

February 23, 2009

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

RE: Comments on Bering Sea Chinook Salmon Bycatch Management DEIS/RIR/IRFA

Dear Mr. Mecum:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (DEIS) for Bering Sea Chinook Salmon Bycatch Management.

As expressed in a series of letters to the North Pacific Fishery Management Council (NPFMC) and National Marine Fisheries Service (NMFS), Oceana is very concerned about Chinook salmon bycatch in the Bering Sea/Aleutian Islands (BSAI) pollock fishery. Along with Western Alaskan communities, Tribal organizations, and subsistence fishermen, Oceana has dutifully engaged in the public process. We have raised issues associated with the management, monitoring, and analyses of salmon bycatch through scoping comments, letters, testimony, and meetings with you and your staff. Many of these substantive issues have not been addressed by NMFS and are not covered adequately in this DEIS.

Oceana agrees with the comments submitted on this DEIS by the Yukon River Drainage Fisheries Association and Trustees for Alaska on behalf of the Association of Village Council Presidents. We reiterate and adopt the arguments made in those comments.

NMFS must put in place a hard cap on salmon bycatch in the pollock fishery and establish a comprehensive salmon research and management program. That cap should not exceed 32,500 Chinook salmon. While we recognize that there are a variety of programs—including incentive programs, gear modifications, and time and area closures—that may have promise for managing bycatch, these programs do not provide a rationale for allowing an annual hard cap of more than 32,500 Chinook salmon. More specifically, because the current Intercooperative Agreement (ICA) proposals before the agency offer no assurance that salmon bycatch will be reduced, they should not be part of any alternative selected by the Council or agency at this time.

The Magnuson Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. §1801 *et seq.*, is a mandate for “conservation and management” of our marine resources. 16 U.S.C. §1801(b)(1). The first enumerated purpose of the MSA is “to take immediate action to conserve and manage the fishery resources found off the coasts of the United States.” *Id.* This conservation mandate applies broadly to all stocks of fish and all fisheries. *Id.* Against this backdrop, the MSA requires NMFS to take practicable actions to minimize bycatch. *See* 16

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U.S.C. §§ 1853(a)(11); 1851(a)(9). Thus far, NMFS has failed to comply with that obligation by choosing to take no effective action to curb bycatch in the pollock fishery. Choosing to adopt a management structure dependent on an unproven, unenforceable, and unanalyzed industry agreement—as proposed in the Preliminary Preferred Alternative (PPA)—would not address this failure.

Further, the Chinook caught by the pollock trawl vessels include fish from Upper Willamette River, Lower Columbia River, and possibly other lower 48 stocks that are protected by the Endangered Species Act. This issue was addressed in 1999 and 2000 biological opinions, which resulted in an incidental take statement for the groundfish fisheries based on the expected bycatch of 55,000 Chinook. *See* NMFS, Endangered Species Act (ESA) Section 7 Consultation – Supplemental Biological Opinion Reinitiating Consultation on the November 30, 2000 Biological Opinion regarding Authorization of the Bering Sea/Aleutian Islands Groundfish Fisheries at 2. The terms of the 2000 incidental take statement were violated in 2003, 2004, 2005, and 2006, when the groundfish fisheries caught 55,594; 63,138; 74,975; and 87,771 Chinook salmon, respectively. More than 90% of these fish were caught by pollock trawl vessels.

In 2006, NMFS undertook a Section 7 consultation process, which resulted in a supplemental biological opinion only addressing impacts to listed Chinook salmon from the groundfish fisheries. *See* DEIS at 242. That supplemental biological opinion includes an incidental take statement dramatically increasing the authorized bycatch level to 87,500 Chinook salmon. The terms of that incidental take statement have been violated as well, as the fisheries caught more than 130,000 Chinook in 2007. In addition, it is our understanding based on the information available that there is a substantial risk that the incidental take statement will be violated again this year.

As the Endangered Species Act requires, NMFS has reinitiated consultation on this issue. *Id.* at 242. Given the scope of this problem and the fact that it is getting worse, we expect that NMFS will prepare an extensive evaluation of the potential impacts to listed salmon, resulting in a new biological opinion. To complete such an evaluation, NMFS should have more complete biological information about age and stock of origin.

To address these and other issues, a comprehensive research and monitoring program, including both Alaskan and lower-48 streams is necessary. This research and monitoring program must be based on sound science and full public participation and disclosure.

For those reasons, the Preliminary Preferred Alternative should be discarded and, instead, NMFS should:

- 1. Immediately establish a hard bycatch cap no greater than 32,500 Chinook salmon, and preferably as low as the Alaska Federation of Natives (AFN) Resolution 08-17 to establish an annual hard bycatch cap of no more than 30,000 Chinook salmon for the Bering Sea pollock fishery.**

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2. **Ensure that such cap does not confer to the pollock fleet ownership of, nor the right to take, salmon.**
3. **Develop and secure funding for a comprehensive salmon gravel-to-gravel research plan to support management needs. This plan must include community-based research initiatives as well as identification of the stock-of-origin and age of all Chinook salmon caught as bycatch.**
4. **Secure adequate funds to ensure rebuilding and sustainable Chinook escapement through comprehensive management and co-management of salmon by managing for all life-stages of salmon from in-river to estuary to ocean and return.**
5. **Mandate appropriate consultation with Alaskan tribal governments and organizations on resource issues affecting Alaska Natives.**

As it undertakes those steps, NMFS also must address the following deficiencies in the DEIS:

The Preliminary Preferred Alternative

The PPA, Alternative 4, is not adequately analyzed in the DEIS. The PPA is described as a 68,392 Chinook salmon cap. As explained in the DEIS, however, the actual high cap on salmon bycatch under this alternative could exceed 100,000 Chinook salmon (68,392 salmon plus 32,482 under opt-out cap). *See* DEIS at 63. The DEIS does not evaluate the effects of allowing bycatch to exceed 100,000 salmon.

We are deeply concerned that the Council's PPA includes measures developed, managed, and overseen by the pollock industry (the ICA component of PPA 1) that cannot be enforced or evaluated. The uncertainty surrounding the effects of an ICA, the lack of analysis, and the fluidity of the ICA itself suggest strongly that these measures should be removed from the PPA. The Preliminary Preferred Alternative should therefore comprise only the annual hard cap of 47,591 Chinook salmon.

The deficiencies in the evaluation of the preferred alternative are highlighted by NMFS using this DEIS to provide suggestions for ways in which the Council might address them. *See* DEIS at 63-71. The NEPA process is designed to ensure "that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts [and] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 768 (2004) (citation omitted). Providing feedback to an advisory body is not one of these enumerated purposes.

Encounter rates and salmon abundance

As discussed in our scoping comments, NMFS must conduct a credible analysis of the relationship between encounter rates of salmon in the pollock fishery, behavior of the pollock fishery itself, and salmon abundance. Though several of the alternatives focus on managing encounter rates of salmon, no credible analysis has been conducted to evaluate whether these

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measures reduce overall Chinook salmon bycatch. Nor is there an analysis of the effects these measures may have on salmon populations.

The DEIS states that, based on anecdotal information, the configuration of trawl gear has changed over time. *See* DEIS at 259. It then states that no information is available to analyze these changes. The DEIS must explain why this information is not available and whether efforts were made to obtain it. The configuration of trawl gear including mesh sizes, trawl sweeps or aggregating devices, net dimensions vertically and horizontally, speed and depth of towing and towing on or near the seafloor would all influence the rate and retention of salmon bycatch. The past and present configuration of pollock trawl gear and its operation in the Bering Sea pollock fishery must be described.

Salmon bycatch estimates and data collection

The DEIS states that the “the levels of salmon bycatch are precisely estimated” DEIS at 103 (citing Miller (2005)). The DEIS, however, fails to explain or consider several important factors in this regard.

The DEIS relies on Miller (2005) to support its assertion that levels of bycatch may be precisely estimated. *Id.* It does not appear, however, that the bycatch numbers reported in the DEIS were estimated by the same methods presented in Miller (2005). Miller (2005) uses design and model-based estimators to arrive at precise estimates of catch and bycatch, but NMFS does not appear to use this same method:

Currently, the Alaska Regional Office uses *ad hoc* estimation methods that integrate observer-collected data and catches reported by the fishing industry. These estimates have no measure of precision[. T]here may be substantial and consistent bias for some target species

. . .
T.J Miller, Estimation of Catch Parameters from a Fishery Observer Program with Multiple Objectives. (2005) (Ph.D. Thesis, University of Washington) 343; *see also id.* at 238-39, 248. The analysis of salmon bycatch in Miller (2005) reflects these same discrepancies. *See id.* at 271.

Moreover, a comparison of Chinook salmon bycatch estimates presented in Miller (2005) and in the DEIS suggests the biases introduced by the Alaska Regional Office’s “*ad hoc* fusion of observer and fishing-industry supplied information” usually results in substantial underestimates. As presented in Table 1 below, the total Chinook salmon bycatch estimates reported in Miller (2005) generally are at least 50% larger than those reported in the DEIS, and are larger by a factor of more than 5 for the year 2000. *Compare* T.J. Miller, *supra* at 273, Table 6.23 with DEIS at 114, Table 3-3. This discrepancy strongly suggests that the estimates reported in the DEIS do not reflect the full extent of Chinook salmon bycatch after 1996, when bycatch rates increased considerably.

Table 1. Comparison of estimates of Chinook salmon bycatch

Year	Miller, 2005 (pg. 273)	DEIS (pg.114)	Ratio
1993	29,746	36,619	0.81
1994	42,948	31,890	1.35
1995	19,208	13,403	1.43
1996	64,016	55,472	1.15
1997	79,300	44,320	1.79
1998	76,123	51,244	1.49
1999	33,770	11,978	2.82
2000	26,446	4,961	5.33
2001	62,555	33,444	1.87
2002	56,134	34,495	1.63
2003	79,165	46,993	1.68

Given the precision claimed by Miller (2005) for his estimates and the fact that he relies solely on sampling results, it is unlikely that such large differences could be dismissed as mere modeling differences. The DEIS must explain this discrepancy between the bycatch numbers on which it relies and those in Miller (2005).

In addition, the Chinook salmon bycatch estimation procedures used by both Miller (2005) and by the Alaska Regional Office rely on unverified assumptions and that may lead to additional biases favoring overly optimistic estimates of precision and systematic underestimation of bycatch. These assumptions include:

- unobserved vessels behave the same as vessels with observers onboard;
- observed vessels behave the same while observers are off shift;
- salmon outside of an observer's sample on catcher processors are not included in bycatch estimates but are claimed to be delivered to observer for examination;
- observers attempt to remove all salmon from the catch as it is offloaded at shoreside plants, but inevitably miss some (called 'after-scale' salmon in DEIS); and
- observers record 'after-scale' salmon as if the observers themselves had collected them

In addition:

- it is not clear if 'after-scale' salmon are physically sampled by observers for coded wire tags;
- the proportion of salmon physically examined by observers for coded-wire tags is not reported; and
- the proportion of salmon discarded at sea is not reported

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While some of these concerns are cursorily acknowledged in the DEIS, *see* DEIS at 103-08, they are not fully explored or enumerated to the extent they affect estimates of salmon bycatch, vessel-specific bycatch, coded wire tag recoveries, and spatial distribution of salmon bycatch.

More fundamentally, the estimates for the entire fishery are likely biased toward underestimation, as are estimates of precision, making it impossible to assess confidence intervals for overall bycatch. We understand that these and related issues are discussed in a confidential report by Geiger and Pella entitled “*Chinook salmon bycatch of the Bering Sea pollock fishery and its geographic origins based on genetic data.*” That report must be made public and the concerns raised therein addressed explicitly in the EIS. These issues are of particular concern in addressing the impacts of bycatch on subsistence fisheries and the impacts of the alternatives on the pollock fishery.

Impacts on Chinook salmon

The analysis of impacts on Chinook salmon is limited to the gross estimated number of bycatch salmon that are reported by the fishery. Other factors that must be evaluated include:

- impacts on salmon that are contacted, but not retained, by the net or associated gear;
- data collection issues explained above which may bias estimates of the total number of salmon downward and which may bias estimates of the number of ESA-listed salmon downward;
- impacts to Chinook salmon stocks in other regions besides Western Alaska;
- impacts on salmon schools or schooling behavior;
- cumulative effects of persistent trawl mortality on salmon populations;
- effects of non-selective mortality on Chinook salmon populations as the Chinook salmon taken by trawls may not be the same ones that would succumb to disease, predation, or other causes of natural mortality;
- interactions and cumulative effects from other fisheries, especially the Russian pollock fishery, which almost certainly intercepts significant numbers of Chinook salmon; and
- attractive nuisance impacts associated with the effects of offal discharge from the mothership and catcher/processor vessels that lure Chinook salmon to the vicinity of these vessels during wintertime operations when the availability of alternative food sources is low, thereby increasing the likelihood attracted Chinook will be caught by subsequent trawling.

Inadequate Identification of Data Limitations

The DEIS repeatedly relies on preliminary or cursory studies to develop arguments that are of central importance to any proper evaluation of environmental impacts, without a clear presentation of how the limitations of those studies translate into uncertainties. Examples include the poster presentations of Seeb et al. (2008) and Templin et al. (2008) on stock origins of Chinook salmon bycatch.

The DEIS also notes that Chinook salmon “that are retained by catcher/processor and mothership crew outside of the observer’s sample are not included in the observer’s samples and are not used to estimate the total number of salmon caught.” *Id.* at 104. Capturing such

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information could provide a useful check on the accuracy of the observer estimates for the observed vessel hauls. Also, in light of Miller (2005), it would seem that this information is ultimately used by the Alaska Regional Office via transmission from the fishing industry to estimate bycatch, so it is not clear why the information is not recorded by observers to serve as a check on the accuracy of the industry data.

In addition, as it completes the NEPA process, NMFS must use the most current estimates of catch and salmon bycatch. The final EIS, therefore, should include relevant catch data from the 2009 season.

Genetics

A key component of the impacts on Chinook salmon rests with the genetic composition of the Chinook salmon bycatch. The DEIS cites two sources, Seeb et al. 2008 and Templin et al. 2008, in section 3.3.2, *estimating genetic composition of Chinook salmon bycatch*. See DEIS at 116. However, from the descriptive text, it appears that Seeb et al. 2008 is the primary source for determining stock of origin and estimating the impacts on river systems. *Id.* at 117. Both Seeb et al. 2008 and Templin et al. 2008 are poster presentations that, while informative, may not have had the rigorous level of peer review that a publication would have, and in any case are not readily available to the public. While the preliminary results from the studies appear to generally follow the trends from previous studies (Meyers et al. 2003) the studies themselves warrant greater scrutiny from the scientific community and the public. To the extent the DEIS relies on information from these studies not in the poster presentations, it must make that information available to the public and must be clear that such information has not yet been peer reviewed.

The impacts on river systems are analyzed through broad groupings of stock of origin. *See id.* at 117. The Pacific Northwest grouping, for example, is an aggregate of over 150 stocks from British Columbia, Washington, Oregon, and California. *Id.* at 125. This grouping contains both endangered and transboundary stocks which have distinctive implications for management and, therefore, requires finer separation to inform the DEIS. If it is technologically impossible to separate these stocks, the EIS must describe the reasons.

The DEIS also states that ongoing work to identify the stock of origin of salmon bycatch is occurring. *See id.* at 119. However, the description of sampling and study design is not included.

Assumptions Regarding Chinook Salmon Saved and Forgone Pollock Catch

The DEIS “assumes that past fleet behavior appropriately approximates operational behavior under the alternatives and does not estimate changes in behavior.” DEIS at 108. This assumption is inconsistent with the primary justification for the preliminary preferred alternative, which presumes adoption of incentives to change fleet behavior. Because it fails to address likely changes in behavior, the DEIS analysis of impacts on Chinook bycatch and forgone pollock catch is very likely incorrect.

Implicit in the selection of the PPA is the proposition that it is within the means of the fishing industry to reduce bycatch if sufficiently motivated. Little evidence is presented by way of

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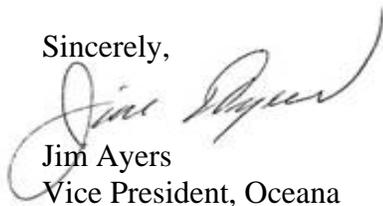
support for this conclusion. Absent evidence that bycatch avoidance is at least partially determined by decisions on where, when and how to fish, it is not clear that any incentive program could actually work.

Need for Action

The Council and NMFS must take immediate action to address Chinook salmon bycatch in the BSAI. While there are substantial deficiencies in the DEIS, these problems must not delay action. Bycatch rates of Chinook salmon in the early stages of the 2009 pollock fishery are comparable to the 2007 when more than 120,000 Chinook were killed. By many indications, 2009 is shaping up to be another disaster for Chinook salmon bycatch. Accordingly, we will work with you to address deficiencies in the DEIS and encourage the Council and NMFS to take immediate action to control Chinook salmon bycatch.

We look forward to continuing to work with you to find a solution that will continually reduce salmon bycatch in the BSAI groundfish fisheries.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Ayers", is written over the typed name and title.

Jim Ayers
Vice President, Oceana