www.fakr.noaa.gov/protectedresources/stellers/recovery.htm ("Recovery Plan"). In addition, the population also must be stable or increasing "in at least 5 of the 7 sub-regions. The population trend in any two adjacent sub-regions can not be declining

significantly[, and t]he population trend in any sub-region can not have declined by more than 50%." *Id.*

The population is not meeting those criteria. While the problem may be most severe in the Western Aleutian Islands, where the sharp decline has continued, the failure to recover is not limited to that geographic region. The stock is not growing at a statistically significant rate, and there are still declines around Kodiak. In the Pribilof Islands, the sole remaining breeding rookery at Walrus Island is currently in danger of extinction. Further, birth rates are low across the western population, and the gains that have been made reflect growth from 2000-2004 that has not continued. The best evidence shows that these continued declines and failure to recover are likely caused by nutritional stress.

The ESA imposes an absolute requirement that NMFS "insure that any action . . . is not likely to jeopardize the continued existence" of the Steller sea lion "or result in the destruction or adverse modification of" its critical habitat. 16 U.S.C. § 1536(a)(1). It further requires that the agency not "make any irreversible or irretrievable commitment of resources" during the pendency of the consultation process. *See* 16 U.S.C. § 1536 (d); *Wash. Toxics Coal. v. Envt'l Prot. Agency*, 413 F.3d 1024, 1031, 1035 (9th Cir. 2004); *Greenpeace v. National Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1152 (W.D. Wash. 200). The Draft BiOp reflects more than 14 years of research, thinking, litigation, and other discussion about how best to meet that requirement and move toward ecosystem-based management. It is clear from that document and the overwhelming weight of the scientific evidence that the groundfish fisheries are likely contributing to the continued decline and failure to recover. The agency, therefore, is, and likely has been out,of compliance with the ESA.

To address the continued decline and failure to recover, NMFS has proposed a Reasonable and Prudent Alternative (RPA) that would require changes in the Atka mackerel, Pacific cod, and groundfish fisheries in Management Sub-areas 543, 542, and 541. It is clear from the information in the Draft BiOp and the detailed comments below that those changes are justified and should be implemented. In addition, the agency must look more closely at low natality in the population as a whole and other local declines. It should take action to address declines in the overall prey base and implement the proposal by the St. George Traditional Council to extend the critical habitat protection measures for the Dalnoi Point haulout. Overall, NMFS should implement an RPA that moves toward sustainable fisheries while affording the necessary protections for sea lions.

The schedule proposed by NMFS for completion of the consultation process would allow for public input, including discussion at the Council, development of a final rule, and implementation of the necessary changes for the 2011 fisheries. Given the lengthy history, continued decline of the population, and clear weight of the evidence, the agency must, at a minimum, abide by that schedule and should implement the protections sooner—in particular to address fishing being authorized to begin in September for Atka mackerel in the areas proposed for closure. *See* 75 Fed. Reg. 53606 (Sept. 1, 2010).

We support a full public process that reflects the appropriate roles of the Office of Protected Resources and Office of Sustainable Fisheries, as expert and action agencies, and allows for

input from the Council, industry, conservation organizations, communities, and others. That process, however, cannot delay the changes necessary to ensure compliance with the law. Nor should NMFS limit the scope of the changes implemented, as suggested by the Council, to force itself to revisit this question in two years.

Ultimately, we can and must do more to move toward a healthy ocean ecosystem that includes sustainable fisheries and supports vibrant communities. We encourage the agency to take advantage of this opportunity to do so.

Attached to this cover letter are substantial, detailed comments on the Draft BiOp, previous correspondence submitted to NMFS and the Council, and a series of references that must be considered as the agency makes decisions about the groundfish fisheries and Steller sea lions.

Thank you for your consideration of these comments, and we look forward to working with you on this and other important issues.

Sincerely,

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Detailed Comments on Draft Biological Opinion for Authorization of Bering Sea/Aleutian Islands and Gulf of Alaska Groundfish Fisheries

The Draft Biological Opinion (Draft BiOp) released by National Marine Fisheries Service (NMFS) on August 3, 2010 is the latest chapter in a story that goes back two decades. The western population of Steller sea lions was listed under the Endangered Species Act (ESA) as a threatened species in 1990. Critical habitat was designated for the species in 1993, and in 1997, it was reclassified as endangered. *See* 50 C.F.R. § 226.202; 58 Fed. Reg. 45,269 (August 27, 1993). Conflicts about NMFS's compliance with the ESA and National Environmental Policy Act led to lengthy and often contentious litigation. *See Greenpeace v. National Marine Fisheries Serv.*, 237 F. Supp. 2d 1181, 1184-87 (W.D. Wash. 2002) (detailing agency actions, procedural posture, and previous decisions). In the course of that litigation, the court repeatedly rejected the agency's rationale for its conclusion that the groundfish fisheries, as managed under the Bering Sea/Aleutian Islands (BSAI) and Gulf of Alaska (GOA) Fishery Management Plans (FMP) were not causing jeopardy to the species or adversely modifying its critical habitat. NMFS revised the BiOp several times and ultimately, on June 19, 2003, released a final document entitled "Supplement to the Endangered Species Act - Section 7 Consultation Biological Opinion and Incidental Take Statement of October 2001." *See* http://fakr.noaa.gov/protectedresources/stellers/biop2002/703remand.pdf (hereinafter "2003 Supplement"). That document was not subject to court challenge and, therefore, concluded that consultation process.

In April 2006, the NMFS Office of Sustainable Fisheries sent a request to the Office of Protected Resources requesting reinitiation of formal Section 7 consultation about the effects of the federal groundfish fisheries on Steller sea lions and other listed species. *See* Letter from S. Salveson, Ass't Reg'l Admin for Sustainable Fisheries to K. Brix, Ass't Reg'l Admin for Protected Resources (April 19, 2006) (hereinafter "Reinitiation Letter"). At that time, the Office of Protected Resources expected to complete the new BiOp by August 2007. *See* Memo from K. Brix to S. Salveson, Reinitiation of ESA Consultation (June 21, 2006). As that process has continued, NMFS has authorized fishing at levels that are causing jeopardy to sea lions, and has done so without a valid BiOp in place.

In 2008, NMFS issued a revised Recovery Plan for the Steller Sea Lion. *See* http://www.fakr.noaa.gov/protectedresources/stellers/recovery.htm ("Recovery Plan"). Now, in 2010—more than four years after consultation was reinitiated and more than 14 years after this dialogue began—NMFS has released a draft BiOp. The draft BiOp concludes that the fisheries are likely to cause jeopardy to the western population of Steller sea lions and NMFS plans to implement changes to the management measures for the 2011 fisheries.

The conclusion that the FMPs, as implemented, jeopardize the survival and recovery of the Western DPS of Steller sea lions and adversely modify critical habitat is sound and consistent with the overwhelming weight of evidence. As explained in more detail below, management changes are long overdue and must be implemented for the 2011 fisheries, if not before.

I. NMFS Must Implement Changes to the Current Management Measures to Bring the Fisheries Into Compliance with the ESA.

The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). Its stated purposes are "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved," and "to provide a program for the conservation of such . . . species." *Id*. at 180 (quoting16 U.S.C. § 1531(b)). The statute reflects "a conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies." *Id.* at 184.

To effectuate this purpose, the ESA places on all federal agencies the substantive obligation to "insure that any action . . . is not likely to jeopardize the continued existence of any endangered species . . . or result in the destruction or adverse modification of habitat for such species." 16 U.S.C. § 1536(a)(1). The obligation to "insure" against a likelihood of jeopardy or adverse modification requires the agencies to give the benefit of the doubt to endangered species and to place the burden of risk and uncertainty on the proposed action. *See Sierra Club v. Marsh*, 816 F.2d 1376, 1386 (9th Cir. 1987). To ensure that this strict substantive mandate is carried out, agencies must engage in a consultation process with the appropriate expert wildlife agency on the impacts of any federal action to listed species:

> In order to avoid jeopardy and adverse modification, the ESA requires that the "action" agency consult with an "expert" agency to evaluate the effects a proposed agency action may have on a listed species. . . . The final product of a formal consultation is a biological opinion (BiOp) which states the expert agency's conclusions regarding the possibility of any jeopardy or adverse modification that the proposed action would cause. When jeopardy or adverse modification is found, the expert agency must propose "reasonable and prudent alternatives" (RPAs), by which the action can proceed without causing jeopardy or adverse modification.

Greenpeace v. National Marine Fisheries Serv., 237 F. Supp. 2d at 1185.

Strict compliance with these procedures is critical to the success of the ESA, because only through the consultation process can the effects of agency action on listed species be fully and objectively evaluated. *See Thomas v. Peterson*, 753 F.2d 754, 764 (9th Cir. 1985); *PCFFA v. U.S. Bureau of Reclamation*, 138 F. Supp. 2d 1228, 1248-50 (N.D. Cal. 2001); *Greenpeace v. National Marine Fisheries Serv.*, 106 F. Supp. 2d 1066, 1073 (W.D. Wash. 2000). These procedures are to be followed scrupulously:

> [T]he strict substantive provisions of the ESA justify *more* stringent enforcement of its procedural requirements, because the procedural requirements are designed to ensure compliance with the substantive provisions . . .. If a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA's substantive provisions will not result. The latter is, of course, impermissible.

Thomas, 753 F.2d at 764 (emphasis in original). NMFS must ensure these procedures are being followed and should make the public aware of the steps taken in that regard.[1]

As it evaluates the BSAI and GOA groundfish fisheries, NMFS is both "action" and "expert" agency: "NMFS's Office of Sustainable Fisheries is the 'Action' Agency and NMFS's Office of Protected Resources is the 'Expert' Agency." *Greenpeace*, 237 F. Supp. 2d. at 1185 n.2. Given that the agency is consulting with itself, there is a particular need for conscientious attention to the procedural rules. Further, responsibility for preparing the BiOp has been delegated to the regional office. Strict adherence to the procedural mandates of the ESA is the best way to ensure that the agency complies with its obligation to prevent jeopardy and adverse modification and that decisions are based on sound science.

In describing the mandatory process, the ESA makes clear that a BiOp must be a science-based document prepared by experts. To protect the integrity of that scientific process, the ESA does not contemplate public comment on draft BiOps. Where, as it did here, the agency decides to seek public input, it should use the public process to ensure that the agency has the best available science, but it cannot use the process to allow other factors to influence its conclusions. Moreover, NMFS cannot allow the public process to delay implementation of necessary protections or allow for actions that may affect the species or its habitat in the interim.

Since it reinitiated consultation, NMFS has continued to authorize the removal of millions of pounds of important prey species for Steller sea lions, including Atka mackerel, Pacific cod, and pollock pursuant to existing management measures. Much of this fishing has occurred in designated critical habitat, and the availability of prey and adequate prey was identified as one of the essential elements of critical habitat for the population. *See* 58 Fed. Reg. 45,269, 45,270-73 (Aug. 27, 1993). The Draft BiOp makes clear that those removals have continued to affect Steller sea lions and that, accordingly the agency is—and likely has been—out of compliance with this requirement for the past four years.

Accordingly, NMFS must take action to strengthen the existing protections for Steller sea lions. The ESA requires that it implement those changes before authorizing fishing that affects the population.

II. The Existing BiOp is Not Adequate.

The groundfish fisheries cannot appropriately rely on the existing BiOp or Incidental Take Statement. The most recent full BiOp was completed in 2000. It "concluded that the FMP in existence was likely to jeopardize endangered Steller sea lions and adversely modify their designated critical habitat." *Greenpeace*, 237 F. Supp. 2d. at 1186. It, therefore, proposed a reasonable and prudent alternative (RPA), which was subsequently amended. That Amended RPA was the subject of the 2001 BiOp. *Id.* at 1187. In 2002, the federal district court found

[1] Repeated concerns have been expressed about this process, and it has not been detailed clearly to the public. *See, e.g.*, Attachments 1-5 (our letters to Balsiger and Schwaab).

arbitrary NMFS's decision that the groundfish fisheries, as managed under the Amended RPA, are not likely to cause jeopardy or adversely modify critical habitat. Specifically, the court found

> that the 2001 BiOp's no jeopardy and no adverse modification conclusions are arbitrary and capricious because they rely on the zonal approach to management which is not rationally connected to the data presented . . .[and that] the necessary analysis of the impact of the Amended RPA on Steller sea lions, their prey, and their critical habitat was not performed.

Id. at 1199, 1204. Subsequently, the parties agreed to an entry of judgment and dismissal of the case.

In response to the court's 2002 decision, NMFS issued a Supplement to the 2001 BiOp in 2003. That Supplement also concluded that the groundfish fisheries, as managed under the Amended RPA, are not likely to cause jeopardy or adversely modify critical habitat. *See* 2003 Supplement at 58.

When it reinitiated consultation, NMFS recognized that the existing 2001 BiOp and 2003 Supplement do not reflect current information and need to be updated. NMFS requested reinitiation to address "new information that has developed since the previous consultations." Reinitiation Letter at 1-2. The biological assessment submitted with the reinitiation of consultation recognizes that there have been "numerous project level changes" in the action and that those changes need to be analyzed in a comprehensive biological opinion. *See* NMFS Alaska Region, Biological Assessment of the Alaska Groundfish Fisheries and NMFS Managed Endangered Species Act Listed Marine Mammals and Sea Turtles at *vi*, 5, 79-82 ("Biological Assessment"). Further, a report submitted to the Council when it was considering whether to recommend requesting reinitation of consultation noted that "[s]ince the FMP BiOp, new information has become available related to the causes of the current decline and its possible relationship to commercial fisheries. The most notable change is to the perspective on which areas around a rookery or haulout are most important." Bill Wilson, Considerations Relevant to the Process of Reinitiating Formal Section 7 Consultation on the Groundfish Fisheries of the North Pacific for Species Listed Under the Endangered Species Act at 1-3, 6 (Oct. 2005); *see also id.* at 7 (noting that, since the last consultation, there have been many changes to fish stocks, new research, changes to the process used to set catch levels, new data on sea lion population structure and dynamics, and other changes).

Further, since the 2003 Supplement was completed, there has been significant new research regarding sea lions and groundfish stocks. The Council has compiled some of this new research in a 366-page report. *See* T.R. Louglin & J.V. Tagart on behalf of C. Oliver, E.D., N.P.F.M.C., Compendium of Steller Sea Lion Related Research, 2000-2006, Final Report (May 15, 2006). NMFS also completed a Recovery Plan for Steller sea lions in 2008. *See* Recovery Plan; *see also* Biological Assessment at 153 (noting that, at the time the Biological Assessment was completed, the most recent information available was in the draft Recovery Plan).

In addition to the new research, the updated information about the population of Steller sea lions renders reliance on the existing BiOp impossible. As it completed the 2001 BiOp, NMFS

believed that sea lion populations across most of Alaska, including most parts of western Alaska, were increasing. *See* NMFS, Endangered Species Act - Section 7 Consultation Biological Opinion and Incidental Take Statement at Intro 3-4 (October 2001) ("2001 BiOp). Overall, populations were still down, but in 2000, for the first time since 1970, sea lion populations began to increase. *See id.* In the 2008 Recovery Plan NMFS recognized that the increase was a short term trend and the overall population trend now is either declining or stable. *See* Recovery Plan at V-5. This trend is borne out by the current status of the population as presented in the Draft BiOp. Thus, the status of the population is quite different from what NMFS believed it to be at the time the existing BiOp was completed, which calls into question the 2001 conclusion that the RPA identified was not likely to jeopardize Steller sea lions or adversely affect their critical habitat. *See* 2003 Supplement at 58.

As discussed below, there is also significant new information about the status of pollock, an important prey species for sea lions. The 2003 Supplement notes that harvest of pollock, particularly in critical habitat areas, has increased, *see* 2003 Supplement at 24, but it does not recognize any decline in biomass of pollock. In setting catch allocations for 2010 and 2011, NMFS acknowledged "that there are legitimate concerns over the Bering Sea pollock stock." 75 Fed. Reg. 11,778, 11,779 (Mar. 12, 2010), and other reports show the stock is at its lowest level in three decades. *See* J.N. Ianneli, et al., Assessment of the Walleye Pollock Stock in the Eastern Bering Sea. This information also likely makes reliance on the 2001 BiOp impossible.

In addition, the 2003 Supplement did not remedy the deficiencies in the 2001 BiOp. It relies on substantially the same "zonal approach" to protection measures rejected by the court and does not address the principal problem, which is that the data shows that "the 3-10 nm zone and the 10-20 nm zone are of more or less equal foraging importance for the most critical population segment." *See Greenpeace*, 237 F. Supp. 2d at 1198; *see also id.* ("NMFS cannot rationally rely on the difference in the ranking of the zones in developing the Amended RPA, which allowed fishing in portions of the 10-20 nm zone but continued to prohibit fishing in the 3-10 nm zone.").

Nor does the 2003 Supplement adequately evaluate whether the Amended RPA is likely to prevent jeopardy and adverse modification. It does compare two years of data about fishing effort and removals in critical habitat, but it also includes references to economic concerns that do not in any way speak to jeopardy or adverse modification and does not explain why increases in fishing effort in critical habitat from 10-20 nm will not cause jeopardy or adverse modification. *See, e.g.*, 2003 Supplement at 37 ("Given the very narrow shelf in the AI, closures out to 20 nm would completely close the fishery."), 41 ("If this area were closed (such as under the injunction in 2000) the fishery would be so severely restricted that much of the TAC would go unharvested . . . ."), 53-57.

Further, NMFS and the fishing industry cannot rely on the analyses undertaken since 2003 for individual amendments to the FMP. *See Pac. Rivers Council v. Thomas*, 30 F.3d 1051, 1056 n.12 (9th Cir. 1994) (rejecting the argument that "reinitiation of consultation would be superfluous and unnecessary because it is in consultation regarding the proposed amendments currently under consideration" and holding that "consultation on the entirety of both [plans] is required, not just an amendment to the [plans]"); *see also Silver v. Babbitt*, 924 F. Supp. 976

(agency cannot go forward with timber sales during consultation even if there have been consultations on the individual sales).

Thus, if this consultation process is not completed and changes implemented, the groundfish fisheries will continue to be out of compliance with the ESA. *Cf. Hawaii Longline Ass'n v. National Marine Fisheries Serv.*, 288 F. Supp. 2d 7, 9-10 (D.D.C. 2003) ("The absence of a valid biological opinion led to a peculiar result: The Fishery, while technically not subject to the regulations that it had successfully moved this Court to invalidate, did not enjoy the benefit of the Incidental Take Statement ("ITS") that accompanies a valid biological opinion. An ITS can be analogized to a permit; in this case, an ITS literally permits the Fishery to take (harm, kill, or harass) listed turtles without violating Section 9 of the ESA. . . . Therefore, although Plaintiff prevailed in its initial efforts to set aside the regulations, without the vacated biological opinion's ITS, members of the Fishery cannot drop a single hook out of fear that it may lead to civil or criminal sanctions-even imprisonment-under the ESA.").

III. NMFS Must Use the Best Available Science, Including the Recovery Criteria

The ESA is clear that, in making these determinations, NMFS must use the best available science. 16 U.S.C. § 1536(a)(2). "Section 7 biologists should seek out available information from credible sources such as listing packages, recovery plans, active recovery teams, species experts, State/tribal wildlife and plant experts, universities, peer-reviewed journals and State Heritage programs." U.S. Fish & Wildlife Serv. and NMFS, Consultation Handbook at 1-7 (March 1998) ("ESA Handbook"). That obligation, however, does not mean that action to protect a species can be delayed in the absence of scientific certainty. Indeed, the ESA provision is not intended to stop action because of uncertainty, it is intended to force the agencies to develop the necessary information. *See Vill. of False Pass v. Watt*, 565 F. Supp. 1123 (D. Alaska 1983). NMFS must make a judgment based on the best information available. *See, e.g., Greenpeace*, 55 F. Supp. 2d at 1261-62; *Pac. Coast Fed'n*, 426 F.3d at 1094-95; c*f. National Ass'n of Home Builders v. Norton*, 340 F.3d 835, 844 (9th Cir. 2003) (upholding NMFS's determination that pygmy owls were a distinct population segment despite "extremely weak" evidence); *Kern County Farm Bureau v. Allen*, 450 F.3d 1072, 1080-81 (9th Cir. 2006).

In the event that missing information exists, "[t]he Services are then expected to provide the benefit of the doubt to the species concerned with respect to such gaps in the information base." ESA Handbook at 1-7 (citing H.R. Conf. Rep. No. 697, 96th Cong., 2nd Sess. 12 (1979)); *see also Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 422 F. Supp. 2d 1115, 1128 (N.D. Cal. 2006) (to the extent there is doubt, the ESA requires the agency to tip the balance in favor of the species); *Greenpeace*, 55 F. Supp. 2d at 1261-62; *Rock Creek Alliance v. U.S. Fish & Wildlife Serv.*, 390 F. Supp. 2d 993, 1008 (D. Mont. 2005).

NMFS's obligation to prevent jeopardy and adverse modification includes not just ensuring survival of the species but also allowing for recovery—an action can cause jeopardy or adverse modification when it does not allow for the recovery of the listed species. *See Gifford Pinchot Task Force v. U.S. Fish and Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004) ("Congress said that 'destruction or adverse modification' could occur when sufficient critical habitat is lost so as to threaten a species' recovery even if there remains sufficient critical habitat for the species'

survival."); *National Wildlife Federation v. National Marine Fisheries Serv.*, 481 F.3d 1224, 1238 (9th Cir. 2007) ("The only reasonable interpretation of the jeopardy regulation requires NMFS to consider recovery impacts as well as survival."). Recovery means an "improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act." 50 C.F.R. § 402.02; *see also* Recovery Plan for the Steller Sea Lion V-1, available at http://www.fakr.noaa.gov/protectedresources/ stellers/recovery.htm (hereinafter "Recovery Plan") ("[R]ecovery and conserve both mean to bring a species to the point at which it no longer needs the protection of the ESA, because the species is no longer in danger of extinction throughout all or a significant portion of its range.").

In the 2008 Recovery Plan, NMFS establishes very clear demographic criteria for recovery of the western population of Steller sea lions:

> The western DPS of Steller sea lion will be considered for removal from the List when the likelihood of its becoming endangered in the foreseeable future has been eliminated by achieving the following biological criteria:
>
> - The population for the U.S. region of this DPS has increased (statistically significant) for 30 years (at an average annual growth rate of 3%), based on counts of non-pups (i.e., juveniles and adults). Based on an estimated population size of about 42,500 animals in 2000, this would represent approximately 103,000 animals in 2030.
> - The trends in non-pups in at least 5 of the 7 sub-regions are stable or increasing, consistent with the trend observed under criterion #1. The population trend in any two adjacent sub-regions can not be declining significantly. The population trend in any sub-region can not have declined by more than 50%.

Recovery Plan at V-21. These criteria must be considered as the agency determines whether its actions are allowing for recovery of the species. *See, e.g., Grand Canyon Trust v. U.S. Bureau of Reclamation*, 2010 WL 2643537 at *10 (D. Ariz. June 29, 2010); *see also Ctr. for Native Ecosystems v. Cables*, 509 F.3d 1310, 1316, 1322 (10th Cir. 2007) (discussing use of recovery plan in consultation process). Further, the agency must ensure that "any reasonable and prudent measures developed through the consultation process are consistent with recovery plan goals." ESA Handbook at 2-2. At this time, those criteria represent the best available science about the changes in the population that are necessary to ensure recovery.

Based on the information in the Draft BiOp, the best available science shows that sea lions are not recovering and that fishing likely is contributing to the decline and failure to recover. Accordingly, the agency must stop or modify the activity.

IV. NMFS Must Implement the Necessary Changes.

As it considers the changes to management, NMFS must bear in mind that its obligation encompasses conserving "the ecosystems upon which endangered species and threatened species depend." 16 U.S.C. § 1531(b). "Lest there be any ambiguity as to the meaning of this statutory directive, the Act specifically defined 'conserve' as meaning '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.'" *Tennessee Valley Auth.*, 437 U.S. at 180 (quoting 16 U.S.C. § 1532(2)) (emphasis in original). "This subsection requires the Secretary and the heads of all other Federal departments and agencies to use their authorities in order to carry out programs for the protection of endangered species, and it further requires that those agencies take the necessary action that will not jeopardize the continuing existence of endangered species or result in the destruction of critical habitat of those species." *Id.* at 182-83 (quoting H.R.Rep.No.93-412, p. 14 (1973) (emphasis in original)). The agency, therefore, has broad authority to implement management measures designed to move toward protection of the marine ecosystem as a whole.

NMFS has stated that it will bring the final BiOp and RPA to the Council at its October meeting. At that time, the Council will have the opportunity to recommend implementation of the RPA in which case the agency could proceed to rulemaking using the "normal" process outlined in § 303(c) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). *See* 18 U.S.C. § 1853(c) (stating that a council may submit proposed regulations it "deems necessary or appropriate").

Should the Council fail to take that action, NMFS has authority under MSA § 305(d) to implement the necessary changes because they are contemplated in the BSAI Fishery Management Plan (FMP). *See* 16 U.S.C. § 1955(d) ("The Secretary shall have general responsibility to carry out any fishery management plan or amendment approved or prepared by him, in accordance with the provisions of this Act."). The BSAI FMP "authorizes the use of either temporal or spatial restrictions for marine mammal conservation." Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area 25(2009). More specifically, it states that "[r]egulations may be necessary to prevent interactions between commercial fishing operations and marine mammal populations when information indicates that such interactions may adversely affect marine mammals, resulting in reduced abundance and/or reduced use of areas important to marine mammals. . . . Examples of temporal measures are seasonal apportionments of TAC specifications. Examples of spatial measures could be closures around areas important to marine mammals." *Id.* at 37.[2]

V. The Best Scientific Evidence Shows that the Western Population of Steller Sea Lions is Not Recovering

As detailed above, the 2008 Recovery Plan establishes very clear demographic criteria for recovery of the western population of Steller sea lions: to be considered for delisting, the population must have "increased (statistically significant) for 30 years (at an average annual growth rate of 3%), based on counts of non-pups (i.e., juveniles and adults)." Recovery Plan at V-21. While there are some encouraging signs over some parts of the western population's

[2] Further, as has been made clear in letters submitted by Oceana and others, NMFS also could exercise its authority under MSA § 305(c) to take emergency action to implement the necessary changes. *See* Attachments 1-5 (citing 18 U.S.C. § 1855(c) & 62 Fed. Reg. 44421 (Aug. 21, 1997)).

range, it is equally clear that the population is not meeting those criteria. NMFS cannot downplay this risk and should not use the positive information to avoid necessary protections.

In particular, while the western population appears to have grown overall from 2000-2004, that growth has not continued, and NMFS cannot base decisions or statements about recovery on that short period of growth, without accounting fully for the fact that it has not continued. Further, the western population, overall, is characterized by low birth rates, and increases in the population may be due to increased juvenile survivorship, which, combined with low birth rates, will not lead to sustained growth. The significant declines occurring in the Western Aleutian Islands and Central GOA are also indicative of a population at risk. NMFS must fairly account for these details and cannot represent to the public or decision-makers that the western population is recovering when, in fact, it clearly is not.

A. NMFS wrongly equates short-term growth from 2000-2004 with recovery.

The 2008 Recovery Plan was the product of a lengthy process involving the Council, industry, agency, and public. It includes the most complete analysis of information about the western population of Steller sea lions and the threats facing it. That analysis and process resulted in the specific recovery criteria outlined above. The Recovery Plan states that the criteria are informed by "the need to consider genetics, demographics, population redundancy, and threats (as identified by the listing factors)." Recovery Plan at V-2; *see also* Draft BiOp at 334 (same). The Plan goes on to state:

> Viable populations have sufficient numbers of individuals to counter the effects of deleterious gene mutations as a result of inbreeding, and to counter the effects of deaths exceeding births and recruitment failure for periods of time. Thus, the conservation biology principle of redundancy is satisfied by the required multiple genetically and demographically viable, self-sustaining populations. Furthermore, the principle of resiliency is satisfied with sufficiently large populations to persist through normal population variations, as well as through unexpected catastrophic events.

Id. The criteria are intended, therefore, to address "uncertainty about the threats and their impacts" and the possibility that "the population will retain the potential of 16% annual decline rates as observed in the late 1980s." *Id.* at V-16.[3] To address those uncertainties and the

[3] More specifically,

> there is the possibility that the population could decline at 16% per year, as it did from 1985-89, at some point in the future; this is a very important consideration when determining criteria. Certainly other species throughout the country are endangered and are at extremely low numbers (e.g. Northern Right Whale). Steller sea lions are not in this category; although their numbers are relatively high (compared to species such as Colorado Pikeminnow, Florida panther, wolves) their risk of extinction is still high due to long periods of decline and a lack of understanding of the threats. If NMFS had waited to list sea lions until

possibility of substantial decline, all of the criteria must be met before the population will be considered "recovered."

While there are some moderately encouraging signs, it is abundantly clear that the population is not meeting those criteria. As the draft BiOp notes, since the implementation of the fishery mitigation measures associated with the 2001 RPA, the western population of Steller sea lions has shown modest overall positive population growth for the first time in 40 years. *See* Draft BiOp at 186. Though this rate of increase is not statistically significant, it does represent a remarkable improvement over the 4% per year population decline in the 1990s, and it coincides with the addition of fishery management measures aimed at reducing fishing impacts on sea lion prey in critical habitat.

Nonetheless, the stabilization does not meet the recovery criteria. The overall rate of increase is not statistically significant and certainly is not close to 3%. *See id.*; *id.* at Fig. 5.1. Further, this trend data do not alone indicate a recovering population, and are certainly not indicative of long-term recovery. Counts of adult and juveniles at trend sites really only increased from 2000-2004, and appear static from 2004 to 2008. *See id.* at 333 ("Demographic results (and modeling [DeMaster 2009, Johnson 2010, Ianelli 2010]), suggest that the western DPS in the U.S. increased at an average rate of about 3% per year from 2000 to 2004 and has been stable overall from 2004 to 2008, for an average of about 1.5% per year between 2000 and 2008 (Tables 3.1b and 3.1c)."). This short pulse of increased counts from 2000-2004 is not indicative of sustained recovery.

There also are continued declines in the Western and Central Aleutian Islands. The far western subregion has declined more than 40%, and the adjacent region has declined as well. *See id.* at 338. The status of the Pribilof Islands breeding population of SSL has been ignored almost completely, but the best available information indicates that the single remaining rookery off St. Paul Island is near extinction as a rookery.

For those reasons, the Draft BiOp appropriately concludes that the population "is not meeting the criteria of a recovering population" as determined in the Final Revised Steller Sea Lion Recovery Plan." *Id.* at 367. Nonetheless, it also includes a series of misleading statements suggesting that the population may be "recovering." *See, e.g.*, *id.* at 270 (stating that, since it reached its low in 2000, "the population appears to be recovering"). Such statements are not supported by the facts and, at best, are misleading.

> they reached 1,000 animals in the western DPS, the prospects for recovery may have been virtually zero. If in 1997, NMFS had been able to adequately describe the threats and show that they had been removed, NMFS might have avoided uplisting the western DPS to endangered. The combination of knowledge of the threats, how they are acting, assurance that the threats have been ameliorated, and the past trajectories of the population have greater influence on likelihood of extinction and listing decisions than the minimum estimate of current abundance.

Recovery Plan at V-15.

Similarly, the draft BiOp includes statements—found in two places—indicating that the problem is due entirely to declines in the Western Aleutians. *See id*. at *xxv* & 338 ("If it were not for this one sub-region, it could be argued that the western DPS of Steller sea lions were moving toward recovery . . . ."). Such statements are not supported by the noted declines in the Central Aleutians or the stagnant productivity in the Central Gulf of Alaska. *See id.* at 338 & Tbl. 3.1b. Further, NMFS has clearly established the importance of maintaining viable sub-populations within the Western DPS rather than looking only at a general trend for the entire stock. *See id.* at *xxi*. Further, other trends, particularly the reproductive success of adult females, strongly indicate that the population cannot achieve the recovery criteria without major improvements in pup production. *See* Draft BiOp at Fig. 3.9.[4]

Further, the draft BiOp includes erroneous predictions that could cause the reader to misinterpret the current status of the population, and hence the urgency of the current actions. For example unless there is an analysis of the likelihood of continued and sustained trends, statements such as, "if the current rate of growth continues through 2014, it is likely that the rate of increase would be statistically significant," *id.* at 333, are entirely speculative and should be stricken. These statements also do not account for the fact that most of the population growth occurred between 2000-2004, and the current trend—from 2004-2008—runs counter to that hypothesis. *See id.* at 333 & Fig. 3.7.

Thus, while there is a compelling correlation between increasing trends in the population and expanded fishery conservation measures implemented since the late 1990s and 2000s, both subregional and overall trends indicate that the existing suite of fishery mitigation measures adopted in 2001 are not adequate.

B. A growing population based solely on improved juvenile survival is not sufficient to support a recovering population over the long-term, especially given the decreased natality rates.

The apparent stability of the Western DPS may be an artifact of the improved survival of juveniles and adults and, therefore, may end as soon as the older age classes become senescent and are not replaced. Decreasing pup to non-pup ratios at rookeries, *see* Draft BiOp at Tbl. 5.1a., are evidence that Steller sea lions of breeding age are either not able to carry pregnancies to term, or are unable to successfully rear a pup. Non-pup counts at haulouts have also decreased across most of the Western DPS, likely reflecting the reduction of successful pupping and lowered influx of the younger age classes.

An early draft BiOp was made available in Sept 2006. *See* NMFS, Endangered Species Act — Section 7 Consultation Biological Opinion, *available at* http://www.fakr.noaa.gov/ sustainablefisheries/sslmc/agency_documents/sec7consultdraft.pdf ("2006 Early Draft BiOp"). That draft noted that the recent population increases were achieved largely through increases in survivorship in spite of a decline in natality. *See id.* at 52. The document goes on to caution: "If

[4] Nor should NMFS conflate the downlisting criteria from the Recovery Plan with the changes in population needed for recovery. *See, e.g.*, Draft BiOp at 338 (stating that "overall the population is increasing and moving toward the number of animals required for downlisting"). As explained, the stabilization or slight growth in the population overall is not sufficient to indicate recovery or warrant downlisting.

these trends in vital rates continue, this is likely to yield only a temporary population increase due to the unstable age structure created." *Id.*

This unstable age structure was examined by Holmes and York (2003) and Holmes et al. (2007) who found that recent natality rates for the Western DPS were strikingly lower than in 1970s (pre-decline), survivorship of juveniles was similar, and adult survivorship was higher than in the 1970s. The current draft BiOp acknowledges and summarizes their findings:

> As previously described in Chapter 3, Holmes and York (2003) and Holmes et al. (2007) modeled the adult female population in the central GOA for the period 1976-2004. Their model indicated that birth rates in the central GOA steadily declined from 1976 to 2004. Over the same period, survivorship first dropped severely in the early 1980s, when the population collapsed, and then survivorship steadily recovered. The best model fit indicated that in 2004, the birth rate in the central GOA was 36% lower than in the 1970s, while adult and juvenile survivorship were close to or slightly above 1970s levels.

Draft BiOp at 290. *See also id.* at 109-116, 251-252, 255-257, 285, 341-342.

A more detailed examination further supports the conclusion that any further significant population gains will almost certainly have to come from increased natality. The Draft BiOp makes only passing reference to the actual comparative numbers on natality, *id.* at 341-342, and a more detailed analysis would be more appropriate given the importance of this issue. The pup/non-pup ratios indicate that the measure of female reproductive success (natality) on the two biggest rookeries in the Eastern DPS (0.85) is about twice as high as the same measure for the Central Aleutians (0.39) and other sub-areas (0.44-0.63), including the Central GOA. It is about one-third higher than for the Western DPS as a whole (0.57). *See id.* The low natality rates are even more surprising given the fact that the range of the Western DPS was the center of the population and accounted for 75% of the pup production as recently as the late 1970s-early 1980s. Today, the estimated proportion of females with pups is only a fraction of the rate observed in 1976, which is indicative of a population that is not recovering and still at risk.

The 2006 Early Draft BiOp contained a table (Table 3.29) in which a survivorship/natality matrix was projected forward to assess changes in juvenile survivorship relative to baseline (1976) necessary to achieve growth rates of 0-3%/year in the Western DPS given rates of adult survival and rates of "successful natality" (from -40% to +10% of baseline). It appears from this analysis that it will be very difficult if not impossible to achieve the Recovery Plan's recovery goal without significant improvements in female reproductive rates.

This table was omitted from the 2010 Draft BiOp. It should be updated and integrated into the analysis and used to evaluate the likelihood that the Western DPS can achieve the Recovery Plan's recovery criteria, given current reproductive and survival rates.

Natural populations evolve with stabilizing mechanisms to resist extreme fluctuations and enhance stability of the population. Such a strategy is important to the continued existence of a species since it avoids extreme population growth which may oversaturate the environment or

population decline to low densities that increases the risk of extinction through chance events. *See* Attachment 10 (Hutchinson 1954). Stabilizing mechanisms for Steller sea lions include long-life spans, overlapping generations, large body size, maternal investment in offspring, and relatively low fecundity. A life stage simulation analysis could prove useful for measuring effects of variation and uncertainty of vital rates on population growth and to focus conservation measures on those vital rates that are most sensitive. *See* Attachment 16 (Wisdom et al. 2000). However, even without a life state simulation analysis, reduced natality appears to be the chronic factor preventing recovery of the Western DPS. This lowered Steller sea lion fecundity will result in a population that is heavily skewed towards the older (reproductively senescent) age classes and increase the risk of extinction. The currently decreasing ratios of pups to non-pups indicate destabilization is already occurring. The present reduction in natality must be addressed.

C. It is important to maintain viable sub-populations within the Western DPS

According to NMFS, the terms "recovery and conserve both mean to bring a species to the point at which it no longer needs the protection of the ESA, because the species is no longer in danger of extinction throughout all or a significant portion of its range." Recovery Plan at V-1. The agency further "avoid[s] the pitfalls of a purely quantitative approach by instead viewing "significant" in the context of a species' long term survival needs. . . . A significant portion of the range is that area that is important or necessary for maintaining a viable, self-sustaining, and evolving population or populations, in order for a taxon to persist into the foreseeable future." Draft BiOp at 334. As part of meeting this requirement for Steller sea lions, "[i]t is important to consider sub-population declines and recovery. . . . Because all parts of the range are currently occupied, it would be wise to maintain those populations as viable entities, with some fluctuations in population numbers expected. Because the previous decline started in one area and spread to other areas, a substantial decline of any two adjacent sub-areas would indicate an active threat that was not predicted." Recovery Plan at V-16; *see also* BiOp at 334 (reiterating that point and stating that "significant declines in the western Aleutian Islands sub-region could indicate that extinction risk may still be high unless immediately mitigated.").

It is crucial to maintain viable sub-populations, and hence population diversity, within the Western DPS. Population diversity is key to building resilience and reducing the impacts of environmental change and stochastic events. *See* Attachment 13 (Schindler et al. 2010). Diversity in the sub-populations is observed through the differing prey reliance, foraging patterns, rookery use, and age structure. Indeed, diet diversity may buffer the effects of swings in abundance of any single prey. Further, having many viable rookery sites across the Western DPS buffers against stochastic events that affect individual rookeries.

The pup counts at rookeries across the Western DPS show that pup production for the entire population is concentrated on only a few rookeries. *See* Draft BiOp at Fig. 3.10. Having pup production concentrated on fewer rookery sites increases the risk of population level effects from stochastic impacts on the densest pupping sites. Catastrophic, stochastic events, if not addressed within conservation planning, can cause extirpation and extinction. *See* Attachment 17 (Mangel 1994). Individual rookeries may be at risk from environmental change, oil spills, geological events (some rookeries are located on active volcanoes), or other catastrophes, and the only way

to buffer against that risk is to have many viable rookeries across a range of habitats. Recovery and persistence of the population must be robust to avoid catastrophe.

D. The distinction between eastern and western distinct population segments is based on solid evidence of underlying population structure and dynamics.

In 1997, NMFS reclassified Steller sea lions as two distinct population segments based on genetic studies and phylogeographical analyses from across their range. *See* 62 Fed. Reg. 24345; Recovery Plan at I-3. Frequent movement has been observed across the stock boundary at Cape Suckling (144° west longitude), but strong female philopatry and other observational data and life history information support the findings of mitochondrial DNA studies indicating a distinct break in the distribution of haplotypes between western population (Russia to the eastern Gulf of Alaska) and eastern population (Southeast Alaska to Oregon), i.e., restricted gene flow between the two populations. *See* Recovery Plan at I-4, Fig. I-1. The genetics information suggests that eastern and western populations have been isolated for a very long time—so long, in fact, that they may have inhabited different glacial refugia during past ice ages. Other genetics research suggests that that there may be additional subpopulation structure within the overall two-stock delineation. For instance, the Asian portion of the western stock may merit consideration as a separate, third stock, although the degree of differentiation between the Asian and U.S. portions of the western stock is not as great as between Western and Eastern DPSs. *See* Recovery Plan at I-4. O'Crowe et al. (2006) found evidence of differentiation among subpopulations within the western stock to the east and west of Samalga Pass, in the Aleutian Islands. *Id.* at I-5. In all major genetics studies, researchers found a clear phylogentic break between populations of the eastern and western stocks of Steller sea lions.

Therefore the paragraphs in the Draft BiOp that downplay the extinction risk to the Western DPS based on population modeling of Boyd (2010) create the impression of a scientific controversy or doubt where none exists. *See* Draft BiOp at 93. Boyd reached his conclusion that Steller sea lions are not at risk of extinction by treating the range-wide population as a single breeding stock from California to Asia, a premise which has been rejected. Recent evidence of stock mixing at newly formed rookeries in the Eastern DPS near the stock boundary line (144° west longitude) does not change the underlying population structure and does not support Boyd's premise of a single stock.

VI. The Continued Decline and Failure to Recover is Likely Caused by Nutritional Stress

In the 2000 BiOp, NMFS concluded that the major groundfish fisheries are likely to jeopardize western Alaska Steller sea lion survival and adversely modify sea lion critical habitat based on fishery competition for food. *See* Draft BiOp at 354 ("This competitive interaction, occurring at the global, regional, and local scales has been shown to jeopardize the continued existence of Steller sea lions by interfering with their foraging opportunities for the three major prey species resulting in reduced reproduction and survival."). This conclusion that commercial fishing likely causes nutritional stress to Steller sea lions was reiterated in revisions to that BiOp in 2001 and 2003 and again in the 2008 Recovery Plan. *See id.* at 4. There is no evidence to suggest a different conclusion now and, if anything, the new information confirms the existence of

nutritional stress. The response of the Steller sea lion Western DPS is entirely consistent with the arrival of a new predator—in this case, large-scale commercial fisheries—that is not limited by the resource base.

Further, as explained above, reduced natality appears to be the chronic factor preventing recovery of the Western DPS. *See* BiOp at 340 and Fig. 3.16. Low fecundity is most likely an indicator of chronic, sub-lethal nutritional stress. A 12-month reproductive cycle, and a 1-3 year lactation period place unusually high energetic demands on Steller sea lion females. The pattern of currently low natality is similar to patterns seen in the 1980s. *Id.* at 128. During that time pregnancies carried into late gestation fell by half and female Steller sea lions began to skip reproductive years. These patterns were consistent with nutritional stress. As the demands of gestation and lactation may double or even quadruple the mean daily caloric requirements of female sea lions, a female may abort a fetus (late-term) or abandon a dependent pup in order to maintain healthy body composition, resulting in the observed currently lowered natality rates. Further, there is a significant relationship between declining natality and the rise of the groundfish fisheries for Steller sea lion prey since the 1960s.

Thus, the conclusion that the FMPs, as implemented, jeopardize the survival and recovery of the Western DPS of Steller sea lions and adversely modify critical habitat is sound and consistent with the overwhelming weight of evidence.

A. The exposure analysis should be improved.

To determine "which fisheries (if any) overlap substantially with important Steller sea lion prey species," NMFS used an "exposure analysis" described as "a step-wise approach to determining how many Steller sea lions will be exposed to potentially adverse fishing effects." Draft BiOp at 195. The approach, as described in the Draft BiOp, is rational, but it could improve its assessment of the relative impacts of the different gear sectors.

For example, while all gear sectors fishing for Pacific cod contribute overall to the reduction of biomass over the course of a year, the Pacific cod trawl fishery catches most of the allowed quota in a short time period. *See* Draft BiOp at 202 (showing that the trawl sector catches an average of 88% of the Pacific cod caught in the Aleutians, with 70% of this catch coming from critical habitat). The exposure analysis notes that "[d]espite various changes in a complex management structure . . ., very little difference between temporal harvests before and after implementation of the Steller sea lion protection measures can be seen when looking at this fishery on a quarterly basis." *Id.* at 201. This fact indicates that the trawl fishery, which targets spawning aggregations of cod and removes a large amount of biomass in a short period of time, could be having effects that are not adequately accounted for in the exposure analysis. Additionally, the management regime for the Pacific cod trawl sector displaces other gear types seasonally and spatially to make allowances for the trawl sector to target the spawning aggregations, thereby potentially increasing the relative impacts of other gear types. The exposure analysis should consider these and other types of sector-specific impacts.

B. A recovering population will need more prey.

The Aleutian Islands Fishery Ecosystem Plan shows that Atka mackerel are already fully consumed within the ecosystem, with the 1994 Steller sea lion population consuming 24% of the Atka mackerel production. *See* AIFEP at 34. Figure 3-17 shows the consumers of this production in the ecosystem:

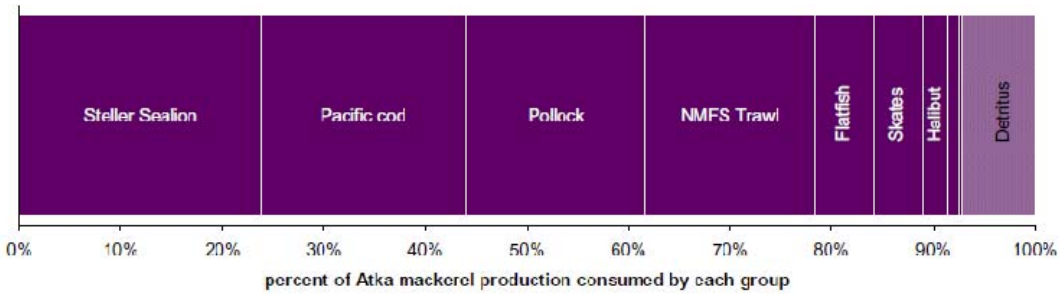

Figure 3-17 Atka mackerel food web relationships

Id. The 1998 Steller sea lion population in the Aleutians was estimated to consume 104,000 ± 20,600 mt of Atka mackerel annually. According to the Draft BiOp, that population has increased, albeit slightly, since 1998. *See* Draft BiOp at 186 & Fig. 3.7. That larger population requires more Atka mackerel, and an even larger population (i.e. one that was on its way to recovery) will need even more. At this time, however, there is no allowance to make this prey available to Steller sea lions as part of setting catch levels. The stock-assessment models for Atka mackerel (as do many single species fishery stock assessments) assume the static natural mortality value of 0.3. *See id.* at 35. All consumers—other than the fisheries—are expected to survive on that percent of the population. In addition, the model for the Atka mackerel population itself is dependent on the period when the Steller sea lion population (and hence the predation levels by sea lions on Atka mackerel) declined dramatically. Together, these factors support the conclusion that competition for prey is likely contributing to the decline and failure to recover.

Further, the rise of the Atka mackerel fishery in the late 1970s was an immediate and substantial new source of mortality. Models can help frame the likely responses of the marine ecosystem when changes in mortality are introduced. The AIFEP showed that a 10% increase in Atka mackerel mortality resulting from management of fisheries could have wide ecosystem effects across a number of species, including potential negative impacts to Steller sea lions. *See* AIFEP at 36. The Atka mackerel fishery currently contributes an estimated 20% of Atka mackerel mortality. It is reasonable to assume, therefore, that the increase in Atka mackerel mortality associated with the rise of the fishery contributed to the decline of Steller sea lions and the continued failure to recover.

Further, there is evidence of significant local depletion of important prey species. In the late 1980s through the mid-1990s, for example, the stock of pollock in the Aleutians was quickly depleted due to unsustainable harvests. *See* BSAI SAFE at 214, *available at* http://www.afsc.noaa.gov/refm/docs/2009/AIpollock.pdf. Similarly, the stock of Atka mackerel

in the Gulf of Alaska was overharvested in the late 1970s. *See* GOA SAFE at 1166, Tbl 16.1, *available at* http://www.afsc.noaa.gov/refm/docs/2009/GOAatka.pdf. These populations, therefore, are no longer available as prey for the western DPS.

C. Other sources of mortality do not alleviate NMFS of the responsibility to address nutritional stress.

The Draft BiOp lists a number of "factors [that] have acted or continue to act individually or together to cause significant declines or otherwise limit the rate of recovery in one or more of the sub-regions that comprise the distribution of this DPS." BiOp at 342-43. The existence of these other factors—whether or not they are contributing to the decline or failure to recover—does not alleviate NMFS of the responsibility to ensure that fisheries are not likely to cause jeopardy or adverse modification. Other stresses on the population may result in cumulative impacts that highlight NMFS's obligation to ensure sufficient prey for sea lions. As explained above, there is significant evidence to support the conclusion that fisheries are causing nutritional stress and that, therefore, the groundfish fisheries, as currently managed, do not comply with the ESA.

Nonetheless, the Draft BiOp devotes significant attention and speculation to killer whale predation that, as a source of natural mortality, is not causing a risk of extinction to the Western DPS. The natural relationship of predators to prey is a tenant of ecology. Predator—prey relationships are inherently stable, even during oscillations in their populations; it is costly for predators to reduce their prey to levels where stochastic events could cause extinction of their prey.

Further, the draft BiOp recognizes that "observations of predation rates, and observations of prey types indicate that predation by killer whales is within the expected natural mortality level for Steller sea lions." Draft BiOp at 335-36. It then speculates, however, that "in some areas (e.g., central Aleutians), effects of killer whale predation could be amplified," even though "the data to evaluate this hypothesis are unavailable." *Id.* at 336. This sort of unsupported speculation should not be included in the final BiOp.

As described above, in addition to the sharp declines in the Western Aleutians, the population as a whole is experiencing very low natality. Killer whale predation is not responsible for this depressed natality. In the 2003 Supplement, NMFS stated that "Predation is not a likely cause as the scientific basis for the lower fecundity rates are based on pup counts on rookeries before the pups take to the water, and therefore are not yet subject to predation by killer whales." 2003 Supplement at II-12.

VII. The need for increased protection

The effects of commercial fishing appear to have been reduced to some extent as evidenced by the slowing of the population decline of Steller sea lions in regions with conservation regulations in place. However, the groundfish fisheries, as currently managed, still allow substantial harvest for important prey species including pollock, cod, and Atka mackerel throughout the range of the Western DPS, including areas in which it is declining. Catch levels for these species are determined on the basis of single-species guidelines in the federal fisheries law that do not

consider the food requirements of other consumers in the ecosystem or the cumulative effects on Steller sea lion carrying capacity of reducing target fish stocks 60%, on average, by design. Further, a substantial amount of the harvest takes place within Steller sea lion critical habitat. *See* Draft BiOp at 345 & Figs. IV-2.1 to 2.10.

These removals coincide with depressed natality, continued declines in the Western Aleutians, and an overall failure to recover. For all these reasons, the existing fishery mitigation measures are not adequate to comply with the ESA or to achieve the downlisting and delisting goals outlined in the Recovery Plan. Accordingly, the draft BiOp proposes an RPA that would increase protections. This RPA correctly emphasizes the urgency of halting and reversing the decline in the central and western Aleutian Islands, but it fails to address the lack of recovery in the central GOA and the cumulative and "global-scale" effects of fishing down the stock biomass of major sea lion prey, by design, under the current groundfish FMPs.

A. Management changes must address local declines in the Western Aleutian Islands and Central Gulf

As explained above, there is a clear, continuing, significant decline of the Steller sea lion population in the Western Aleutian Islands. The Draft BiOp shows a clear division in pup protection at 178ºW. *See* Draft BiOp at 82 and Fig. 3.10. West of that line, pup counts have declined precipitously since 2005. With a notable exception in the Central Gulf, pup production generally has increased east of that line. *Id.* The division at 178ºW coincides with a change in management approach that allows fishing for prey species, including Atka mackerel in critical habitat. *See* BiOp at 63, 294. The RPA implemented in 2001 allows the Atka mackerel fleet to catch up to 60% of its quota in critical habitat and did not reduce the overall biomass the fishery could remove. By contrast, critical habitat is closed to Atka mackerel fishing east of that line.

Further, pup counts in the central Gulf of Alaska have not increased significantly since 1998. *Id.* at Tbl 3.2. Rookery counts in the central Gulf are possibly stable or declining, and pup counts are declining rapidly for at least one major rookery in each area. *Id.* at Fig. 5.1. These declines correspond to substantial fisheries in critical habitat for important prey species.

In addition, the management changes proposed by the St. George Traditional Council are necessary because the area currently closed to trawling (0-3 nm) around the Dalnoi Point haulout is a small portion of the critical habitat (0-20 nm) for this area. The small size of the current no-trawl area may have already caused localized depletion of prey resources that are important to Steller sea lions during the winter.

B. Changes in management must also address the low natality across the entire Western DPS.

Management changes must also address the overall decline in natality likely caused by removals of important prey. The Steller sea lion decline did not start before the advent of commercial fisheries; there was a sizable Pacific cod fishery in the Aleutians in the 1920s, peaking at a harvest of 12,000 to 15,000 mt. AIEFP at 171. The effects of this past harvest cannot be ignored. Neither can the overharvest of pollock in the Aleutians in the 1990s, the overharvest of

pollock in the Bogoslof region, or the disappearance of Atka mackerel from the Gulf of Alaska following high harvests in the 1970s be ignored. *See supra* pp. 19-20.

Recovery of the population will be dependent on addressing the effects of past and present commercial fishery removals of Steller sea lion prey overall. For 2010, pollock in the Gulf of Alaska is projected to be fished down to 30% of unfished female spawning biomass, GOA Pacific cod down to 40% of unfished biomass, Aleutian Atka mackerel to 47% unfished biomass, Bering Sea pollock to 22% of unfished biomass, and Bering Sea/Aleutian Islands Pacific cod to 34% of unfished biomass. *See* Draft BiOp at Tbl 5.4. This decrease in overall prey abundance for Steller sea lions must be addressed.

Nonetheless, the RPA determined by NMFS focused narrowly on the most immediate threats to the Steller sea lions in the Western and Central Aleutians. The RPA should be expanded to address the lingering impacts from past overfishing of Aleutian pollock, and Bogoslof pollock. The RPA should also include management measures to increase the biomass of pollock and hence expand the range of the pollock stock and the size of schools. These measures are particularly important if the pollock stock is moving northward, further from Steller sea lion foraging areas. A larger biomass of pollock is important to retain the overlap of the stocks with Steller sea lion foraging areas. In addition, the continued decline of some rookeries and low trend counts in the Central Gulf of Alaska indicate a need for RPA measures to address pollock harvests near and within critical habitat in this region.

Further, the changes in management must address the effects of localized depletion of prey, which may be exacerbated by the current low biomass of pollock and the continued status-quo authorization of pollock fisheries. Localized depletion of pollock occurs during the fishery in the Bering Sea, and it is likely underestimated. *See* Attachment 6 (Battaile and Quinn 2006). This depletion may result from fishing that alters the distribution of pollock schools and density of schools. *See* Attachments 14 & 15 (Shen et al. 2009, Shen et al. 2008). Additionally, areas with fewer fish at the outset are more susceptible to depletion, even with proportionally smaller amounts of effort and total catch. *See* Attachment 6 (Battaile and Quinn 2006).

It is likewise important to consider the total biomass and stock size of prey species when evaluating effectiveness of management measures in conserving the prey field for Steller sea lions. Some studies have found that a higher biomass of fish results in an expanded range and larger and denser schools. A study of Bering Sea pollock noted higher biomass of pollock resulted in larger schools or a greater area occupied by the stock, but not necessarily denser schools. *See* Attachment 14 (Shen et al. 2009).

It is our understanding that during this public comment process, NMFS may consider public comments by the North Pacific Fishery Management Council, which has requested consideration of an alternative RPA that would weaken the management changes proposed in the draft BiOp. This proposed RPA does not contain the minimum measures necessary to prevent jeopardy and adverse habitat modification.

VIII. Conclusion: Movement Toward Sustainable Fisheries

As explained in detail above, the best available science clearly supports NMFS's conclusions that the groundfish fisheries, as currently managed, are likely to cause jeopardy to the western population of Steller sea lions and adverse modification to their critical habitat. Further, the changes proposed in the RPA included in the Draft BiOp certainly are needed, and the agency likely must do more to comply with the ESA. Thus, NFMS cannot consider weakening the protections it has proposed and, to the contrary, should do more to address low natality across the entire western population and the impacts of the fisheries overall.

In establishing the final RPA, NMFS must bear in mind that the ESA is intended "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b)). As currently implemented, the single-species management approach in the BSAI and GOA FMPs has failed to achieve this goal. Ultimately, therefore, the RPA should move us toward a healthy marine ecosystem—one that includes sustainable fisheries and supports vibrant communities. Management changes to protect Steller sea lions and their critical habitat can help us achieve that goal.

We must move toward viable sustainable fisheries, that could include fixed gear fisheries such as longline, pots, and jigs, that can support local communities. Where tradeoffs are possible, NMFS should favor these more sustainable alternatives. The agency cannot simply weaken the proposed RPA to allow additional fishing for Steller sea lion prey, but it can consider strengthening other protections to allow these fisheries to continue and to continue to develop in a sustainable manner. For example, NMFS could strengthen protections by addressing overall harvest levels, further reducing the biomass taken from the western Aleutian Islands by the cod and Atka mackerel trawl fisheries. While it is difficult to determine the importance of the various components of the Steller sea lion diet, an approximation of the prey biomass increased through harvest restrictions multiplied by caloric values for prey (i.e. those calculated by Loggerwell and Schaufler 2005) could give NMFS a metric to evaluate small changes to the RPA designed to move toward sustainable fisheries. NMFS must also consider the inherent characteristics of the trawl fisheries (a large pulse harvest on aggregated schools), which provides few options to minimize impacts.

Ultimately, the ESA is forcing change that we have known all along is necessary. We have learned, over and over, that the large-scale removals of important Steller sea lion prey by industrial bottom trawl fisheries are not sustainable. NMFS should use this opportunity to move away from those fisheries and toward ecosystem protection and sustainable alternatives.

ADDITIONAL REFERENCES

The references listed below are not included in the Draft BiOp and should be considered as NMFS completes the consultation process. Many of them are attached to these comments.

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