

Potential Scoping Issues Identified in Litigation Briefings, Bernard et al. 2011, and Oceana letter (5-29-12) by NMFS Sustainable Fisheries (May 30, 2012)

The following documents were reviewed for issues that may be included in the scoping for the EIS.

1. THE ALEUT CORPORATION AND ALEUT ENTERPRISE, LLC'S OPENING AMICUS CURIAE BRIEF (ACAE)
2. PLAINTIFFS' JOINT MEMORANDUM IN SUPPORT OF MOTIONS FOR SUMMARY JUDGMENT State of Alaska, Freezer Longline Coalition, and Alaska Seafood Cooperative (JB)
3. MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT OF ALASKA SEAFOOD COOPERATIVE ET AL. (ASC)
4. PLAINTIFF FREEZER LONGLINE COALITION'S MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT (FLL)
5. Executive Summary from Bernard, D.R., S. J. Jeffries, G. Knapp, A.W. Trites, An Independent, Scientific Review of the Biological Opinion (2010) of the Fisheries Management Plan for the Bering Sea/Aleutian Islands Management Areas, October 8, 2011. (Bernard et al. 2011)
6. Oceana letter to NPFMC and NMFS dated 5-29-12 (Oceana)

Issues by Topic:

Environmental Justice

1. Many of the ethnic Aleuts in Adak and throughout the Aleutian Islands are low income as well as minority populations. Their communities depend heavily on the commercial fishing industry for economic opportunities, tax revenues to support social and public health programs, and economic and educational opportunities provided by the Aleut Corporation and its subsidiaries, including shareholder dividend income, community investment, and scholarship awards. All of these factors contribute to the health and welfare of the minority and low-income native Aleuts, and will be disproportionately impacted by the protection measures. (ACAE)

Social and Economic Impacts to the Aleut Entities and Native Aleut Communities

1. **Overall Impact:**
 - a. The Aleut Corporation received a large portion of the Aleutian Islands from Sand Point in the East to Attu in the West, including the communities of Attu, Atka, and Adak, through the Alaska Native Claims Settlement Act, 43 U.S.C. §§ 1601 *et seq.* All of these native Aleut communities continue to depend heavily on the groundfish fishing industry, including Pacific cod and Atka mackerel, in Management Areas 541, 542, and 543. The Interim Final Rule imposes restrictions and closures that will severely diminish opportunities to benefit from these nearby fisheries. Severe and disparate impacts on their business interests and the welfare of the local Aleut communities in the Aleutian Islands result from the protection measures. The community of Adak, which is heavily dependent on the nearby groundfish fishing industry, is especially hard hit by NMFS' action. (ACAE)
 - b. The protection measures have devastating effects on crewmembers, captains, owners, operators, and other participants in the fisheries. These impacts include up to 750 jobs lost in the region and over \$83 million annually in total lost earnings (JB).

- c. Adverse economic consequences in 2011 on the order of \$23 million for Alaska Seafood Cooperative and \$21 million for Alaska Groundfish Cooperative and its members (AGC). (page 4) (ASC)
 - d. Impacts cannot be mitigated by vessels shifting their fisheries temporally or geographically. (page 4) (ASC)
2. **Aleut Dependence on Fishing Income:** Much of Aleut Enterprise’s business relies on commercial fishing industry in Areas 541, 542, and 543. Aleut Enterprise operates a fueling facility at Adak in the central Aleutian Islands, near the border between Areas 541 and 542 that has historically served commercial fishing vessels as its primary customers. In addition, Adak Enterprise and other local businesses at Adak sell various goods and services, including lodging, to commercial fishermen, providing needed revenue to the community. Much of Aleut Enterprise’s commercial fishing fleet customer base fishes the Atka mackerel and Pacific cod fisheries in those areas, and therefore Aleut Enterprise, and consequently the Aleut Corporation, stand to lose much of their revenue as a result of the Interim Final Rule. Reduced revenues to the Aleut Corporation will negatively impact its shareholders and their communities throughout the Aleutian Islands, not just in Adak. The Aleut Entities project that they will immediately be forced to terminate three of their nine employees in Adak, eliminating the primary means of support for approximately seven residents of Adak, or approximately 4 percent of the Adak community’s population. (ACAE)
3. **Impacts on Aleut Fisheries:** Aleut Fisheries owns a seafood processing facility at Adak that historically has processed large amounts of catch from the Atka mackerel and Pacific cod fisheries in Areas 541, 542, and 543. The restrictions and closures to those fisheries contained in the Interim Final Rule will drastically reduce the amount of that catch being brought into the Aleut Fisheries facility for processing, severely undercutting the value of that facility to Aleut Fisheries, and consequently reducing its, and therefore the Aleut Corporation’s, revenue generated by the facility. (ACAE)
4. **Impacts on Adak Community:**
- a. The loss of local fuel sales by Aleut Enterprise to commercial fishing vessels will drive up fuel costs for the community of Adak and the local utility. Decreased sales volume could cause fuel prices to spike by as much as 90 percent, causing a corresponding spike in electricity prices and imposing severe financial hardship on all residents and businesses in the Adak community, especially during the harsh winters when fuel and electricity are at a premium. (ACAE)
 - b. There will be drastic negative impacts on tax revenues for the City of Adak. The Aleut Corporation and its subsidiaries make up nearly one third of the City of Adak’s tax base, and the Aleut Fisheries seafood processing facility provides approximately an additional 30 percent of local tax revenue. The revenue losses to the Aleut Corporation family of companies will severely undercut the tax revenue available to fund local programs and governmental operations to a degree that will be difficult, if not impossible, for the Adak community to overcome. (ACAE)
 - c. There will be a severely reduced customer base for all local businesses and a corresponding undercut to commercial revenues coming into the community. Historically the commercial fishing fleet has used Adak for crew changes. (ACAE)
 - d. Those crew changes provided demand for airline services, and as a result, Alaska Airlines has been offering twice weekly flights between Adak and Anchorage. Alaska Airlines will reduce or terminate its air service to Adak, leading to higher costs to get

to Adak, fewer visitors, and less outside revenue coming into the community. (**Note, Doesn't appear to be any Alaska Airlines or Era flights to Adak per web search 4/19/12**) (ACAE)

Target Species Effects

1. Single species model is inappropriate for projecting increases in Atka mackerel and Pacific cod biomasses. (pages 6–7) (ASC)
2. The model incorporates an assumption that [the stock?] in each fishery management area is independent. This is wrong. (page 6) (ASC)
3. The model assumes that recruitment is average (?) and constant. This is wrong. (page 6). (ASC)
4. Given low exploitation rates used for Alaska fisheries management, the impact of harvest reductions is highly uncertain. (page 7) (ASC)
5. NMFS used a methodology to estimate the fraction of biomass removed by the fisheries that was non-standard and vastly overestimated the relevant fraction. (page 7) (ASC)
6. NMFS made the untested assumption that if a large fraction of the biomass were harvested, less would be available for Steller sea lions. (page 7) (ASC)
7. The most recent annual stock assessment shows that the Atka mackerel stock in Area 543 is currently at the levels that closure of the Atka mackerel fishery is intended to achieve. (page 8) (ASC)
8. The Atka mackerel stock in Area 543 in the summer of 2010 was close to historical high levels, making a substantial increase in biomass from the fishery closures an illogical and unsupported expectation. (page 7) (ASC)
9. The only directed fishery for Atka mackerel in the Bering Sea and Aleutian Islands management area takes place in the Aleutian Islands, where it is the largest fishery, accounting for approximately 60 percent of all groundfish catch. (JB)
10. Pacific cod is the second largest directed fishery in the Aleutian Islands, and this fishery also occurs in the Bering Sea and Gulf of Alaska (GOA). (JB)
11. Pacific cod fisheries employ cooperative structures and catch share programs that provide flexibility for the conduct of the fisheries by cooperative members, encourage efficient harvesting, and allow the avoidance of catch of prohibited species. (JB)
12. Reduced Pacific cod harvests may hurt Steller sea lions as Pacific cod prey on Atka mackerel which is an important prey species of Steller sea lions. (pages 10–11) This is not recognized because of the use of a single-species rather than a multi-species model for analysis. (FLL)

Steller Sea Lion Abundance

1. The western distinct population (wDPS) segment of Steller sea lions has increased in the past decade even though the two western subregions as identified in the Recovery Plan have not increased. The reason for the difference in abundance for the entire distinct population segment compared to the two western subregions is unknown. (JB)
2. NMFS has used an estimate of Steller sea lion abundance that is low (pages 11–12). NMFS estimates of the size of the wDPS are too low. NMFS estimating techniques accounted for movement of eastern DPS animals into the western area, but did not account for the movement of wDPS animals into the eastern area. (FLL)

Stresses on Steller Sea Lions and Behavior

1. Nutritional stress is an unproven theory that has been related to potential effects on Steller sea lion populations. (JB)
2. A number of factors may contribute to the population decline including (i) a climate shift in the late 1970s that may have altered available prey, increased predation, and modified human-caused mortality and fishery-related effects; and (ii) direct mortality (then-legal shootings, commercial and subsistence harvest, and incidental take in fisheries). (JB)
3. Current stressors to wDPS Steller sea lions may include a change in carrying capacity in the North Pacific Ocean, killer whale predation, overlapping diets among competitors, disease, contaminants, and nutritional stress. (JB)
4. Telemetry data shows that sea lions forage mostly inside 10 nm during the winter. (page 10) (ASC)
5. Recent scientific information shows that the longline fishery has no adverse effect on wDPS Steller sea lions (pages 4–6). The discussion in the biological opinion (Biop) is pretty general and is based particularly on a study by Calkins (2008), which concluded that the evidence that Calkins had reviewed (not described in detail) was consistent with the hypothesis that longline fishing and Steller sea lion population trends are largely independent of each other. The text in the Biop says that the Calkin results are consistent with those of other relevant studies. (FLL)
6. Pacific cod is not an important prey item for Steller sea lions (page 10). The Biop does not provide evidence that Pacific cod are an important Steller sea lion prey for the wDPS in the western and central Aleutian Islands. Moreover, the analysis does not assert that Pacific cod are an important prey in the western Aleutian Islands. (FLL)
7. NMFS failed to scientifically support its fishery driven nutritional stress explanation and misrepresented or misinterpreted evidence to the contrary. (Bernard et al. 2011)
8. NMFS did not seriously consider environmentally driven nutritional stress or killer whale predation for declines in Steller sea lion numbers. (Bernard et al. 2011)
9. If fisheries adversely affect sea lion numbers, statistically significant negative associations should be detectable between measures of fishing and measures of sea lion numbers. Studies after 2000 cited in the Biop and two studies cited in Bernard et al. 2011 did not have statistically significant associations consistent with harm by fisheries. The food driven nutritional stress hypothesis as an explanation for central and western Aleutian Islands Steller sea lion decline should be scientifically rejected. (Bernard et al. 2011)
10. Steller sea lions eat younger, smaller fish than caught in the fisheries. This is especially true for Pacific cod. Data of limited overlap is provided in Bernard et al. 2011 and not in the Biop. Size, temporal, and depth overlap between fisheries and Steller sea lion foraging were not investigated in the Biop. (Bernard et al. 2011)
11. Forage ratios for Steller sea lion prey inside critical habitat are higher in the Aleutian Islands than in the Bering Sea and GOA, yet Bering Sea and GOA animals do not show nutritional stress. (Bernard et al. 2011)
12. Information on nutritional stress is lacking. The reduced reproduction information was contradictory (Bernard et al. 2011).
13. The Biop did not consider that increased amounts of groundfish might have negative consequences to sea lions (junk food hypothesis) (Bernard et al. 2011)
14. A 10 percent reduction in Atka mackerel mortality leading to a 6 percent increase in sea lion biomass based on Aydin (2010) was not explained in the Biop. Further discussion should include:

- a. Address how to reduce Atka mackerel rates the additional 2 percent beyond the closure of the Atka mackerel fishery (8 percent) to reach the modeled 10 percent.
 - b. How many years would it take to reach the 6 percent increase in sea lion biomass?
 - c. Would the increases in biomass persist (for sea lions and Atka mackerel)?
 - d. What would be the effect of closing both the Pacific cod and Atka mackerel fisheries on sea lions? (Bernard et al. 2011)
15. Using the multispecies model would provide the best ecological information on the response of Steller sea lions to the reasonable and prudent alternative (RPA) (Bernard et al. 2011)
 16. The expectation that Steller sea lion numbers in the Aleutian Islands would increase under the RPA based on experiences with fisheries management and Steller sea lions in the GOA is not based on science. There is insufficient evidence that Steller sea lion numbers increased in the GOA due to fisheries management to protect sea lions. The multispecies model in the Biop showed that increases in sea lion numbers in the last decade were a coincidence. (Bernard et al. 2011)
 17. The fishery driven nutritional stress hypothesis requires consideration of the fishery and sea lion food webs and therefore a multispecies model is required for development of an RPA in a scientific manner. The multispecies modeling should include measures of uncertainty in parameters in initial conditions and in environmental conditions, and an analysis of the sensitivity of results to the model structure, reporting results in probabilistic terms. (Bernard et al. 2011)
 18. NMFS should examine Steller sea lions issues including declines in natality, local declines in some regions, rebuilding Pribilof Island rookeries, and effects on past reductions of prey by commercial fisheries, including Aleutian and Aleutian Basin/Bogoslof Basin pollock stocks. (Oceana)

Ecosystem Management

1. Managing the harvest of fish must consider the needs of the ecosystem. NMFS should look at the impacts of the groundfish fisheries on the marine ecosystem, including Steller sea lions, including the interactions described in the Aleutian Islands Fishery Ecosystem Plan and the integrated fisheries management approach in the FEP that considers the needs of predators when setting fishing levels. (Oceana)
2. The maximum yield approach does not allow for Steller sea lion recovery and basic changes should be made to fisheries management to resolve this shortcoming. (Oceana)

Alternative Management Measures

1. Request that the North Pacific Fishery Management Council's (Council's) alternative be evaluated. The Council's proposal was a reasonable, protective alternative with respect to sea lions. (pages 9–11) (ASC)
2. Cod trawl fishing is appropriate during a short winter window when cod abundance is high and in areas where removals are not likely to affect sea lion foraging opportunities. (page 10) (ASC)
3. More cod fishing in the summer is appropriate in light of studies showing that 94 percent of sea lion scat samples collected during the summer contained no cod. (page 10) (ASC)
4. Fisheries and sea lions show little overlap in the size of the Pacific cod they target. (page 10) (ASC)
5. It is appropriate to allow more fishing in Area 541 because Area 541 pups are increasing and non-pups are at least stable if not increasing. (page 10) (ASC)

6. The analysis has to look at the different effects of different gear types. This was not done in the Biop. Three dimensions of this problem are identified: (1) Because of the nature of the gear and techniques used, the longline fleet fishes in a way that disperses fishing effort over time and space (pages 6–8); (2) There is no overlap between the lengths of Pacific cod taken by longline gear and the lengths caught by Steller sea lions (pages 8–9); (3) The longline fishery does not catch Pacific cod in the water depths where Steller sea lions forage (pages 8–9). (FLL)
7. The Court decision upholds NMFS’s parameters in the biop that should be used for any fisheries management regime in the BSAI. (Oceana)

Bycatch

1. The RPA compromises the ability of Amendment 80 vessels to reduce bycatch. (page 4) (ASC)

Fisheries Catch Information

1. NMFS based the RPA measures on a mistaken estimate of the longline catch in 2008 (pages 9–10). (FLL)

ESA Interpretation

1. The Biop does not explicitly define its standard for “likely.” This standard should be explicitly defined and the scientific evidence should meet that standard. (Bernard et al. 2011)

Applicable Law

1. The EIS must comply with the ESA, NEPA, and the standards and science in the 2010 biop. (Oceana)