



World Wildlife Fund
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January 30, 2009

Mr. Eric Olson, Chair
North Pacific Fishery Management Council
605 W. 4th Street, Suite 306
Anchorage, AK 99501-2252

Mr. Doug Mecum
Acting Regional Administrator
NOAA Fisheries, Alaska Region
709 W. 9th Street
Juneau, AK 99802-1668

Re: Salmon Bycatch C-3

Dear Mr. Olson and Mr. Mecum,

The World Wildlife Fund (WWF) appreciates the opportunity to comment on the salmon bycatch reduction measures being considered for analysis by the North Pacific Fishery Management Council (Council). We submit this letter in continued support of salmon bycatch reduction efforts in the Bering Sea and Aleutian Islands (BSAI) pollock fisheries. We continue to recommend that the Council expedite the analysis of caps and other mechanisms to minimize and reduce salmon bycatch in the BSAI pollock fishery and take the urgent action necessary to protect salmon stocks throughout the North Pacific.

Although salmon bycatch appears to have retreated substantially in 2008, this should not be reason for inaction or consideration of diluted measures. With respect to potential or already occurring cumulative environmental impacts on BSAI salmon populations, such as changes in climate and marine species distribution, impacts of ocean acidification, and planned offshore oil and gas development in Arctic waters and the Bering Sea, it is especially important to implement measures to further reduce and prevent salmon bycatch. Cumulative impacts on salmon populations, coupled with a lack of a cap on bycatch for BSAI salmon can potentially be devastating to local communities, especially indigenous peoples throughout Alaska, Russia and Canada as well as Pacific Northwest residents who were dramatically affected by the Pacific Coast salmon fishery shutdown in 2008.

As evidenced by the historic inattention that led to excessive bycatch of salmon in the pollock fishery in the 2007 season, we cannot simply go back to business as usual because salmon bycatch was lower in 2008. Although a reduction in overall salmon bycatch levels has occurred, the Council must take decisive action to prevent future excessive bycatch of salmon stocks throughout the North Pacific. The best way to achieve that protection is through the implementation of an adequate precautionary cap.

We encourage the pollock fleet to continue to seek measures and techniques to reduce salmon bycatch independent of regulatory requirements. WWF continues to support a rigorous analysis of a reasonable range of reasonable alternatives to reduce salmon bycatch while minimizing the economic impact to the pollock fleet. We recommend the Council adopt Alternative 2, Suboption vii, a hard cap of no more than 32,500 Chinook salmon bycatch. Implementing a hard cap of 32,500 would provide a level of assurance to communities

throughout the North Pacific, many of which were affected by low Chinook salmon returns in 2008 and may have to face projected equal or lower returns in 2009. This proposed hard cap is also the ten year average of bycatch prior to the signing of the Yukon River Salmon Agreement of 2002. When considering other potential impacts to these fisheries, such as climate change, it is important that we implement a precautionary approach in salmon bycatch reduction to protect cultures and livelihoods throughout the North Pacific. However, we recommend that the Council not consider the proposed 32,500 maximum cap as a goal to be met, but an absolute value in a range that must not be exceeded under any circumstance. The Council should continue forward with actions to further reduce bycatch under this level. Furthermore, the Council should carefully consider the recommendations of the Yukon River Panel, Federal Subsistence Board, the US Fish and Wildlife Service, the Community Development Quota groups, and the Regional Advisory Councils in developing the maximum cap for salmon bycatch.

In conclusion, WWF again encourages the Council to move quickly to finalize alternatives for the Salmon Bycatch agenda item C-3 in order to achieve an effective solution as soon as possible. Most importantly, flexibility in the strategy is important to minimize adverse effects on the pollock fishery, but should not preclude decisive action to protect salmon stocks and the communities, commercial fisheries, and subsistence fisheries that depend on them.

Thank you for your time and consideration of these comments.

Respectfully,

A handwritten signature in black ink, appearing to read "Alfred Lee Cook Jr.", with a stylized flourish at the end.

Alfred Lee "Bubba" Cook Jr.
Kamchatka/Bering Sea Ecoregion Senior Fisheries Program Officer
World Wildlife Fund



February 23, 2009

Mr. Doug Mecum
Acting Regional Administrator
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802

RE: Comments on the December 2008 Bering Sea Chinook Bycatch Management Draft
EIS/RIR/IRFA

Dear Mr. Mecum,

WWF appreciates the opportunity to comment on the Salmon Bycatch Draft Environmental Impact Statement (DEIS) (EIS No. 20080484, Draft EIS, NOAA, Bering Sea Chinook Salmon Bycatch Management). We also would like to thank NOAA Fisheries for granting the extension for comments to February 23, 2009 (74 *Fed.Reg.* 889, January 5, 2009). WWF would like to first acknowledge and commend the effort that the preparers put into compiling and developing the DEIS. The DEIS contains a considerable amount of information necessary for managers to make reasoned decisions and for the public to understand the issues and tradeoffs available. However, there are areas where the analysis could be improved to ensure that decision-makers have the most recent and relevant information available.

In addition to the comments made here, we agree 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 note that no changes suggested within these comments should be construed as reasons to delay action before the North Pacific Fishery Management Council (Council) on the issue of salmon bycatch reduction. The comments provided are meant to enhance the analysis and provide additional discussion within the decision-making process and within the currently provided timeline for action on this issue before the Council.

We believe the DEIS requires additional development in the following areas:

A. Cumulative Impacts

i. General

NEPA requires that the EIS take a hard look at the cumulative impacts on the environment related to the pollock and salmon fisheries in the Bering Sea, 40 C.F.R. § 1502.1; 40 C.F.R. § 1508.7. Cumulative impacts result “from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions,” and “can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. The DEIS only cursorily addresses cumulative impacts, omitting several important issues that must be considered in order for managers to make an informed decision.

ii. Climate Change

The analysis neglects to adequately acknowledge the cumulative impacts associated with climate change. Climate change represents one of the most ominous threats to Alaska’s fisheries resources and cannot be ignored as it relates to changes in abundance, distribution, and the general ecological relationship of fish populations in the Bering Sea. Climate change could completely alter the ecology of the Bering Sea, resulting in significant acute and chronic effects on individual species and considerable population level effects among various species. Moreover, climate change could have substantial impacts on subsistence, beyond the population level effect it could have on various species. Increasing arctic temperatures and associated physical effects could compound and amplify the impacts large-scale commercial fishing in the Bering Sea. Section 3.4.1 Ecosystem-sensitive management, addresses climate change only to the extent of what current research is currently underway in the Bering Sea that might inform the process in the future, but fails to acknowledge existing research that would inform decision-makers and the public.

In assessing the potential effects of climate change, the EIS also should consider the following sources: The Intergovernmental Panel on Climate Change (IPCC). The Science Basis. Contribution of Working Group I to the Fourth Assessment Report, 2007; Pew Center on Global Climate Change. Observed Impacts of Global Climate Change in the U.S. (Nov. 9, 2004); U.N. Environment Programme, GEO Year Book 2004/5: An Overview of Our Changing Environment 42-46, 80-84 (2005); National Academy of Sciences, Joint science academies’ statement: Global response to climate change (June 7, 2005); and Arctic Climate Impact Assessment conducted by Arctic Council and the International Arctic Science Committee (IASC) and found at (<http://www.acia.uaf.edu/pages/scientific.html>) . Furthermore, the paper “A Major Ecosystem Shift in the Northern Bering Sea” by Jacqueline M. Grebmeier and James E. Overland describes additional issues that NOAA Fisheries should consider regarding fishery resources when addressing cumulative effects in the Bering Sea.

To better inform managers and the public about the issues associated with climate change impacts, the DEIS should include the best available scientific information regarding climate change effects on salmon. A growing volume of recent research specifically addresses the issue of climate change impacts on salmonids. Specific studies include the following peer-reviewed scientific publications:

Crozier, L., and R.W. Zabel. 2006. Climate Impacts at multiple scales: evidence for differential population responses in juvenile Chinook salmon. *Journal of Animal Ecology* 75: 1100-1109.

Holt, C.A., et al. 2008 International cooperation among nation-states of the North Pacific Ocean on the problem of competition among salmon for a common pool of prey resources. *Marine Policy* 32: 607-617.

Mantua, N.J. et al. 1997. A Pacific Interdecadal Climate Oscillation with Impacts on Salmon Production. *Bulletin of the American Meteorological Society* 78: 1069-1079.

Mueter, F.J., et al. 2002. Spatial correlation patterns in coastal environmental variables and survival rates of salmon in the north-east Pacific Ocean. *Fisheries Oceanography*. 11: 205-218.

Schindler, Daniel et al. 2009. Climate Change, Ecosystem Impacts, and Management for Pacific Salmon. *Fisheries* 33(10): 502-506.

Non-peer reviewed sources currently in press, but available on request include:

Beamish, R.J. et al. 2008. Changing Climate and the Need to Change Our Thinking About the Management of Pacific Salmon. American Fisheries Society Special Publications, in press.

Eggers, D.M. 2009. Sustainability of the Arctic-Yukon-Kuskokwim Salmon Fisheries. In C. Krueger, C. Zimmerman, eds. American Fisheries Society, Bethesda, Maryland, in press.

Additional information exists regarding how pollock abundance and distribution may change as a result of climate change. These changes could have a profound effect on salmon bycatch in the pollock fishery. For instance, if pollock abundance continues to decrease or stocks become more erratically distributed it could increase towing times which would correlate with higher overall salmon bycatch. A number of peer-reviewed scholarly articles investigating climate change effects on pollock and other gadids with similar life histories may be found in the **Proceedings of the Symposium Resiliency of Gadid Stocks to Fishing and Climate Change, 2007**. G.H. Kruse, K. Drinkwater, eds. Alaska Sea Grant, Anchorage, Alaska.

In light of the potential threats posed by climate change and the potential negative impacts it could have on in-river salmon harvests, salmon bycatch, and the pollock fishery, it is important that the EIS address the issue in a systematic and transparent way in the context of cumulative impacts. Thus, the EIS should take a hard look at the issue of climate change and how it may affect both the pollock fishery and its prosecution as well as how it may affect salmon populations. The potential negative effects on both the pollock and the salmon fisheries resulting from climate change would argue for additional precaution in setting a cap for salmon bycatch.

iii. Foreign Fisheries

The DEIS overlooks the potential cumulative impacts of foreign fisheries on transboundary stocks of salmon and pollock. Russian fishery managers project increased effort and catch in all pollock fisheries from the Sea of Okhotsk to the Western Bering Sea. Two separate investigations of the Eastern Bering Sea pollock stock estimated that 10-30% of the U.S. stock spills over into Russian waters. We currently do not know the level at which salmon bycatch occurs in the Russian pollock fishery and Russian authorities are unwilling or unable to share information on salmon bycatch at this time. Despite Russian official's claims that no salmon bycatch exists in their fishery, it can reasonably be inferred that, based on existing bycatch rates in the U.S. fishery and the absence of any kind of bycatch mitigation scheme in Russian waters, there is substantial bycatch in the Russian fishery that goes unobserved and/or unreported.

Additionally, recent news regarding Russian and Japanese driftnet fisheries in the Western North Pacific indicates that some salmon bound for U.S. waters are intercepted in those fisheries. Recently, Russian authorities began to take action to exclude Japanese fishermen from participation in the driftnet fishery that occurs in the Russian EEZ. The Japanese fishermen involved in this fishery have indicated intentions of potentially withdrawing from the North Pacific Anadromous Fish Commission process and re-engaging in the high seas driftnet fishery. The lack of information in these two important fisheries and the high degree of potential impact argues for additional precaution in addressing salmon bycatch in U.S. waters. Therefore, the EIS should estimate potential catch and bycatch in foreign fisheries in an effort to inform our own managers and the public of the level of precaution that may be necessary in our own fisheries to ensure that U.S. salmon runs are maintained.

B. Subsistence and Cultural Resources

i. General

For thousands of years, Alaska Native communities have long used the marine resources of the Bering Sea for both subsistence practices and cultural identity. It is also well-documented that those who live in the region year-round have high cost of living expenses. The data on these minority populations should be considered by the Council when considering all alternatives. Although NOAA Fisheries recognizes the importance of the resources to these communities, the agency has inadequately addressed the disproportionate impacts of Chinook salmon bycatch on these communities. While the Council has made an admirable effort to reach out with tribes and communities, NOAA Fisheries continues to conduct inadequate systematic consultation with the Alaska Native tribes as required by the Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and accompanying Presidential memorandum (1994), or Executive Order 13175, Consultation and Coordination With Indian Tribal Governments (2000). As a result of high fuel prices in combination with a rapidly declining economy, the importance of subsistence food to physical and cultural survival in Western Alaska has become increasingly more important.

ii. National Standard 8

The DEIS neglects to specifically address National Standard 8, which requires minimizing adverse economic impacts on communities. Although the DEIS discusses communities in several sections, the DEIS fails to explicitly address the requirement in relation to the other National Standards. In this case, salmon bycatch results in a disproportionately adverse economic impact on subsistence and commercial economies in Western Alaska communities dependent on salmon. Thus, NOAA Fisheries should consider National Standard 8, as balanced with the other National Standards, especially in the context of adverse impacts on the subsistence and commercial economies in Western Alaska salmon fisheries.

iii. National Standard 9

In the analysis of how the different alternatives will affect minority or low income communities (table 9-8 through table 9-13) preliminary preferred alternative annual scenario 2 (PPA2) seems to be the most effective in reducing salmon bycatch for Chinook salmon users and other marine resource users in the six regions analyzed. It also states that adopting such a hard cap may reduce bycatch for seabirds and marine mammals. This may compound benefits of salmon bycatch reduction because the reduction in bycatch for other species may directly benefit Alaska Natives and other indigenous peoples of the North Pacific who subsist off of these species. Furthermore the analysis speculates that such Chinook management measures 'are likely to slightly reduce chum salmon bycatch' and that PPA2 may also reduce groundfish bycatch. This approach seems most consistent with National Standard 9, which states that "Conservation and management measures shall, to the extent practicable, minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch," particularly in the context of achieving environmental justice.

Unfortunately, the DEIS seems to disproportionately focus on the practicability of bycatch as it relates to the pollock sector. The DEIS considers the cost to the pollock fleet in the form of "forgone" pollock harvest, but does not address effectively consider the forgone salmon harvest lost to bycatch. The issue of practicability of bycatch levels becomes much more acute when considering the economic conditions of the remote Alaska communities with comparatively limited food and economic resources.

iv. Environmental Justice

Chapter 9 in the DEIS states that poverty and income statistics should be adjusted to reflect monetary value of subsistence production to provide a relatively comparable measure of income. WWF supports the estimation of this measure to illustrate the economic hardship incurred by Alaska Native tribes and communities as a result of potential loss of subsistence salmon resources. For instance, what would be the cost of a person living in Rampart on the Yukon River to replace their subsistence diet with an equivalent proxy protein source? This estimation should also incorporate average income in relation to average food costs as they relate to the cost of harvesting subsistence salmon, a reasonable subsistence proxy that could replace salmon, and a reasonable commercially-purchased proxy that would substitute subsistence salmon. Nonetheless, the Council should not neglect the value of the subsistence harvest of salmon to

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Native and family traditions, which are considered intrinsic values within the Alaska Native community.

Substantial information for evaluating and estimating subsistence economic values exists and additional information should be sought. On p.453, the DEIS notes that the Magdanz study of 2007 analyzed subsistence consumption for the Norton Sound and Port Clarence areas. It cited that "up to a third of the [subsistence] meat and fish was salmon." There are other studies that show regions in the Bering Sea with even higher consumptions of subsistence salmon. For example, in a study cited by the Alaska Department of Community and Economic Development, on its website http://www.dced.state.ak.us/dca/AEIS/Bristol/Subsistence/Bristol_Subsistence_Narrative.htm accessed in December of 2007, the Department said that "the average subsistence fish consumption for Bristol Bay residents' accounts for 55 percent of all subsistence foods utilized."

Elsewhere, on p.459, the DEIS evaluates the costs of subsistence fishing in Holy Cross and Tanana, which included costs for gas, clothing, equipment and other supplies. These subsistence fishing expenses are expected to stay the same or rise in the future according to economic projections, so it is important for the Council to consider this in any decision-making. It is also important that the Council continues to evaluate the living expenses for residents of these communities compared to urban centers of Alaska such as in Anchorage. Therefore, while it may be difficult, it is not impossible to conduct an economic analysis of the value of subsistence salmon in the rural Alaska Native economy.

v. Prohibited Species Donation

On p.461, the DEIS analyzes the Prohibited Species Donation Program and notes that none of the salmon bycatch donated through the program makes it to Western Alaska villages, who are most affected by increased salmon bycatch. NOAA Fisheries should consider the Tanana Chief's proposal presented to the Council at its February 2009 meeting, which would require the pollock fleet to package and ship salmon PSC to Western Alaska villages with the pollock industry absorbing the cost. Although this proposal will not substitute for adult equivalent Chinook salmon that may be available to these communities otherwise, nor provide a substitute to the cultural traditions the members of these communities engage in while harvesting Chinook salmon, analysis of this proposal may uncover whether an economic incentive to reduce salmon bycatch through this mechanism exists.

vi. Other Indigenous Cultures

On p.474, the DEIS notes that increased salmon bycatch may also adversely affect rural and indigenous people on the Yukon River in Canada. Under Executive Order 12898, NOAA Fisheries is only required to address minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Marianas Islands. However, because salmon is a transboundary migratory species, NOAA Fisheries has an ethical and moral obligation to consider the effects of salmon bycatch on low-income populations wherever they occur. If there is available data on subsistence harvest of salmon in Russia or Canada, the EIS should consider

these potential impacts. NOAA Fisheries has jurisdiction over the fisheries that affect the ecosystems, species composition, and thus communities throughout the salmon-spawning watersheds that feed into the North Pacific. The Council should therefore consider all available data on the health of the salmon runs in Canada and Russia and the level to which those runs support subsistence harvest. This would allow the Council and the public to further understand the impacts of salmon bycatch for all peoples who depend on salmon for subsistence purposes whether in the Kuskokwim River in Alaska, the Yukon River in Canada, or the Bolshaya River in Kamchatka. While genetic information indicates that the number of Russian salmon captured in the U.S. pollock industry are relatively small, like with the runs of the Pacific Northwest, a small number may constitute the entire run in some cases. Thus, the DEIS should acknowledge the transboundary nature of salmon stocks and the potential implications that it may have on other indigenous cultures.

C. Conclusion

In conclusion, we believe the DEIS provided for this action could be substantially enhanced by considering and incorporating the preceding comments. Substantively, WWF recommends adopting PPA2 with a hard cap of no more than 32,500 salmon bycatch. This cap is equal to the ten year average of salmon bycatch in the BSAI pollock fisheries prior to signing the 2002 Yukon River Salmon Agreement. Thus, a hard cap of 32,500 is necessary and achievable. Also, as noted in chapter 2 of the DEIS, given that it is possible that the pollock industry may still exceed a hard cap of 68,000 salmon bycatch under the proposed alternative and that the incentives envisioned may prove elusive, PPA1 does not provide a reasonable alternative to reduce salmon bycatch within the National Standards. Given the forecasts for salmon returns in Western Alaska in 2009 that project equal or lower salmon returns than the low returns of 2008, a hard cap of 32,500 salmon represents necessary insurance to the communities of the North Pacific who depend on salmon as a subsistence resource.

Sincerely,



Alfred Lee "Bubba" Cook Jr.
Senior Fisheries Officer Kamchatka/Bering Sea Ecoregion
World Wildlife Fund, Bering Sea Field Office