Public Comment #1
C01

December 22, 2008

ICICLE.

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

RE: Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (DEIS/RIR/IRFA)

Dear Mr. Mecum:

The purpose of this letter is to support the December 19, 2008 request, made jointly by the At-Sea Processors Association, Pacific Seafood Processors Association, and United Catcher Boats, for a forty-five (45) day extension to the public comment period associated with the above-referenced DEIS/RIR/IRFA (the "DEIS"). It is our understanding that this requested extension will not impede or otherwise put at risk the North Pacific Fishery Management Council's objective to implement a new Chinook salmon bycatch reduction plan in time for the 2011 A-season Bering Sea pollock fishery.

The timing of the comment period related to this DEIS is particularly challenging. As an inshore pollock processor and the owner of several pollock catcher vessels, we are fully engaged in year-end planning and preparation for the January 20 start of the 2009 pollock season. December and January are the months in which we hold our annual cooperative membership and captains' meetings, finalize our budgets, prepare our annual reports, and re-negotiate our cooperative and the intercooperative agreements. This year, we are also working on developing an incentive plan to save Chinook salmon in accordance with the Council's preferred preliminary alternative. Additionally, we are in the process of hiring and training crew members and processing employees, readying our vessels and facilities for the season, and working on marketing plans and sales strategies. All of this, in combination with the holiday season and necessary preparation for the December and February Council meetings, leaves little time to respond appropriately to a document as comprehensive as the DEIS.

In light of the significant impact that the proposed action may have on our business, and because an extension to the comment period will not delay the intended implementation of the Council's final action, we respectfully request that you extend the comment period by forty-five (45) days. Thank you for your consideration.

Best regards,

ICICLE SEAFOODS, INC.

Pat Hardina

Patricia M. Hardina
General Counsel

ICICLE SEAFOODS, INC.
4019 – 21st Avenue West • Seattle, WA 98199
P.O. Box 79003 • Seattle, WA 98119 • Tel: 206-282-0988 • Fax: 206-282-7222

Public Comment #2

C02

At-Sea Processors Assn
4039 21st Ave W
Suite # 400
Seattle, WA 98199
206-285-5139

Pacific Seafood Processors Assn.
1900 W. Emerson PL
Suite # 205
Seattle, WA 98119
206-281-1667

United Catcher Boats
4005 20th Ave W
Suite # 116
Seattle, WA 98199
206-282-2599

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

December 19, 2008

Re: Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (DEIS/RIR/IRFA)

Dear Mr. Mecum:

The undersigned representatives of the Bering Sea pollock industry are writing to request a forty-five (45) day extension in the public comment period associated with the above-referenced DEIS/RIR/IRFA (the "DEIS" or "the document"). At the present time, the 60-day comment period on the document is due to close on February 3, 2009.

While a 60 day comment period may, under normal circumstances, provide an adequate time in which to respond to a proposed federal action, the length of this particular document, the complexity of the issues being evaluated, the potential impacts of the alternative management measures under consideration, and the unfortunate timing of the comment period itself make it very difficult for the members of our respective organizations to prepare and submit meaningful comments within the 60 day period provided.

Of all these reasons, the timing of the comment period is perhaps the most challenging. As you know, the Bering Sea pollock fishery is the largest fishery in the United States and one of the largest and most valuable fisheries in the world. In order to prepare informed comments on an issue as important as salmon bycatch management and the proposed options that the North Pacific Fishery Management Council ("NPFMC") has under consideration, we will need to collect data, information and other input from our associations and their respective members who own and operate the vessels and plants that participate in the fishery and who engage in the production and sale of various pollock products in the world markets for whitefish. That data and information will need to be reviewed and analyzed and then incorporated into the comments that our organizations will be preparing on the DEIS.

This would be a daunting task under the best of circumstances, but the difficulty is compounded by the fact that the comment period straddles the busiest time of the year for our associations and their memberships. Not only have our associations been pre-occupied with the groundfish plan team meetings (where the status of pollock and other groundfish stocks are reviewed and preliminary harvest recommendations for the upcoming fishing year are developed) and other preparations leading up to the all-important December meeting of the NPFMC and its related advisory bodies, but December is also the month that we are scheduled to hold our annual membership meetings, finalize our budgets for the coming year, organize our skipper meetings, prepare our annual co-op reports, complete arrangements for the research projects we plan to undertake during the upcoming fishing season (including research designed to develop an effective salmon excluder device for use by our member vessels), re-negotiate co-op and inter-co-op agreements (ICAs), develop a new ICA re salmon bycatch reduction incentives and otherwise prepare for the opening of the 2009 pollock fishery on January 20th. We also need to prepare for the February meeting of the NPFMC.

Even more problematic is the fact that a great deal of the data and information needed to prepare our comments on the DEIS has to be generated by our respective members. This is the time of the year that most of them are already pre-occupied with shipyard and other annual repair and maintenance work on their vessels and in their plants in order to prepare for the 2009 pollock "A" season that starts on January 20th. It is also the time of the year that they hire and train their crewmembers and processing workers, re-provision their vessels and plants, develop fishing and processing plans for the upcoming fishing year, fine-tune marketing plans and strategies and otherwise prepare to resume fishing and processing operations in the Bering Sea on January 20th.

To complicate things further, many of the people on whom we must rely to provide the data and other information needed to meaningfully respond to the DEIS will be out of town or otherwise unavailable due to the upcoming holiday season. These times are particularly important to the men and women engaged in the fishing industry who spend a great deal of their time away from their families during the rest of the year and who routinely schedule vacations during the holidays at the end of the year.

For these reasons, an extra forty-five (45) days will greatly assist the pollock industry in preparing the kind of analyses, data and information necessary to inform the NPFMC about the costs, benefits and other environmental impacts of the proposed Chinook salmon bycatch amendment described in the DEIS and the various alternatives that are currently under consideration.

It is also important to note that the requested extension will not interfere with or otherwise jeopardize the NPFMC's stated goal of having a new Chinook salmon bycatch limitation plan in place in time for the start of the 2011 Bering Sea pollock fishery. In order to comfortably meet that goal, and given the time necessary to accommodate Secretarial review and public comment following Council action, the NPFMC needs to take final action on the amendment package at its meeting next June. A 45-day extension

in the comment period on the DEIS would result in a comment period ending on or about next March 20th The Council would then have more than two months to review comments on the document before its June meeting. That should provide the Council with more than adequate time to review the comments before it takes action on the bycatch amendment.

Thank you for your consideration of this request. If you have any questions concerning the need for the extension or any of the other points discussed in this letter, please give any one of us a call.

At-Sea Processors Assn. Pacific Seafood Processors Assn. United Catcher Boats

By: Stephanie Madsen By: John E Gauvin By: Brent C. Paine

C03A

From Andrew Malavansky <andymalavansky@yahoo.com>
Sent Monday, January 19, 2009 1:33 pm
To salmonbycatcheis@noaa.gov
Subject Salmon Bycatch EIS

Robert D. Mecum,

Bycatch in the Trawl fishery off Alaska's coast are despicable. There are billions of dollars of economic waste occurring annually that must be stopped, for example Halibut and Salmon, these two economically important specie bring in millions of dollars to many communities and to the state of Alaska itself and yet the Trawl fleet is allowed enormous amounts of by-catch negatively affecting other fisheries.
These rates of Trawl by-catch are without doubt affecting commercial quotas of these and other fisheries such as hook and line and sport, both economically important, take for example the IPHC cuts across the board for 2009.
These enormous by-catch rates are also affecting the very ecosystem on which all species depend upon, marine birds, mammals, crab, squid and all fish. Even your agency reports continuing declines of Northern Fur Seal and Steller Sea Lions in the Bering Sea strangely with no no known cause.
Many communities are also being economically impacted by this huge removal and waste of species not only coastal communities but also communities further inland where many Salmon migrate to spawn, these communities are also seeing a major declines in Salmon. I'm certain that removal of Salmon from these inland communities will also have a hugely negative effect on those ecosystems as many mammals such as bear, wolves and bald eagles depend upon returning Salmon for survival.
The lowering of the Pollock quota to 815,000 tons will without doubt help to alleviate by-catch but it is certainly not enough. Scientific evidence was there at the December 2009 NPFMC meetings that should have enacted a much lower Pollock quota to 400,000 and maybe even less but sadly this strong evidence was ignored.
Your agency is there to protect our fisheries, the only way to reduce by-catch is to eliminate the problem in the first place and in this particular case, a fishery that is having enormous implications on our entire ecosystem and economy, the Trawl fishery.

Andrew Malavansky
10085 William Jones
Anchorage AK 99515

C03

From Andrew Malavansky <andymalavansky@yahoo.com>
Sent Sunday, December 14, 2008 11:42 pm
To salmonbycatcheis@noaa.gov
Subject Salmon Bycatch EIS

Bycatch rates in the Pollock Trawl fishery is horrendous and not enough is being done to reduce this high rate. There is sufficient evidence that links trawling to ecosystem damage, this damage has been occurring for too long in Alaska. As a federal agency that oversees our nations fisheries I am appalled trawling is allowed, this is a wasteful fishery and your organization should be working on sustainable fisheries not finding ways to limit bycatch in a fishery knowingly tainted with wanton waste. I'm asking your organization to ban trawling in Alaskan waters for the sake of all fish species and communities that depend upon them.

Andrew Malavansky
Anchorage, AK

Nome Eskimo Community
Box 1090
Nome, Alaska 99762
Phone (907) 443-2246
Fax (907) 443-3539

C04

January 21, 2009

Robert D. Mecum, Administrator, Alaska Region
National Marine Fisheries Service (NMFS)
P.O. Box 21668
709 W. 9th Street, Room 420
Juneau, Alaska 99802-1668

RE: Bering Sea / Aleutian Islands Chinook Salmon EIS

Dear Administrator Mecum,

Nome Eskimo Community (NEC) is the federally recognized tribe for Nome, Alaska and we wish to make formal tribal comment per Presidential Executive Order 13175 for your consideration regarding the Bering Sea Chinook Salmon, Bycatch Management, Draft Environmental Impact Statement / Regulatory Impact Review/, Initial Regulatory Flexibility Analysis, dated December 2008. In September 2008 NEC requested tribal consultation on the EIS.

In September 2008 NEC staff received an early version of a draft EIS. NEC staff posed numerous questions regarding the early version of the EIS which were not satisfactorily addressed by NMFS staff. NEC staff then reviewed the December 2008 EIS which was materially different than the earlier version but addressed many of the questions posed earlier. The EIS is tremendously complex, and it has been very burdensome to review and compile meaningful comments on it.

NEC is concerned about healthy populations of all salmon. NEC tribal members make extensive use of numerous marine, freshwater and terrestrial subsistence resources including chinook salmon. In recent times Nome subsistence fishermen experienced the State's only TIER II fishery. NEC tribal members endured exhaustive closures, and extraordinarily complex fishing regulations in order to meet their subsistence needs. Several decades of declining salmon returns to Nome streams including chinook salmon declines have been hard to deal with. It is our opinion after reviewing all available information that factors outside of local influences dictate salmon populations. It is a long held belief that commercial mid-water, and bottom trawling as described in the EIS are the primary human influences affecting salmon returns to western Alaska streams. Other influences such as severely cold winters, poor ocean conditions, predation, & migration also affect the number of returning salmon. Clearly, commercial mid-water, and bottom trawling as described in the EIS enact a heavy annual toll on salmon populations if there are no effective measures to control salmon bycatch.

The EIS describes a bewildering array of alternatives with hundreds of seasonal distribution options, sector allocations, rollovers, cooperative arrangements, and sector transfers. The EIS does not describe other options that the North Pacific Fishery Management Council may have discussed at its recent meetings or work-sessions. It is difficult to understand how the hundreds of options help inform the decision making process. It seems the options provide details about how Chinook salmon management should occur so that Pollock fishing will continue unabated. It is not clear how the management options appease the Magnuson-Stevens Act to reduce salmon bycatch. NEC believes the simplest management scenario is the best course of action, which must be some sort of hard cap with a seasonal distribution, no rollover, and no provisions for inter-cooperative agreements. NEC believes all of the options that the EIS describes other than the hard cap considerations will leave too many loose ends for the Pollock industry to maneuver around in. NEC proposes the following:

1. Annual hard cap of no more than 30,000 chinook be implemented to protect and conserve chinook salmon.
2. Seasonal distribution method as described in the EIS
    a. 58% to the A season
    b. 42% to the B season
3. Sector allocation as described in the EIS
    a. 10% to the CDQ Sector,
    b. 45% to the Inshore Catcher Vessel Sector,
    c. 9% to the Mothership Sector
    d. 36% to the Offshore Sector

NEC is frustrated with NMFS methodology in selecting its preliminary preferred alternative of somewhere between 47,591 and 68,392. As the EIS describes it is clear that the range of caps represent averages that if continued into the future would only ensure that the status quo level of salmon bycatch would continue, and not be reduced as the Magnuson-Stevens Act mandates. As such it is best argued that a cap of 30,000 which is in the range of the lowest number among averages is the only bycatch cap that would represent any reduction in bycatch. **It is our understanding that NMFS observers in the course of the Pollock season may be underreporting bycatch, and that NMFS is aware of the under-reporting bias but has not adequately accounted for it in the EIS. NEC requests that we be given full disclosure of observer reports in a simple to use and easily understandable format that portrays this underreporting so that we may compile comments before the NPFMC takes it final action in April 2009.**

NEC believes that other fisheries will contribute to additional salmon bycatch. Therefore the lowest cap is appropriate, and must also be considered in the context of other Bering Sea fisheries. Under any scenario Nome subsistence fishermen will be dealt a heavy blow to their lifestyle and all of western Alaska will carry the entire burden of NMFS management.

Chapter 3, Impact Analysis

Should the NPFMC enact measures to reduce salmon bycatch the NPFMC must enact additional and more effective observer deployments to monitor the bycatch of salmon. NMFS should be directed to increase species composition information and obtain stock of origin information so that NMFS and the NPFMC will be able to better understand how Norton Sound salmon stocks interplay in the bycatch. With a new management scenario it is possible that the Pollock industry will have additional incentives to underreport bycatch therefore, NMFS must enact measures to ensure proper reporting when a new regulation is adopted.

Chapter 5, Chinook Salmon

Chapter 5, Chinook Salmon needs some reconciliation. NMFS and the NPFMC must make decisions that reflect the broad range of knowledge we now have concerning salmon in Norton Sound and Nome. 4 fish counting projects exist with the Nome area that count Chinook Salmon. NMFS makes the following statement on page 205, last paragraph, last sentence:

"Currently the only escapement project operating specifically for Chinook enumeration is the North River counting tower, located on a tributary of the Unalakleet River (J. Menard, pers. comm.)."

While it is true that Norton Sound fish counting projects are not specifically chinook projects each project counts ALL fish and are thus effective in enumerating chinook salmon. NMFS lists a limited number of references regarding Norton Sound Chinook and must make meaningful efforts to portray a broader array of information that exists so that the NPFMC will make an appropriate decision. NMFS does not characterize any Norton Sound salmon savings component, and the NMFS narrative regarding Norton Sound chinook require immediate attention to include a broader range of scientific knowledge.

Chapter 9, Environmental Justice

Chapter 9, Environmental Justice is terribly inadequate and only describes potential Pollock industry employment impacts. The potential impact to marine mammal resources is of key concern to our tribal members. The EIS does not adequately describe the effects of the potential loss of marine mammal hunting opportunities, cultural effects, or social effects. NMFS has portrayed a very jaded management perspective and it is clear that NMFS is mainly concerned with ensuring that Pollock fishing continues even if salmon are not effectively conserved. One

section within Chapter 9 needs immediate attention. In Chapter 9, page 450, 1st paragraph, last sentence NMFS makes the following statement:

"Significant numbers of transactions also appear to take place in barter or informal trades and exchanges in informal markets which constitute an "underground economy.""

Describing our time immemorial fishing and hunting tradition as an "underground economy" is terribly hurtful and untrue. Customary trade laws and regulations exist in both the State and Federal regulatory system that legitimize customary trade transactions. Barter transactions are always legal and do **NOT** require implementing regulations.

CONCLUSION

NEC believes that immediate action is required to implement salmon savings despite the numerous problems within the EIS. NMFS will likely hear many criticisms of its management options, and data that was used to support the alternatives. Chinook salmon savings must be implemented in some manner as soon as possible to stem the tide of salmon declines. Chinook salmon have declined in many western Alaskan streams and it is apparent that chronic commercial bycatch is one of the major human influences in the recovery of salmon. NEC will continue to follow the issue of the salmon EIS and will provide comments on the Chum salmon EIS when it is developed.

If you have any questions please feel free to contact Austin Ahmasuk, Tribal Resources Director at the above address or directly at (907) 443-9130 or e-mail aahmasuk@gci.net. Thank you for your time and consideration.

Sincerely,

NOME ESKIMO COMMUNITY

Karlin Itchoak, President

Austin Ahmasuk, Tribal Resource Specialist

CC: Eric Olson, Chairman, North Pacific Fisheries Management Council
Loretta Bullard, President, Kawerak, Inc.
Bering Strait Region Tribes

C05

Alakanuk Tribal Council

P.O. Box 149; Alakanuk, AK 99554

January 23, 2009

Robert D. Mecum, Acting Administrator
Alaska Region, NMFS, NOAA
P.O. Box 21668
Juneau, Alaska 99802

Re: Chinook Salmon Bycatch EIS

Dear Mr. Mecum:

I am writing to comment on the Draft Environmental Impact Statement (DEIS) on salmon bycatch reduction measures in the Bering Sea management area. The high salmon bycatch numbers of recent years in the Pollock fishery, threaten our salmon and our way of life. Salmon serves an important cultural and economic role in my community and throughout Western Alaska. Salmon provides a primary source of food for us, and the commercial salmon harvest provides the only means of income for many who live in the remote villages of the Yukon River. Salmon is an irreplaceable resource that must be protected by all means. Once again the lower Yukon River villages will be carrying the burden of conservation, even though the causes of salmon decline is not the result of subsistence users along the river. To our understanding, there may not be enough Chinook salmon for subsistence users this coming summer.

The model utilized in the DEIS drastically underestimates the impacts to Western Alaska Chinook salmon stocks, and to Chinook users. We have been dealing with rebuilding our salmon stocks since the mid-80's. To our understanding, we are still trying to rebuild the salmon stocks by reducing the amount of fishing time for subsistence. There were no commercial fishing for Chinook salmon in 2008. Our people are struggling to make ends meet with the added burden of high fuel costs to heat homes, high transportation costs, and high electricity costs.

We recommend that the Council and NMFS should set a hard cap of the lowest number of salmon bycatch immediately to protect Western Alaska Chinook salmon. We also recommend that the Council look at all means of reducing salmon bycatch, even to consider closing Pollock fishing to rebuild the Chinook salmon.

Sincerely,

Benjamin B. Phillip
President

Phone: (907) 238-3419 or 3459 Fax: (907) 238-3429 Email: [redacted]
roney@aucp.org

C06

Elizabeth Andrews PhD
USA

Co-Chairs

Frank Quinn
Canada

Yukon River Panel 100-419 Range Road Whitehorse, Yukon Y1A 3V1

January 26, 2009

Eric Olson, Chair
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501-2252

Doug Mecum, Acting Regional Administrator
NOAA Fisheries, Alaska Region
PO Box 21668
Juneau, Alaska 99802-1668

Re: Industry Programs for Chinook Salmon Bycatch Reduction

Dear Mr. Olson and Mr. Mecum:

This letter provides our general comments on industry programs to reduce Chinook salmon bycatch in the Bering Sea pollock fishery. The North Pacific Fishery Management Council discussed this concept at its June 2008 meeting and included it in Alternative 4 Preliminary Preferred Alternative (PPA) described in the December 2008 "Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis."[1] The Council will be reviewing incentive-based programs at its February 2009 meeting.

At our recent US/Canada Yukon River Panel meeting in December 2008, Dr. Diana Stram of the Council presented to Panel members an overview of the management alternatives. We very much appreciated this presentation and the opportunity to ask questions of Council members and staff about the alternatives and information presented. Some Panel members also attended two presentations of draft reports on industry incentive-based programs, as the concept of an incentive program is a key element of the Council's preliminary preferred alternative (PPA).

[1] http://www.alaskafisheries.noaa.gov/sustainablefisheries/bycatch/default.htm accessed 12-12-08.

Raymond J. Watson, Chairman
Myron P. Naneng, Sr., President

Association of Village Council Presidents

Office of Administration
P.O. Box 219 • Bethel, AK 99559
Phone: (907) 543-7300 • Fax: (907) 543-3369

April 1, 2009

The Honorable Gary Locke
Secretary of Commerce
U. S. Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

Re: Fisheries Disaster Declaration

Dear Secretary Locke:

The Association of Village Council Presidents is the regional Native non-profit service organization in southwest Alaska, representing the 56 Yup'ik, Cup'ik and Athabascan federally recognized Tribes of the Yukon-Kuskokwim Delta. We are authorized by our member Tribes to assist them and to act on their behalf on matters affecting their very way of life. The issue we would like to bring to your attention now is the virtual collapse of our in-river fisheries, specifically the Yukon River commercial fisheries our people rely so heavily upon. We respectfully request that you exert your authority as the Secretary of Commerce and declare a fisheries disaster because of the failure of our commercial fisheries and the return of our Chinook salmon.

Under Section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) you are authorized, once a fishery disaster has been declared, to assign funds "for assessing the economic and social effects of the commercial fishery failure, or any activity that the Secretary determines is appropriate to restore the fishery or prevent a similar failure in the future and to assist a fishing community affected by such failure." Section 312(a) also states that a failure must be due to a "disaster of natural or undetermined causes or man-made causes beyond the control of fisheries managers to mitigate through conservation and management measures, including regulatory restrictions…" This regulation description virtually parallels our situation. Our Yukon fisheries have been severely restricted, almost closed completely, and we know it to be due in large part to the incredible amounts of salmon taken as bycatch in the BSAI Pollock fisheries – a very real man-made cause.

The Alaska Department of Fish & Game 2008 Yukon River Summer Season Summary (dated October 20, 2008) report described the 2008 season indicating there were no Chinook-directed commercial fishing openings, there were restricted mesh openings for chum salmon (and only when the likelihood of catching Chinook incidentally was very

low) and a reduced Subsistence fishing schedule was implemented on June 23, starting in the Lower River district Y-1, and instituted incrementally up the river. More specifically for the districts affecting our Tribes, that meant that the Subsistence fishing opportunities were cut from an already restrictive schedule of 2 – 36 hour openings a week to 2 – 18 hour openings a week.

For the up-coming season, The United States and Canada Yukon River Joint Technical Committee 2009 report (Alaska Department of Fish & Game Regional Information Report No. 3A09-01) states that the Canadian-origin Chinook return is expected to be below average to poor with the expectation that there will likely be no directed Chinook commercial fishery in the mainstem Yukon and that Subsistence conservation measures will likely be needed.

AVCP just concluded its mid-year convention where the focus of discussions was the current economic crises the country is facing, and programs that might be available in particular instances. Our Tribal delegates spoke passionately about their situations and the very dire realities of life in their villages – people having to choose between buying stove oil to heat their homes or food to feed their families. Specific to our fisheries situation, when the bycatch issue came up on the agenda, what was meant to be a quick update on the process turned into hours of testimony and accounts of real hardship. People shared their frustrations, including requests to state and federal agencies, even the Governor, being refused and denied.

Secretary Locke, we urge you to review our request, a very legitimate and much needed declaration. Our people are in need of support. Their cultural and historical fisheries are not available to them. Their economies, both individually and community-wise, need help.

We look forward to your most favorable response. Quyana.

Sincerely,
ASSOCIATION OF VILLAGE COUNCIL PRESIDENTS
Raymond J. Watson, Chairman

Myron P. Naneng, Sr., President

Cc: Alaska Senator Mark Begich
Alaska Senator Lisa Murkowski
Alaska Congressman Don Young
North Pacific Fishery Management Council

At the Panel's December 2008 semi-annual meeting, four key points were identified by US and Canadian Panel members, alternates, and advisers: 1) a meaningful regulatory cap is necessary; yet a cap of 68,392 is too high regardless of an incentive program's effectiveness; 2) 100% observer coverage must be required to avoid any attempts to under-report salmon bycatch; 3) any incentive program has to begin working immediately; and 4) an incentive program must include funding, at a meaningful level, to support research relevant to salmon bycatch reduction.

The Yukon River Panel is an international advisory body established under the Yukon River Salmon Agreement for the conservation, management, and harvest sharing of Canadian-origin salmon between the United States and Canada. This Agreement constitutes Chapter 8 of the Pacific Salmon Treaty, which means it has the full power and force of an international treaty between our two nations.

In December 2008, Panel members described to Council members the very poor 2008 Chinook salmon fishing season on the Yukon River. The Canadian Chinook salmon escapement objective was not met for the second year in a row. Fisheries managers closed commercial fishing in the US and Canada; reduced fishing time in the subsistence fisheries in the US and in the lower Yukon River districts only allowed smaller mesh gillnets; reduced sport fishing bag limits in the US; closed sport fishing in Canada; and Canadian First Nations voluntarily reduced aboriginal fishing harvests by more than 50 percent. Even with these severe reductions, spawning escapement of Canadian-origin Chinook was 27 percent below the minimum interim management escapement goal of 45,000.

With the anticipated poor run of Yukon River Chinook salmon in 2009, fishery managers and Panel members will be gathering input from local fishermen regarding salmon management strategies and options to assist getting adequate numbers of Canadian-origin Chinook to the spawning grounds. Management and conservation of Yukon River salmon is challenging during these times of reduced salmon production when restrictions to subsistence fisheries may be necessary.

With in-river measures being taken to conserve salmon and improve escapement, it is equally important to abide by the Pacific Salmon Treaty, Chapter 8, Yukon River Agreement, paragraph 12: *"the Parties shall maintain efforts to increase the in-river run of Yukon River origin salmon by reducing marine catches and by-catches of Yukon River salmon. They shall further identify, quantify, and undertake efforts to reduce these catches and by-catches."*

It is a major concern to the Panel that without some analysis of incentive-based program proposals, it is difficult to assess the effectiveness of any proposed program to reduce salmon bycatch. We urge the Council to request an analysis of proposals before taking final action.

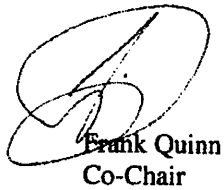
As the Council reviews incentive-based program proposals during its February 2009 meeting, we ask the Council to evaluate each proposed program with regard to the following: a) monitoring and enforceability; b) meaningful penalties for non-compliance, not simply a "trading" of credits or reducing or phasing out of participation in the fishery; and c) the inclusion of funding from industry for research that will help reduce salmon bycatch in the pollock fishery and to meet escapement goals established by the Yukon River Salmon Agreement.

We support responsibly managed and monitored sustainable fisheries and recognize that nearly every fishery has some level of bycatch. On behalf of the Yukon River Panel, thank you for your diligent work to reduce Chinook salmon bycatch and for considering our comments during your review of incentive-based programs.

Sincerely,

Elizabeth Andrews

Elizabeth Andrews
Co-Chair



Frank Quinn
Co-Chair

C07

Alaska Ship Supply

A DIVISION OF WESTERN PIONEER, INC.

January 19, 2009

Sent via US mail

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Re: Draft Environmental Impact Statement on Chinook salmon bycatch limits in the Bering Sea pollock fishery (the DEIS)

Dear Mr. Mecum:

My name is Larry Soriano, president of Western Pioneer Inc. in Seattle. Our company provides a variety of goods and services to the various Bering Sea fishing fleets including: groceries, marine supplies, clothing, along with real estate and warehouse space in Dutch Harbor Alaska. Our company and its employees greatly depend on the health and well-being of the Bering Sea fishing fleets. We employ proximately 10 people in the Seattle area and 40 people in Dutch Harbor in our various operations.

I am writing to comment on the above referenced Draft Environmental Impact Statement (DEIS) and the analysis contained within it. The DEIS describes a number of alternative management measures designed to limit or control the amount of Chinook salmon that Bering Sea fishermen can take as bycatch in their pollock fishing operations. Once those limits or "caps" are reached, the fishermen must either stop fishing altogether for the remainder of the fishing year or at least for the remainder of the fishing season in which they've been operating.

Depending on the option chosen, the analysis suggests that such caps might result in unrealized pollock harvests worth hundreds of millions of dollars to the pollock fishing industry each year. Such losses would have significant impacts in terms of lost revenues, jobs and other economic activity-- not only for the fishing companies themselves, but also for companies such as ours that provide goods and services to the pollock industry.

Unfortunately, the analysis does not attempt to describe, much less quantify those impacts on companies such as Western Pioneer and Alaska Ship Supply. Without a full understanding of the potential costs that such measures might have on companies such as ours, the North Pacific Council will not have the information it needs to make an

informed decision as to what the appropriate balance should be between the benefits that the proposed caps might provide to salmon fishermen on the one hand and the costs to pollock fishermen and their related support industries on the other. For these reasons, it is imperative that the analysis be expanded to consider both the direct and indirect costs associated with each of the proposed alternatives before the Council takes final action on the proposed bycatch amendment.

If you have any questions about our company, the goods and services it provides to the Bering Sea pollock fleet, and/or the possible impacts on our business that would flow from premature closures of the fishery, please give me a call if the above number and I would be happy to explain further.

Sincerely,

Lawrence J. Soriano

Lawrence J. Soriano, PhD
President
Western Pioneer Inc./Alaska Ship Supply

□rom Gabriel McKilly □g.mckilly□ worldnet.att.net□
□ent □aturday, □anuary □□, □□□□ □□□□pm
To salmonbycatcheis□ noaa.gov
□ub□ect □almon Bycatch □I□

C08

To whom it may concern,
I am writing this as President of Uyak □atives Inc. An Alaska □ative □orporation.
On the salmon bycatch issue I would hope that the cap on salmon bycatch be set at the lowest amount possible. Also it may help to close known salmon migrating areas to trawling.
It is not right to allow the trawlers to catch salmon while fishing for Pollock. or for that matter to let them trawl at all. Trawling is a indiscriminate way to fish. □ou are allowing people to rape the oceans for a little money. There must be a better way to catch the fish than trawling. □ot only does it take away from subsistence fishing it also takes away the salmon for commercial salmon fishermen as well. I also believe it is the main reason the □ea □ion numbers are diminishing you are allowing there food to be taken for fish sticks. Alaska □atives have relied on salmon for hundreds if not thousands of years as a main food source and more recently as a way to make a living. Please put a stop to the raping of the oceans for the profit of a few corporations. It is not right and should be stopped or at least reduced to a more reasonable amount of harvest. Please help stop this nonsense, and do not let the amount of money involved influence your decisions on this matter. There must be a better way to do this type of fishing.

Thank □ou,
Gabriel □. McKilly
President
Uyak □atives Inc.

□rom Katmai □ishing Adventures □□□ □gofish□ bristolbay.com□
□ent □unday, □ebruary □, □□□□ □□□□pm
To salmonbycatcheis□ noaa.gov
□ub□ect □ ritten □omment □ubmission

C09

□ebruary □, □□□□

□ear □ommittee Members;

I have chosen to share my testimony electronically and sincerely appreciate your undivided attention and serious consideration of my views concerning the □hinook salmon by catch issue in the Bering □ea Pollock □ishery. I hope that you would include these with the rest of the testimony you receive.

I am □anci Morris □yon, owner and operator of Alaska □portsman□s Bear Trail □odge □□□, a commercial sport fishing operation. I have been involved in this industry for □□years, I am also vice chair of the Bristol Bay regional federal subsistence advisory council, board member of the Bristol Bay □hamber of □ommerce, board member of □ ells □argo Bank King □almon branch, board member of the □outhwest Alaska □onservation □oalition, board member of □aknek □lectric Association and most importantly King □almon resident, subsistence user and concerned citizen. I write today to identify my concerns surrounding the huge increase in the □hinook salmon by catch issue.

I have read through your e□tensive and analytical □I□and absorbed as much of an □□□plus page document as I am able, not being the author nor a scholar. I find much of it to be very well thought out and realize what a difficult and arduous task you have to determine the best solution for a complicated problem. My comments result from my e□tensive e□perience in the Bristol Bay fishery and my brief review of your □I□

I am concerned that your Alternatives are all fairly liberal with the upper capping number that will trigger some form of protection for the □hinook salmon. I feel that a much safer number would e□ist in the upper □□,□□□to lower □□,□□□ranges. I base that comment on the fact that a number of our river systems have escapement goals of less than □□,□□□fish. I also acknowledge that my absolute preference would be to have a number in the range of less than □,□□□fish taken as by catch, since my home water on the □aknek □iver has an escapement goal of □,□□□fish. That being noted, I see a huge opportunity for the Pollock fishery to inadvertently wipe out an entire season of □hinook fishing for all user groups in an area.

I know that the numbers you propose were analyzed through past performance of the fishery, but you should not assume that □ust because those numbers happened in the past they might be acceptable in the future. □ e have struggled for the past three seasons to ac□uire the □hinook our communities have come to rely upon, when our pre□season forecasts were for ade□uate numbers of fish returning. I know that the Pollock fishery is not the only predator out there, but it is the one that has the numbers to prove our concerns and one that we may actually address and moderate. Please take another look at these numbers and think about the hardship that others might endure if they are not kept at a lower level.

I commend the fishery for offering to implement some of its own regulations and invest in methods to protect the □hinook resource, but I must say I cannot imagine an agency out there that would realistically be able to

e□ecute a fishery if everyone is not on the same page. I think it would be dangerous and possibly unmanageable to have a portion willing to cooperate under one guideline and the remaining portion following a separate set of guidelines. I am sure it will cause dissention and unease among users. I would highly recommend that the alternative implemented would result in everyone playing from the same deck of cards.

As a user of this resource from its origin, I would prefer to see PPA #□implemented with a lower cap limit for the reasons stated above. I also feel it is safer to implement a single cap with a lower limit so that as the fishery progresses, should the limit be reached □uickly, the possibility of over e□tending the cap will not be as potentially harmful to the □hinook runs.

I do not wish to take up any more of your valuable time then is necessary, so in closing I thank you for your attention to my comments. I would urge you to contact me for any further information you might require or for questions you might have concerning my comments. I wish you luck in sorting out this complicated issue and would appreciate receiving any further information that is forthcoming, related to this issue.

Sincerely,

Nanci A. Morris Lyon

Alaska Sportsman□s Bear Trail Lodge LLC

P.O. Box 221 □ King Salmon, AK 99613 - 907-246-8322 □ gofish@beartraillodge.com

United □tates □epartment of □ommerce
□ational Oceanic and Atmospheric Administration
□ational Marine □isheries □ervice
PO Bo□ □□66□
□uneau, AK. □□□□□□66□

□obert □. Mecum,

I'm writing to you on behalf of the Toghotthele □orporation which represents the □ative people of the □enana, Alaska area. □enana is located on the Tanana □iver which connects to the □ukon and subse□uently to the Bering □ea. In many ways the Tanana □iver represents the very lifeline of the people of □enana. It is a natural transportation corridor for us; it is a source of sustenance, and an integral part of our lifestyle here in the □enana region. □ e have serious concerns about the non□□hinook by catch in the Bering □ea. □ e have noticed a steep decline in the number of salmon returning to our area. As you know □hum salmon make up the ma□ority of the non□□hinook by catch and we are very dependent on □hum salmon as a food source for ourselves and our dog teams. □o in many ways our lifestyle is dependent upon the return of the salmon. It is the re□uest of the Toghotthele □orporation that you put measures in place to eliminate or at least minimize the non□□hinook by catch in the Bering □ea. It is our suggestion that you put limits on commercial fisherman in the form of total poundage caught, including by□catch. Then they have to □uit fishing when the reach the total, whether they caught the kind of fish they were targeting or by□catch fish, when they reach a certain predetermined poundage □uota, they are done fishing. This is a much better option then having them throw the □hum □almon back into the sea, dead. They bring whatever they caught to shore and sell it and whatever escapes will return to their spawning grounds, regardless of species. □ e support closure of the fishery after a cap has been reached.

Thank you for your consideration in this matter,

□im □ackett, □□O
Toghotthele □orporation
PO Bo□ □□□
□enana, AK. □□76□

SWAMC
Southwest Alaska Municipal Conference
3300 Arctic Boulevard, Suite 203 Anchorage, AK 99503 p: 907.562.7380 f: 907.562.0438 www.swamc.org
Alaska Peninsula
Aleutian Chain
Bristol Bay
Kodiak Island
Pribilof Islands

SWAMC RESOLUTION 09-06

A RESOLUTION OF SOUTHWEST ALASKA MUNICIPAL CONFERENCE ADDRESSING IMPACTS OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS/RIR/RIFA) ON BERING SEA CHINOOK SALMON BYCATCH MANAGEMENT

WHEREAS, The North Pacific Fishery Management Council (NPFMC) has received the Draft Environmental Impact Statement (EIS/RIR/RIFA) on Bering Sea Chinook Salmon Bycatch Management from the National Marine Fisheries Service (NMFS), and this document is intended to serve as the central decision making document for the North Pacific Fishery Management Council; and

WHEREAS, The proposed action is to amend the federal management plan (FMP) and other federal regulations to establish new measures to minimize Chinook salmon bycatch in the Bering Sea Pollock fishery to the extent practicable while achieving optimum yield in the Pollock fishery; and

WHEREAS, The NPFMC is reviewing options to reduce Chinook bycatch such as imposing sector hard caps or other restrictive limits on the amount of Chinook salmon that can be taken as bycatch in the Bering Sea Pollock fishery with the end result being a possible shut down of the entire Bering Sea Pollock fishery during A/B fishing seasons; and

WHEREAS, More research regarding the origin of Chinook salmon taken as bycatch in the Bering Sea Pollock fishery as well rivers of origin, should be addressed, and improved research on the overall abundance figures of the Salmon resource in the Bering Sea needs to be better understood before restrictive hard caps or other measures are put in place ; and

WHEREAS, The Draft EIS thoroughly analyzes the benefits of the proposed Chinook bycatch hard caps that are designed to provide additional fish for salmon fishermen in Western Alaska; and

WHEREAS, The Draft EIS is altogether lacking in ***any meaningful*** analysis of the direct and indirect economic consequences that could cost hundreds of millions of dollars in lost revenues for Pollock-dependent communities in Southwest Alaska and the State of Alaska; and

-MORE-

WHEREAS, Support sector businesses in Pollock-dependent communities in the SWAMC region could also be devastated by a restrictive hard cap on Chinook bycatch that could potentially close the Pollock fishery; and

WHEREAS, SWAMC supports the responsible development and implementation of reasonable limits on Chinook bycatch, and further supports the Pollock Industry's efforts to utilize salmon excluder devices in their fishing nets, rolling hot spot closures, inter-cooperative agreements that help reduce bycatch, and penalizing fishermen who have high bycatch levels, in that all of these measures have shown great promise in reducing Chinook bycatch; and

NOW THEREFORE BE IT RESOLVED, the membership of the Southwest Alaska Municipal Council strongly urges the NMFS to expand their analysis of the preferred alternative in the DRAFT EIS to include a full cost benefit analysis of the impacts to ***all*** areas of western Alaska, including ***all*** fisheries-dependent communities and CDQ groups, before the North Pacific Fishery Management Council takes final action on the proposed Chinook bycatch amendment.

PASSED AND ADOPTED by a duly constituted quorum of the Southwest Alaska Municipal Conference Membership this Thirtieth day of January, 2009.

Signed:

Tom Abell
President

Attest:

Michael Catsi
Executive Director

KAWERAK , INC. ○ P.O. Box 948 ○ Nome, AK 99762

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January 30, 2009

Mr. Doug Mecum, Regional Administrator
NOAA Fisheries, Alaska Region
PO Box 21668
Juneau, AK 99802-1668

Re: Salmon Bycatch EIS and Government-to-Government Consultation

Dear Mr. Mecum:

The people of the Bering Strait/Norton Sound region depend on the salmon they harvest and put away each year. Salmon is a healthy, fresh food and teaching the traditional methods for food production is a time honored way to involve our children. We are very concerned about the bycatch of our salmon by large trawl fishing boats. We are also concerned that the tribal consultation process was not initiated sooner. The following summarizes our position and recommendations regarding the Chinook Salmon Bycatch Environmental Impact Statement.

Kawerak recommends that the North Pacific Fishery Management Council (NPFMC) take immediate action to reduce Chinook salmon bycatch in the Bering Sea pollock fishery. Kawerak also supports an annual Chinook salmon bycatch allocation hard cap of no more than 30,000 fish. This hard cap should decline over time, as bycatch reduction methods result in declining bycatch rates in the pollock fishery. This hard cap, while low compared with most alternatives, is still too high given the poor state of Chinook salmon stocks in Western Alaska.

Kawerak opposes any transferability of Chinook salmon bycatch allocations between fishery sectors or individual vessels. We oppose transferability for two reasons. First, it is unconscionable to allow the pollock industry to buy and sell Chinook salmon bycatch allocations when it is illegal for subsistence salmon fishermen to do the same. Second, all transferability options will result in greater use of salmon bycatch allocations and will result in less salmon returning to the region's rivers and streams. Transferability options would allow a vessel with low bycatch rates to transfer their unused bycatch allocation to a vessel with high bycatch rates, and the result is that both vessels' bycatch allocations of salmon may be taken.

Kawerak supports seasonal time/area closures of areas that are identified as having high rates of Chinook salmon bycatch. Aside from the simplicity of such management measures, this bycatch management method has proven effective in other Bering Sea fisheries. We also feel that the National Marine Fisheries Service (NMFS) should modify these time/area closures as necessary, based on new bycatch data as it becomes available. Vessels should not be allowed exemptions to these time/area closures for any reason.

Social/Cultural Impacts

Kawerak also believes that the social/cultural analysis of the human environment and the environmental justice analysis in the Draft EIS are woefully incomplete. The draft EIS does not have a section devoted to the "Human Environment," nor does it discuss the "Cumulative Impacts" of the proposed actions. The Executive Summary notes some of these and other deficiencies, but that does not excuse them.

EIS documents are intended, in part, to assess impacts to the human environment if it is thought that there will be a significant impact to that environment. While social or economic concerns in and of themselves do not necessarily require an EIS to be completed, they must be considered if an EIS *is* done. Kawerak adamantly believes that the proposed actions (including "No Action") have the potential to significantly affect the human environment of the Bering Strait region.

Additionally, the EIS does not sufficiently discuss the potential economic impacts to coastal communities. The EIS *does* address the "costs of forgone harvest in the pollock fishery" but makes no assessment of the costs of foregone subsistence salmon harvests. Communities such as Unalakleet have, at various times, forgone subsistence salmon fishing in order to help conserve stocks in the hope of increasing future returns. This is necessary due, in part, to the high incidence of bycatch in the pollock industry which intercepts Chinook and other salmon prior to them reaching subsistence fishing grounds. The contribution of the pollock industry to the declining salmon runs in western Alaska is also not sufficiently analyzed. We recognize that there is a lack of data on certain topics such as determining the river of origin for each by-caught fish; however this information is vital to assessing impacts to coastal communities reliant on subsistence salmon harvests. This is particularly important because declining salmon returns have already had impacts on coastal communities. If anything, this lack of data should make NMFS extremely conservative when it comes to assessing allowable bycatch, which is not the case with this EIS.

The EIS chapter on Environmental Justice is also lacking an appropriate scale analysis of the impacts to low-income communities in our region. While the EIS does a good job of describing environmental justice and how its principals should be applied, and provides facts about the current situation of some minority populations, it fails to actually apply the principals to Alaska Native coastal communities in detail or to provide much analysis concerning them. Much more time is spent addressing potential impacts to minority populations working within the pollock industry. While impacts to these populations need to be addressed as well, it is unclear why the EIS would include more analysis on these populations than on resident Alaska Native populations which are likely to experience far greater impacts. We recommend you review facts and information in Kawerak's *2008 Bering Strait Region Data and Statistics Report* which contains facts on population, birth and death, education, unemployment and poverty, cost of living, suicide, mental health, crime rates and village summaries of our twenty communities. We can email or send a hard copy.

Overall, the EIS lacks a real understanding of subsistence communities and subsistence lifestyles. The most egregious example of this can be found in section 9.3.2 where the mixed economy of villages is described as an "underground economy" (as opposed to the "above-

ground economy"). Underground economies are commonly understood to be illegal, black market, or purposefully hidden. To describe the mixed economy of rural Alaska in this way exposes the ignorance of the agency as to the reality of subsistence and subsistence exchanges. Additionally, as the EIS notes that its analysis is based solely on information from the "above-ground economy." For all intents and purposes, it is stating that some of the most important aspects of coastal communities, and the ones that are likely to be most impacted by the proposed actions, are being purposefully ignored.

Another example of lack of understanding can be seen in section 9.4.2 with the repeated uses of the term "evolve." To use the term "evolve" is to imply that a society is constantly working towards something 'better' than what it currently is (or was). This linear view of change, as applied in the EIS, implies that "successfully" adapting to a monetary economy is the next step in acculturation into a Euro-North American lifestyle (and the "above-ground economy").

Finally, though this issue is slowly being addressed, it is worth noting that the National Marine Fisheries Service Government-to-Government Consultation efforts have been less than impressive. This would include their resistance to developing formal and accountable consultation processes and protocols. We suggest you can address many of the issues discussed in this paper by carrying out appropriate consultation, to hear from Tribes with the greatest concerns and to involve them in project development as early in the process as possible. The tribes should be at the table at the beginning of the process when alternatives are being developed.

Unfortunately, the Draft Bering Sea Chinook Salmon Bycatch Management EIS does not provide enough or detailed enough analysis as to how the proposed action and its various alternatives may affect coastal Alaska Native communities.

If you require any additional information, please contact Michael L. Sloan, Fisheries Biologist, at 907-443-4384 or msloan@kawerak.org.

Sincerely,
KAWERAK, INC.

M. Edwardo for LB

Loretta Bullard, President

Attachments:
Kawerak Board Resolution

KAWERAK, INC. ○ P.O. Box 948 ○ Nome, AK 99762

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RESOLUTION 2008-11

A RESOLUTION REQUESTING THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL TO REDUCE CHINOOK SALMON BYCATCH IN THE BERING SEA

WHEREAS, the *North Pacific Fishery Management Council*, in association with the National Marine Fisheries Service, is charged with responsible management of marine fisheries resources in Alaska; and

WHEREAS, the National Marine Fisheries Service is the federal agency responsible for carrying out government-to-government tribal consultation; and

WHEREAS, Kawerak, Inc. is a tribally authorized non-profit consortium whose mission is to assist, promote and provide programs and services to improve the social, economic, educational, and cultural well being of the people within the Bering Strait region; and

WHEREAS, the communities within the Bering Strait region include: Brevig Mission, Council, Diomede, Elim, Gambell, Golovin, King Island, Koyuk, Mary's Igloo, Nome, Savoonga, Shaktoolik, Shishmaref, Solomon, Stebbins, St. Michael, Teller, Unalakleet, Wales and White Mountain; and

WHEREAS, Chinook salmon incidental bycatch taken in association with the Bering Sea commercial pollock fishery has risen in recent years while Chinook salmon stocks in our region's rivers have dropped; and

WHEREAS, subsistence fishing activities are a priority for the residents of the Bering Strait region and constitute a vital role in our culture and tradition, and these activities have been negatively impacted by the loss of Chinook salmon from our region's rivers; and

WHEREAS, the *North Pacific Fishery Management Council* is currently developing regulations to reduce incidental Chinook salmon bycatch in the Bering Sea pollock trawl fishery; and

WHEREAS, proposed alternatives currently being considered fail to adequately recognize the importance of this issue to the residents of the Bering Strait region, and fail to emphasize the negative impact of this issue on the culture, traditions, health and economy of our region; and

WHEREAS, Kawerak, Inc. believes that all of the proposed bycatch caps under review are immoderately high and that an absolute maximum bycatch of 30,000 Chinook should be established and should be further reduced in the future; and

NOW THEREFORE BE IT RESOLVED, that Kawerak, Inc. requests that the *North Pacific Fishery Management Council* take action to reduce Chinook salmon bycatch in the Bering Sea by imposing an immediate hard cap on the trawl pollock fishery of 30,000 or less Chinook salmon; and

NOW THEREFORE BE IT FURTHER RESOLVED, that Kawerak, Inc. requests new regulations be promulgated through the Chinook Salmon Bycatch EIS process by the *North Pacific Fishery Management Council* and be formulated in such a manner as to effectively restrict Chinook salmon by catch in the Bering Sea to historically conservative amounts; and

NOW THEREFORE BE IT FURTHER RESOLVED, that Kawerak, Inc. requests that National Marine Fisheries Service fulfill their legally mandated requirement to develop and institute a tribal consultation process and protocols, continue with consultation between National Marine Fisheries Service and Kawerak region tribes regarding Chinook salmon bycatch, and that consultation with any and all tribes potentially affected by the upcoming Chum Salmon Bycatch Management Environmental Impact Statement be initiated.

By: Robert Keith
Robert Keith, Chairman

CERTIFICATION

I, the undersigned Secretary of the Kawerak, Inc. Board of Directors, hereby certify that the foregoing resolution was adopted by majority vote of the Board of Directors of Kawerak, Inc. during a duly called meeting on this 11th day of December.

By: _____
Kawerak Board Secretary

BERING SEA ELDERS ADVISORY GROUP

P.O. Box 49
Kwigillingok, Alaska 99622-0049
(907) 588-8114/8212
(907) 588-8429-fax
kwkadmin@starband.net

February 20, 2009

Doug Mecum
Acting Regional Administrator
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
709 W. 9th St.
Juneau, Alaska 99802

RE: Comment on the Chinook Salmon Bycatch Draft EIS

Dear Mr. Mecum:

The Bering Sea Elders Advisory Group (BSEAG) is authorized by thirty-two (32) participating tribal governments in the Yukon/Kuskokwim and Bering Straits regions to enhance traditional guidance to our villages on marine fisheries issues.

We formed in 2007 to prepare recommendations for decisions scheduled for 2011 regarding the northern bottom trawl boundary and the future Northern Bering Sea Research Plan. As the Chinook bycatch situation has become increasingly more urgent to our people, the BSEAG decided to support member Tribes in their calling for an immediate bycatch cap of 30,000 Chinook salmon in the Pollock fishery.

The Draft EIS does not adequately account for the impact of high seas salmon bycatch on the Inupiaq, Yupik or Athabascan peoples. Our people are experiencing disastrously low returns of Chinook salmon to some our rivers and we are unable to harvest enough salmon to eat. This causes a ripple effect throughout our villages. Not only is salmon an important food source, but harvesting and processing salmon is how we teach our children to respect natural resources and how to survive on the resources in the lands where we have always lived. As salmon returns to our rivers decline, fewer people go to fish camp, less fish is preserved for the winter and we cannot practice and pass on our traditions. Our Elders say the land is lonely when the people are not there. There is no dollar value to place on this but the cost is inestimable.

Our subsistence practices and, specifically, ties to salmon go beyond commercial value or the monetary replacement cost of food. The English language term "subsistence" is not in our Yupik language and does not describe the totality of our ties to salmon.

> Traditionally, Alaska Native peoples derive their food, nutrition, ethics and values of stewardship, languages, codes of conduct, stories, songs, dances, ceremonies, rites of passage, history, and sense of place and spirituality from the lands, waters, fish and wildlife they have depended on for millennia.[1]

> Many White persons imagine that subsistence is merely the act of an individual going hunting or fishing. Subsistence, in actual fact, is a complicated economic system and it demands the organized labor of practically every man, woman and child in a village. There are countless tasks, such as the maintenance of equipment (nets, snowshoes, boats, fish wheels, outboard motors, snowmobiles, etc.), preparing the outfit for major hunting and fishing expeditions, setting and checking trap lines, dressing thousands of pounds of fish, gathering berries and edible plants, tanning skins and hides, making things from them – clothing, footgear, containers, sleds, tents, kayaks – sharing harvest of meat and fish, and trading with other communities.[2]

This economic and cultural value cannot be quantitatively compared to the Pollock fishery, but the Chinook Salmon EIS must recognize it as irreplaceable.

The Draft EIS acknowledges intangible values to only a limited extent while the overall emphasis is on the costs to the Pollock fleet if a bycatch cap causes the Pollack fleet to forego some Pollock catch. The document projects high cost to the Pollock fleet but does not consider that the Pollock fleet will most likely undertake special means to avoid high bycatch areas in order to catch their quota. Therefore, the Draft EIA may over estimate the costs. In any case, foregoing a small percentage of the profit of some years is not comparable to the tangible and intangible impacts that Chinook salmon bycatch has on our time tested ways of life.

The Magnuson-Stevens Act requires that management measures "minimize bycatch to the extent practicable." Continued high Chinook bycatch creates a situation that is intolerable for Tribes who rely on salmon for food, traditional economy and culture. A cap that allows continued high bycatch to persist is not "practicable" for people.

The International Covenants on Civil and Political Rights[3] says "In no case may a people be deprived of its own means of subsistence". We ask the National Marine Fisheries Service to establish a 30,000 Chinook bycatch cap for the Bering Sea Pollock fishery to ensure more salmon returns to our rivers. Chinook salmon that is taken as bycatch by the offshore Pollock fleet is fish that will not return to our rivers. There is no such thing as "surplus" fish that can be sacrificed for bycatch because every fish that returns to our rivers is important for meeting our subsistence needs, for supporting our small commercial salmon harvest, and for contributing to the continued migration of salmon and future generations of our people.

The Bering Sea Elders Advisory Group does not strive to bring harm to the Pollock fleet. Our villages are beneficiaries of a successful Pollock fishery. We seek solutions that first and foremost protect subsistence, the foundation of our survival for the last 10,000 years on this land we call home. The conservation and cultural importance of maintaining healthy salmon is of utmost importance.

Sincerely,
BERING SEA ELDERS ADVISORY GROUP
David Bill, Sr., Chairman

Arthur J. Lake
Executive Director

C/O Native Village of Kwigillingok P.O. Box 49 Kwigillingok, AK 99622

YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

January 26, 2009

Mr. Eric Olson, Chair
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501

Mr. Doug Mecum, Acting Regional Administrator
NOAA Fisheries, Alaska Region
PO Box 21668
Juneau, AK 99802

Re: Agenda Item C-3 Salmon Bycatch

Dear Mr. Olson, Mr. Mecum and Council members:

The Yukon River Drainage Fisheries Association (YRDFA) appreciates the opportunity to comment on the issue of salmon bycatch. YRDFA is an association of commercial and subsistence fishermen and women on the Yukon River in Alaska with a mission of promoting healthy, wild salmon fisheries on the Yukon River. Given the dire state of Yukon River Chinook salmon and salmon dependant communities, we urge the Council, as detailed below to:

1. Adopt a hard cap of no more than 32,500 immediately;
2. Establish a stair-stepped approach which further reduces the hard cap over time;
3. Develop and secure funding for research about Western Alaska salmon throughout their lifecycles;
4. Reject the industry incentive program proposals.

The state of Chinook salmon, and the communities who depend on them for sustenance and income, has deteriorated rapidly since the Council first began this action, and even since the last Council meeting. As you have heard, the 2008 Chinook salmon run was very poor on the Yukon River, as well as throughout Western Alaska. On the Yukon, subsistence fishing time was reduced by half in Alaska part way through the season, and people met 40 percent or less of their subsistence needs in some places. In Canada, subsistence (aboriginal) fishers voluntarily restricted themselves to half of their historic take. In one community these voluntary restrictions resulted in a total Chinook harvest of only 160 Chinook salmon. The aboriginal harvest for the entire Canadian portion of the run was 2,766 fish, based on preliminary data. There was no directed commercial Chinook salmon fishery on the Yukon in 2008, and the commercial chum fishery was delayed to allow Chinook to pass through, reducing the chum salmon harvest as well. Despite these restrictions, estimated Chinook salmon spawning escapement into Canada was only 32,700 fish, 27 percent below the Yukon River Panel agreed upon goal of 45,000 fish.

The outlook for this coming summer is no better: the Alaska Department of Fish and Game (ADF&G) and the U.S. Fish & Wildlife service are preparing users for further subsistence restrictions in 2009, and have already stated that it is unlikely that a commercial Chinook fishery will be allowed. Fishermen and women throughout the watershed are participating in teleconferences to develop management measures which can be used to restrict their own subsistence harvest to provide escapements to ensure healthy salmon runs in the future.

725 CHRISTENSEN DRIVE, SUITE 3-B • ANCHORAGE, ALASKA 99501
TELEPHONE: 907-272-3141 • 1-877-99YUKON(9-8566)
FAX: 907-272-3142 • EMAIL:info@yukonsalmon.org
WWW.YUKONSALMON.ORG

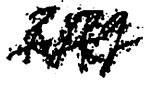
The weak Chinook salmon run of 2008 has already created problems of crisis proportions along the Yukon River. While subsistence restrictions limited the amount of food available for the winter, the lack of a commercial Chinook fishery cut off one of the only sources of income for many Yukon River residents. Cold winter temperatures and high fuel prices have made the lack of commercial fishery income even more drastic this season. The promise of the same or worse Chinook salmon return in 2009 is no comfort.

In light of the current state of Yukon River Chinook salmon and the salmon-dependant people of Western Alaska it is essential that this Council put a hard cap on Chinook salmon bycatch immediately. While any amount of bycatch is too much under these circumstances, we understand that the Council is required to balance the need to reduce bycatch with achieving yield from the pollock fishery. We therefore recommend the Council **adopt a hard cap of no more than 32,500 immediately**. This cap level will reduce bycatch to levels experienced before the Yukon River Salmon Agreement was signed, honoring our international commitments under this treaty and providing necessary protections to Chinook salmon throughout Western Alaska. The hard cap should be a declining cap, reducing salmon bycatch to levels below 32,500 over time while allowing the pollock fishery time to adapt their operations to these expectations. The Council should include in this action a commitment to develop and secure funding for research about Western Alaska salmon, including but not limited to genetic stock identification of salmon caught as bycatch, marine research such as the BASIS program and in-river management and enumeration. Research planning must involve Western Alaska and tribal groups and can provide a scientific basis from which to inform future actions as we learn more about Western Alaska Chinook salmon throughout their lifecycle.

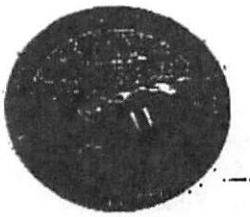
In regard to the industry incentive programs, this Council should reject both proposals as neither can guarantee that it will achieve bycatch reduction to a level sufficient to warrant a cap of 68,000, more than twice that being recommended by many Western Alaska and tribal groups. While it is difficult to provide concrete comments due to the developmental status of the industry proposals, it is clear that both systems depend to some degree on the need for some boats to buy bycatch credits, or conversely a desire to keep bycatch levels down so as to avoid buying credits. It is apparent that a hard cap level of 68,000, based on historical data, will rarely be hit - only in 2006 and 2007 has that number been exceeded, even without the threat of a hard cap in place. Using the most basic market theory, there is little incentive to buy credits, or fear of losing them, when the hard cap is unlikely to be hit. Beyond this specific inadequacy, industry analysts themselves indicated at the recent salmon bycatch workgroup that they cannot guarantee that these programs will reduce bycatch!

Overall, with Yukon River Chinook suffering, and the people of the Yukon making enormous sacrifices in their own subsistence harvest and commercial fishery, it is imperative that the Council immediately puts in place a system which is guaranteed to reduce salmon bycatch in the pollock fishery. Only a hard cap set at 32,500 or below can provide the degree of protection required to allow Western Alaska Chinook salmon to recover. Thank you for your continued efforts on this issue. We look forward to working with you to reduce Chinook salmon bycatch in the Bering Sea pollock fishery.

Sincerely,



Rebecca Robbins Gisclair
Policy Director



OCEANA Protecting The World's Oceans
725 South Franklin Street, Suite 410 +1.877.586.4050
Juneau, AK 99801 USA www.oceana.org

January 27, 2009

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

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

RE: Salmon Bycatch in the Bering Sea Pollock Fishery

Dear Mr. Olson and Mr. Mecum:

Collectively, we have submitted dozens of letters and testified on numerous occasions over the years to express our concerns about salmon bycatch in the Bering Sea pollock fishery. Currently, it is our understanding that in-the-water regulations to control salmon bycatch, if there are any, would not be enacted until 2011. The purpose of this letter is to help you hasten your rule-making by clearly articulating our position on key points, in particular the critical importance of implementing a hard salmon bycatch cap and establishing a comprehensive salmon research and management program.

First and foremost, the North Pacific Fishery Management Council (NPFMC) and the National Marine Fisheries Service (NMFS) must take immediate action to minimize the wasteful bycatch of Chinook salmon in the groundfish fisheries that you manage. We strongly urge you to set an absolute limit, a hard cap, to the number of Chinook salmon that can be killed annually by the Bering Sea pollock fishery. For the Bering Sea pollock fishery, we believe the Chinook hard cap should be no greater than 32,500, and we support the Alaska Federation of Natives (AFN) Resolution 08-17 to establish an annual hard bycatch cap of no more than 30,000 Chinook salmon, based in part on the 2009 Alaska Department of Fish and Game Yukon River Chinook salmon forecast and the US-Canada treaty obligations under the Pacific Salmon Treaty.

Setting an annual hard bycatch cap of no more than 32,500 Chinook salmon is a first step. The goal must be to further minimize and reduce salmon bycatch. Thus, the Chinook bycatch cap should be a declining cap, subject to annual review for the amount by which the cap should be decreased. This review should include information on escapement goals and success in meeting those goals, reports on the status of subsistence, commercial and personal use salmon harvests, updates on the stock-of-origin of the bycatch, and new insights in ocean research.

The challenge of managing salmon bycatch exemplifies the need to develop and fund a comprehensive research program to adaptively manage salmon at all life-stages. This gravel-to-gravel research plan which would emphasize hiring and development of local expertise would include community-based salmon research like habitat assessments, integration of traditional knowledge, in-river and ocean sampling for genetic stock identification, and the temporal and spatial use of ocean habitat.

Mr. Olson and Mr. Mecum
January 27, 2009

Further, regarding the pollock industry's proposal for internally-managed programs to control salmon bycatch, we do not support any program that allows for the taking of any more than 32,500 Chinook salmon. The current ICA proposals before you suffer from a failure of transparency, public participation, scientific rigor and management oversight and offer no assurance that salmon bycatch will be reduced. 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, but all must operate under an annual hard cap of no more than 32,500 Chinook salmon with annual review as above for declining bycatch allowances. Finally, under no circumstances should NMFS and the Council imply or confer ownership rights of the Chinook salmon resource to the pollock fleet.

In summary, we support action to:

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.

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.

Sincerely,

Jim Ayers
Vice President, Oceana

Myron Naneng
President, Association of Village Council Presidents

Melanie Edwards on behalf of
Loretta Bullard
President, Kawerak Inc.

STEBBINS COMMUNITY ASSOCIATION
IRA COUNCIL
P.O. Box 71002
Stebbins, Alaska 99671
PH. (907) 934-3561 / FAX 934-3560

January 30,2009

Mr. Eric Olson, Chair
North Pacific Fisheries Management Council (NPFMC)
605 W. 4th. Ave. Suite 306
Anchorage, Ak. 99501- 2252

Mr. Doug Mecum, Regional Administrator
NOAA Fisheries,Alaska Region
P.O. Box 21668
Juneau, Ak. 99802- 1668

Re: Chinook By-Catch

Dear Mr. Olson and Mr. Mecum,

I was not able to come in person and I hope that you will excuse me and accept this testimony.

It is good to know that you both have Alaska Addressess. First , I am going to provide some information of Stebbins Community. We have a State incorporated ." City of Stebbins". 1968 and Stebbins IRA (Indian Reorganization Act of 1934) Stebbins IRA established with this Act in 1939 and have served Stebbins since then. Stebbins IRA is a political,social and economic entity to serve it's 814 members. Stebbins is cash poor and a natural resource rich area. Stebbins membership (related to Stebbins IRA) and Residents,same people, are related to City of Stebbins,natives and non-natives. Prior to the passage of the IRA Consitution and bylaws and long before the inception of the City, the village was governed by an active Traditional Tribal Council.
Stebbins is a Yupik Eskimo village located northwest coast of St. Michael Island (notable due to Nome Gold Rush and the U.S. Army Post which were put there to enforce law @ Nome. The isolated community is 120 miles southeast of Nome,nearest regional hub and 870 miles northwest of Anchorage (the largest commercial center for goods and services). Stebbins is accessible and serviced by Air Transportation year round.
Stebbins is derived from Stevens. Elders could not could not sound out the "V" and pronounced Stebbins. Stebbins was first recorded in 1898 by the U.S. Coast and Geodetic survey.
In 1950, Stebbins was described as a village of Yupik Eskimos who make their livelihood by hunting,fishing,and herding reindeer. The economy of Stebbins remains primarily herring fishing (now inactive,due to market conditions. Food fish of the Chinook and other salmon species
All cash positions are in local government(IRA and City,village corporation established by Alaska Native claims Settlement Act of 1971,School, and two local grocery stores. Seasonal jobs are firefighting,local projects, if any.
Stebbins receives State Services of Food Stamps, 64 or 13% get food stamps and UDSA Food Bank Service,administered by Stebbins IRA. 34 with State and 20 with USDA Program, in 2008.
83 Or 10% also received heating assistance in 2008. Data is derived from the 2 fee agents, IRA Tribal Coordinator and the local fuel company
Since inception of commercial salmon in the Norton Sound district,Stebbins is excluded from commercial fishing of salmon,the justification is that we intercept would intercept salmon.

The by catch of Chinook salmon has a negative impact to the coastal areas of Bristol Bay, Yukon - Kuskokwim coastal and rivers,Norton Sound and the Country of Canada,that depend on the resource for subsistence and commercial. I am a commercial salmon permit holder,issued by the State and voluntarily and due to cost prohibitiveness,late openings,shorter fishing time have not fished in 2007 and 2008 and will not participate in 2009 in the pursuit of Chinook salmon fishing,but will concentrate on subsistence fishing. The 130 to 150,000 (my understanding) by catch of Chinook Salmon in 2007 is very alarming and the by catch of Chinook and chum are documented from 2003 to 2007,2008, its no wonder that Chinook salmon numbers are coming down, to those coastal areas .
Consistent with Association of village Council Presidents,that encompasses the 56 Yukon / Kuskowim Delta,villages. Native Village of Stebbins(Stebbins and St. Michael are within the Yukon Delta National Wildlife Refuge,,USFWS) favors a 30,000 cap of Chinook by catch. Although the Pollock fishery is justified in commercially feeding the masses, the harvesters in the Bering Sea have and are contributing drastically to the decline of the Chinook and chum salmon. Chinook / King Salmon feed on the Pollock and the by catch cannot be avoided and will continue.despite efforts to lower the by catch.
Thank you for giving me the opportunity to testify.

Fred

Fred Pete,Sr.
President

C017
2/6/09
Western Interior Alaska Subsistence Regional Council

Western Interior Alaska Subsistence Regional Advisory Council
c/o Office of Subsistence Management
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
Phone: 1-(907)-456-0277 or 1-800-267-3997
Fax: 1-(907)-456-0208
E-mail: Vince_Mathews@fws.gov

January 30, 2009

Robert D. Mecum, Acting Administrator
Alaska Region, National Marine Fisheries Service
National Oceanic Atmospheric Administration
Post Office Box 21668
Juneau, Alaska 99802

Re: Comments and Recommendations on the Draft Environmental Impact Statement for the Bering Sea Chinook Salmon Bycatch Management

Dear Mr. Mecum:

The Western Interior Alaska Subsistence Regional Advisory Council has a keen interest in the sustainability of the returning salmon to Western Alaska, especially the Yukon and Kuskokwim rivers. The Regional Council again strongly recommends that the Bering Sea/Aleutian Islands pollock fishery salmon bycatch be reduced immediately. Rural subsistence and commercial fishermen across the Yukon and Kuskokwim river drainages are facing another difficult Chinook salmon fishing season in 2009 when the conservation burden to meet escapement needs in Alaska and Canada may result in subsistence families not meeting their Chinook salmon needs.

The twenty-seven villages along the Yukon and Kuskokwim rivers, within the Western Interior Region the Regional Council represents, heavily depend on subsistence caught salmon for personal and community consumption and for their livelihoods. Every community within our Region, through sharing or trading, utilizes returning salmon for a significant part of their subsistence diet. The dramatic rise in salmon bycatch, especially of Chinook salmon, by the Bering Sea/Aleutian Islands pollock fishery cannot be allowed to continue to threaten the future sustainability of the Yukon River salmon stocks and the continuation of a subsistence way of life in Interior Alaska. The continuing decline in the returning salmon stocks has to stop and a key component with reversing this decline is the immediate reduction in the BSAI Chinook bycatch.

The Regional Council appreciated the presentation from Dr. Diana Stram and Nicole Kimball, and the discussions with North Pacific Fishery Management Council members Sam Cotton and Dave Benson during our public meeting on October 27, 2008 in McGrath, Alaska. Based on the presentation and discussions, past Regional Council discussions, and personal knowledge of the

Regional Council members, the Regional Council unanimously adopted the following recommendations for the DEIS:

1. The Regional Council recommends a hard cap of 29,323, which represents the long-term historic range of Chinook salmon bycatch. A hard cap within the 10-year average 29,000 – 38,000 would be acceptable to the Regional Council.
2. The Regional Council does not support the high cap of 68,000 fish in the preferred alternative. This figure represents the average of the three highest bycatch years on record. This cap level is unacceptable.
3. If the higher cap figures are adopted, selling or trading the caps should not be allowed within the fishery. Such activity would result in reaching the higher cap figures instead of providing incentive for the fishing industry to have bycatch amounts below the caps.
4. All salmon bycatch should be processed and returned to the Alaskan communities within the rivers of origin by apportionment by percentage of the bycatch. This bycatch distribution to Alaska would not replace the subsistence activities of the people of Western and Interior Alaska.
5. The Regional Council requests a review of the pollock quota and consideration of season time reductions to protect the pollock fish stocks. Our concern is that as the desired commercial fish stock becomes less abundant more fishing effort follows, which results in additional salmon bycatch.

The subsistence and commercial in-river fishermen and their communities are incurring extreme expense from the increasing fishing restrictions, high fuel costs, and their decreasing catch per unit of effort from the pollock fishery's salmon bycatch. Rural villages are declining in population because of the increasing high cost of living in rural Alaskan communities. Couple these challenges with the declining size of the returning Chinook salmon and fewer large females reaching the spawning grounds and we may be looking at a serious conservation concern that may result in a serious burden on subsistence fishermen they are unable to withstand.

The Regional Council is authorized by the Alaska National Interest Lands Conservation Act and chartered under the Federal Advisory Committee Act. Section 805 of ANILCA and the Regional Council's charter establish the Regional Council's authority to initiate, review and evaluate proposals for regulations, policies, management plans, and other matters related to subsistence uses of fish and wildlife on public lands within the region and to provide a forum for the expression of opinions and recommendations on any matter related to the subsistence uses of fish and wildlife on public lands within the region.

Thank you for the opportunity to present the Regional Council's recommendations on the DEIS. We and the residents of the Western Interior Region look forward to a substantial reduction in the BSAI salmon bycatch. A substantial reduction would rebuild the Yukon River salmon stocks so that, first and foremost, biological escapement needs would be met, the subsistence needs of Alaska and Canada would be met, and the Yukon and Kuskokwim rivers' commercial fisheries would return. Continuation of a subsistence way of life and the economic underpinnings of our villages depend on viable and sustainable salmon stocks.

If you have any questions or need additional information please, contact me or our council coordinator, Vince Mathews (contact information in letterhead). I can be reached directly at 1-907-678-2007.

Sincerely,

Jack Reakoff, Chair

cc: Eric Olson, Chair, North Pacific Fishery Management Council
Michael R. Feagle, Chair, Federal Subsistence Board
Peter J. Probasco, Assistant Regional Director, Office of Subsistence Management
Rod Campbell, Fisheries Liaison, OSM
Larry Buklis, Chief, Fisheries Division, OSM
Tim Jennings, Fisheries & Ecological Service, Fish and Wildlife Service
Ann Wilkinson, Chief, Council Coordination Division, OSM
Jill Klein, Executive Director, Yukon River Drainage Fisheries Association
David Bedford, Deputy Commissioner of Fisheries, ADF&G
Sue Entsminger, Chair, Eastern Interior Alaska Subsistence Regional Advisory Council
Lester Wilde, Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Western Interior Alaska Subsistence Regional Advisory Council members

World Wildlife Fund
Kamchatka/Bering Sea Ecoregion
406 G. Street, Suite 303
Anchorage, AK 99501 USA

Tel: (907) 279-5504
Fax: (907) 279-5509

www.worldwildlife.org

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,

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

Rec. 02-23-2009
5:04pm

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

World Wildlife Fund
406 G. Street, Suite 303, Anchorage, AK 99501 USA
Tel: (907) 279-5504 Fax: (907) 279-5509

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.

World Wildlife Fund
406 G. Street, Suite 303, Anchorage, AK 99501 USA
Tel: (907) 279-5504 Fax: (907) 279-5509

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.

World Wildlife Fund
406 G. Street, Suite 303, Anchorage, AK 99501 USA
Tel: (907) 279-5504 Fax: (907) 279-5509

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 economics 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

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 to 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

STATE OF ALASKA

Department of Fish and Game
Boards Support Section

Stan Zuray, Chair

Tanana Rampart Manley Fish and Game Advisory Committee

North Pacific Fishery Management Council
605 W 4th Avenue Suite 306

November 19, 2008

Anchorage AK 99501

To Whom It May Concern:

The Tanana-Rampart-Manley Fish and Game Advisory Committee represents people from those three villages in central Alaska. We are writing to you to let you know the Pollock fishery Chinook by-catch is having a severe effect on Chinook Salmon numbers in the Yukon River currently, and must be curtailed at once.

We feel that it is extremely irresponsible that the Bering Sea Pollock fishery continues to harvest such a huge number of Chinook Salmon as by-catch, particularly since the Yukon River Chinook salmon run is clearly under stress biologically within the river system. What this run does not need is indiscriminate harvest before it even gets to the mouth of the Yukon.

We ask that:

Chinook by-catch numbers must not exceed 30,000 for any reason. This is appropriate for conservation reasons, as well as for honoring a legally binding treaty that is now in force between Canada and the United States. Pollock fishing must stop if the numbers exceed 30,000: there must be no "soft cap" or other extralegal methods of allowing this greedy practice to continue.

We also want to voice our concern that bycatch of other species, such as chum salmon, be addressed immediately.

Succinctly put, the Pollock fishery as it exists now is a clear example of a "dirty" or wasteful fishery, and this bulk protein harvest is putting the Chinook run of the Yukon River, one of the world's last wild salmon runs, in jeopardy.

Please reply to this Advisory Committee about what actions the Council intends to take to address this problem.

Sincerely,
Stan Zuray, Chairman, TRM Committee

Stan Zuray

Cc/ National Marine Fisheries Service
PO Box 21668
Juneau AK 99802

2/6/09 C020
Dr Rivard to Council

Eastern Interior Alaska Subsistence Regional Advisory Council

c/o Office of Subsistence Management
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
Phone: 1-(907)-456-0277 or 1-800-267-3997
Fax: 1-(907)-456-0208
E-mail: Vince_Mathews@fws.gov

January 30, 2009

Robert D. Mecum, Acting Administrator
Alaska Region, National Marine Fisheries Service
National Oceanic Atmospheric Administration
Post Office Box 21668
Juneau, Alaska 99802

Re: Comments and Recommendations on the Draft Environmental Impact Statement for the Bering Sea Chinook Salmon Bycatch Management

Dear Mr. Mecum:

The Eastern Interior Alaska Subsistence Regional Advisory Council has a keen interest in the sustainability of the returning salmon to Western Alaska, especially the Yukon and Tanana rivers. The Regional Council represents thirteen villages along the Yukon or Tanana rivers and an additional seventeen villages within the Eastern Interior Region. All of these villages are heavily dependent on subsistence caught salmon for personal and community consumption and for their livelihoods. Every community within our Region, through sharing or trading, utilizes returning salmon as a significant part of their subsistence diet. The dramatic rise in salmon bycatch, especially the Chinook salmon with the Bering Sea/Aleutian Islands pollock fishery cannot continue to threaten the future sustainability of the Yukon River salmon stocks, as well as the continuation of a subsistence way of life in Interior and Western Alaska.

The Regional Council appreciated the presentation from Dr. Diana Stram and the discussions with North Pacific Fishery Management Council (NPFMC) members Gerry Merrigan and Duncan Fields during its public meeting on October 14, 2008 in Nenana, Alaska. Based on the presentation and discussions, past Regional Council discussions, and personal knowledge of the Regional Council members the Regional Council unanimously adopted the following recommendations for the DEIS:

1. A Chinook salmon hard cap of 29,323 should immediately be implemented to protect Western Alaska Chinook salmon. This is the only proposed bycatch cap that uses the average bycatch numbers in the years prior to the United States-Canada Yukon River Salmon Agreement of 2001, therefore, the cap which comes closest to complying with the international agreement. The parties to the Agreement are required to increase the in-

river run of Yukon River origin salmon by reducing marine catches and by-catches of Yukon River salmon. They shall further identify, quantify and undertake efforts to reduce these catches and by-catches.

2. The economic penalties on the BSAI fishing industry must be implemented and strictly enforced to prevent high Chinook salmon bycatch. The penalties should apply to the individual trawler vessel and not across the fleet or industry.
3. The North Pacific Fishery Management Council should recommend to the industry that it bear the cost of improved sampling methods and cost of analyzing these samples for genetic studies on the Chinook salmon stocks impacted by the industry's bycatch. This should also be tied to the economic incentives to improve the overall commercial fishery.
4. The North Pacific Fishery Management Council should modify the food bank program to distribute the bycatch salmon to include the Western and Interior Alaska communities. The Regional Council wants it clearly understood that this Western and Interior Alaska distribution would by no means be considered a substitution or replacement of the active in-river subsistence fisheries.
5. The Regional Council is very concerned about the length of time it takes to have a management action implemented when there are clear concerns regarding conservation and sustainability of the Chinook salmon stocks. The Regional Council will be submitting a letter to the Executive Director of the North Pacific Fishery Management Council on this concern for timely management actions.

The Regional Council is authorized by the Alaska National Interest Lands Conservation Act and chartered under the Federal Advisory Committee Act. Section 805 in ANILCA and the Regional Council's charter establish the Regional Council's authority to initiate, review and evaluate proposals for regulations, policies, management plans, and other matters related to subsistence uses of fish and wildlife on public lands within the region and to provide a forum for the expression of opinions and recommendations on any matter related to the subsistence uses of fish and wildlife on public lands within the region.

Thank you for the opportunity to present the Regional Council's recommendations on the DEIS. We and the residents of the Eastern Interior Region look forward to a substantial reduction in BSAI salmon bycatch. A substantial reduction would rebuild the Yukon and Tanana rivers salmon stocks so that, first and foremost, biological escapement needs would be met, the subsistence needs of Alaska and Canada would be met, and allow the Yukon and Tanana rivers' commercial fisheries to return. Continuation of a subsistence way of life and the economic underpinnings of our villages depend on viable and sustainable salmon stocks. If you have any questions or need additional information please, contact me or our council coordinator, Vince Mathews (contact information in letterhead). I can be reached directly at 1-907-883-2833.

Sincerely,

Sue Entsminger

Sue Entsminger, Chair

cc: Eric Olson. Chair, North Pacific Fishery Management Council
Michael R. Feagle, Chair, Federal Subsistence Board
Peter J. Probasco, Assistant Regional Director, Office of Subsistence Management
Rod Campbell, Fisheries Liaison, OSM
Larry Buklis, Chief, Fisheries Division, OSM
Tim Jennings, Fisheries & Ecological Service, Fish and Wildlife Service
Ann Wilkinson, Chief, Council Coordination Division. OSM
Jill Klein, Executive Director, Yukon River Drainage Fisheries Association
David Bedford, Deputy Commissioner of Fisheries, ADF&G
Jack Reakoff, Chair, Western Interior Alaska Subsistence Regional Advisory Council
Lester Wilde, Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Eastern Interior Alaska Subsistence Regional Advisory Council members

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www.vikingbank.com

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

February 12, 2009

sent via fax to: 907-586-7557

Re: Draft Environmental Impact Statement on Chinook Salmon Bycatch Limits in the Bering Sea Pollock Fishery (the DEIS)

Dear Mr. Mecum:

I am writing on behalf of Viking Bank to comment on the above referenced DEIS and the analysis contained therein. Our company provides financing to companies and vessels engaged in the Bering Sea pollock fishery. In order for Viking Bank to continue financing fishing operations, vessels must be able to generate sufficient cash flow to service debt. Likewise, the companies engaged in servicing the fleet, look to Viking Bank to fund their operations until such time that the fleet is able to repay them for services rendered. The total financial impact is in the tens of millions of dollars.

The DEIS describes a number of alternative management measures designed to limit or control the amount of Chinook salmon that Bering Sea fishermen can take as bycatch in their pollock fishing operations. Once those limits or "caps" are reached, the fishermen must either stop fishing altogether for the remainder of the fishing year or at least for the remainder of the fishing season in which they've been operating.

Depending on the option chosen, the analysis suggests that such caps might result in foregone pollock harvests worth hundreds of millions of dollars to the pollock fishing industry each year. Such losses would have significant impacts in terms of lost revenues, jobs and other economic activity-- not only for the fishing companies themselves, but for companies such as ours that provide goods and services to the pollock industry.

Unfortunately, the analysis does not attempt to describe, much less quantify those impacts on companies such as Viking Bank. Without a full understanding of the potential costs that such measures might have on companies such as ours, the North Pacific Council will not have the information it needs to make an informed decision as to what

the appropriate balance should be between the benefits that the proposed caps might provide to salmon fishermen on the one hand and the costs to pollock fishermen and their related support industries on the other. For these reasons, it is imperative that the analysis be expanded to consider both the direct and indirect costs associated with each of the proposed alternatives before the Council takes final action on the proposed bycatch amendment.

If you have any questions about our company, the goods and services it provides to the Bering Sea pollock fleet, and/or the possible impacts on our business that would flow from premature closures of the fishery, please give me a call.

Sincerely,

Jim Michaels
Senior Vice President &
Market Manager
Viking Bank
PO Box 70546
Seattle, WA. 98127

Phone 206-297-4221
Fax 206-782-5469

jimm@vikingbank.com

C22

SF —

Records —

Robert D. Mecum, Acting Administrator
Alaska Region, NMFS, NOAA
P.O. Box 21668
Juneau, AK 99802

February 11, 2009

RE: Salmon Bycatch EIS

Dear Dr. Mecum;

I am a commercial/subsistence fisherman in Saint Mary's, AK on the Lower Yukon River. I am writing to comment on the Draft Environmental Impact Statement (DEIS) on salmon bycatch reduction measures in the Bering Sea management area. The high salmon bycatch numbers of recent years threaten our salmon and our way of life. Salmon serves an important cultural and economic role in my community and throughout Western Alaska. Salmon provides a primary source of food for us, and the commercial salmon harvest provides the only means of income for many who live in the remote villages of the Yukon River. Salmon is an irreplaceable resource that must be protected.

The model utilized in the DEIS drastically underestimates the impacts to Western Alaska Chinook salmon stocks, and to Chinook salmon users. We recommend that the Council and NMFS should set a hard cap of **29,000** immediately to protect Western Alaska Chinook salmon.

Sincerely,

William F. Alstrom
PO Box 62
Saint Mary's, AK 99658

UFPC
UNIFIED FOODSERVICE
PURCHASING CO-OP, LLC

February 11, 2009

Robert D. Mecum
Acting Administrator
NMFS Alaska Region
P.O. Box 21688
709 W. 9th Street, Room 420
Juneau, AK 99802

Re: Draft Environmental Impact Statement on Chinook Salmon Bycatch Limits in The Bering Sea Pollock Fishery

Dear Mr. Mecum,

I am writing to comment on the Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement from the perspective of a major buyer of pollock products harvested in the Eastern Bering Sea. I work for the Unified Foodservice Purchasing Cooperative, LLC. (UFPC). UFPC is the exclusive supply chain manager for Yum! Brands, Inc. U.S. restaurants. Yum! Brands, is the world's largest restaurant company and includes Long John Silver's, the category leader in the U.S. quick-service seafood segment. Long John Silver's sells an array of fried and grilled seafood items to more than 140 million customers each year. I have purchased seafood since 1992, first for Long John Silver's and then for the UFPC when Long John Silver's was purchased by Yum! Brands in 2003.

Since 1992, Long John Silver's has consistently ranked among the largest users of fillet blocks made from Alaska pollock harvested in the Eastern Bering Sea Exclusive Economic Zone and U.S. origin pollock has made up the majority of the battered fish sold in Long John Silver's restaurants. Over the past five years, 100 percent of battered fish sold in Long John Silver's restaurants has been made from U.S. origin Alaska pollock. Since pollock was introduced into Long John Silver's battered fish line, Long John Silver's purchases represent more than 1.4 million metric tons of whole pollock.

My personal experience with the U.S. pollock fishery goes back beyond 1992. Prior to working for Long John Silver's, I spent five years at the National Fisheries Institute (NFI) where part of my responsibilities included fish and industry issues along the west coast including Alaska. Before that, I was a staff economist for the North Pacific Fishery Management Council for three years and my primary responsibility was writing regulatory impact reviews.

My comments today will focus exclusively on Chapter 10 of the EIS, the Regulatory Impact Review (RIR). Specifically, I will limit my comments to the discussion of the impacts on pollock markets of a premature closure of the pollock fishery due to an unrealistically low hard cap.

UFPC
Suite 300
950 Breckenridge Ln.
Louisville, KY 40207
(502) 896-5900

A&W Hub
Suite 300
950 Breckenridge Ln.
Louisville, KY 40207
(502) 896-5900

KFC Hub
Suite 300
950 Breckenridge Ln.
Louisville, KY 40207
(502) 896-5900

Long John Silver's Hub
Suite 300
950 Breckenridge Ln.
Louisville, KY 40207
(502) 896-5900

Pizza Hut Hub
MD 4C311
14841 Dallas Pkwy.
Dallas, TX 75254
(972) 338-8900

Taco Bell Hub
MD 710
7001 Von Karman Ave.
Irvine, CA 92614
(949) 863-4500

www.ufpc.com

Use of Dated Price Data Undervalues Pollock Fishery

The market data, including wholesale price data, cited in RIR is taken from the "2007 Economic SAFE Report." Wholesale prices, and hence, the wholesale value of the fishery, are derived from product prices through 2005, or at best, 2006. Given that prices for fillets made from U.S. pollock have increased substantially since 2006, the use of 2005 or 2006 prices significantly understates the value of the pollock fishery in Alaska. For example, prices for regular skinned, or pin bone out pollock fillet blocks, FOB east Coast, as reported by the "Urner Barry's Seafood Price Current" have increased by 49% since 2006 and 69% since 2005 (see table below).

Wholesale Prices, Pin Bone Out Pollock Blocks

	$/Lb, FOB East Coast
2005	$ 1.19
2006	$ 1.34
Feb, 2009	$ 2.00
Increase, 2005 to 2009	69%
Increase, 2006 to 2009	49%

Source: Urner Barry's Seafood Price Current

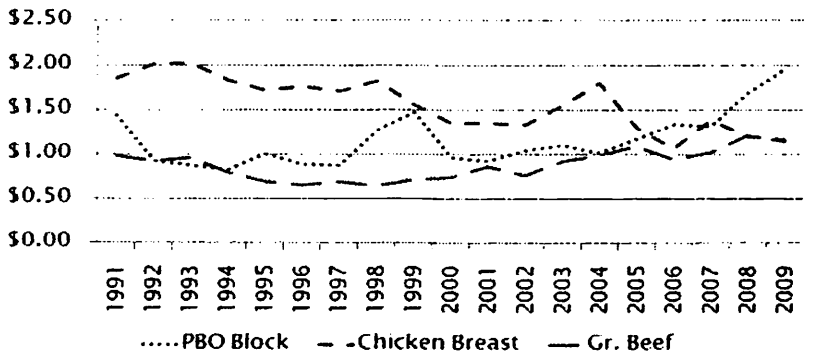
While the data from Urner Barry is not official government data, it is widely relied upon by the industry. U.S. export data confirm the magnitude of the increases reported by Urner Barry. U.S. export data provide FOB, port of export prices and most pollock products are exported directly from Alaska so prices include little in the way of freight, markup or other charges. Capturing the recent increased price levels is important as evidenced by the increased prices for products exported to the two largest European destinations referenced in the RIR - Germany and the Netherlands. For the Netherlands, the price of all fillets exported from Alaska increased from $0.99 per pound in 2005 to $1.53 per pound in 2008. For Germany, the prices for fillet exports increased from $1.05 to $1.65 per pound over the same period. Note these export prices are somewhat understated since there are pin bone in, piece block and other lower-quality and lower price items included in these data. The Urner Barry price data is the only available data applied to one specific fillet type. Urner Barry prices have been good indicators of European prices as U.S. buyers have had to match European prices (in U.S. dollars) in order to preserve market share as quotas have declined.

Characteristics of Market Stress Importance of Reliability of Supply

Compared to other agricultural commodities and even other proteins, Alaska pollock fillets have been somewhat unique in their ability to maintain a series of significant price increases from 2005 to 2009, despite the global economic recession. Chart 1 shows the price movements for three of three protein items from 1990 to 2008. Prior to 2006, prices for pin bone out (PBO) fillet blocks were consistently bound by the lower ground beef prices and higher skinless, boneless chicken breasts. Since that time, however, pollock prices have broken clear of both items and now command significant price premiums to both competing proteins. This is explainable in part by the reduction in the U.S. quota, but as much, if not a

greater factor, is the nature of the market for these products. The marketplace for Alaska pollock fillet products is characterized by a relatively small number of both buyers and sellers. There are two primary market destinations for U.S. origin Alaska pollock. First, there are large volume customers in Europe and the U.S. that bread or batter the product for sale into retail outlets. The second large category includes large fast food restaurant chains, primarily in the United States. Demand for single frozen pollock fillets from the U.S. fishery has been enhanced by the sustainable certification from the Marine Stewardship Council, especially in the European market, but MSC certification for competing products produced from other fisheries is currently underway.

Major Protein Price Comparison: U.S. Market
(1991 – 2009)



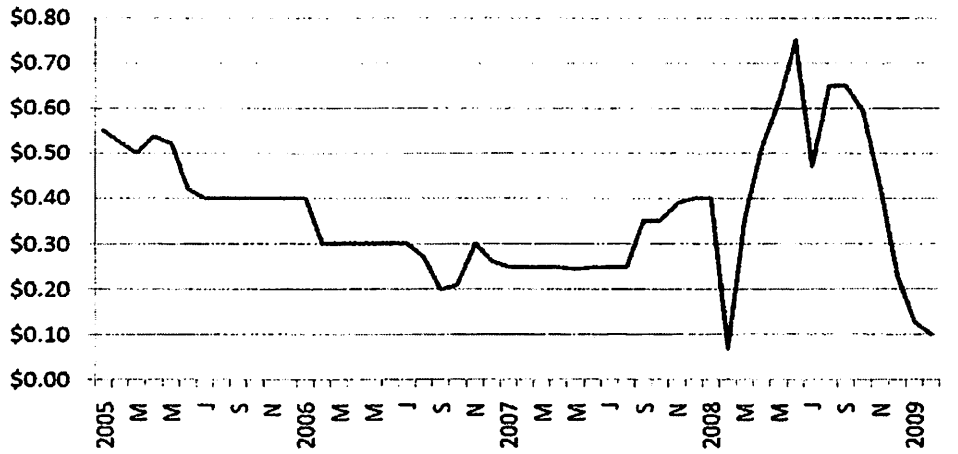
Sources: Urner Barry, USDA, EMI Analytics

The large end-users will annually spend millions of dollars on marketing programs and promotions. These programs require a steady, assured supply of raw material to execute successfully. Often, there are barriers to these companies' ability to move quickly from one resource to another including species and supplier approvals, consumer research, etc., creating a temporary inelasticity in the demand for the proteins used in their products. In the case of the large European companies, the inclusion of the Marine Stewardship Council (MSC) logo on the packaging and promotional materials effectively limit them to Alaska pollock from the U.S. fishery---at least in the short run (the Russian pollock fishery is currently seeking MSC certification and may well become a major competitor to U.S. producers, especially if it does not face unanticipated supply disruptions).

One of the primary assets of the U.S. pollock fishery that has made it the "fishery of choice" for these large users is the reliability of the resource and the management system. The pollock fishery offers a unique combination of strong stock assessment, thorough oversight and enforcement and effective in-season management that provides reasonable advance notice of potential changes in stock size and a high degree of confidence that, once the quota is set, the fishery will harvest the quota. This reliability is the foundation of the strong prices pollock fillet products have attained and maintained over the past several years and has allowed long-term contracts lasting more than a year, a practice somewhat unheard of in the seafood industry.

However, U.S. pollock products are starting to feel strong competition from aquacultured species such as tilapia and pangasius. As production efficiencies improve for those species and as their costs of production decline, pollock fillets and tilapia and pangasius fillets are starting to approach price parity in the marketplace. Large volume buyers find aquacultured species highly desirable because of their year round consistency and the ability of producers to increase supply in response to increased demand. Promotional calendars are often planned as much as a year and a half in advance as there are significant lead times for media, production of promotional materials and training materials. Buyers must be confident that suppliers can supply the product they need for these events. While pollock buyers have been willing and able to accept some level of supply uncertainty due to changing biomass size, the type of uncertainty and risk associated with bycatch-related closures will likely cause at least some of the large end-users to shift usage from pollock to other species, including tilapia and pangasius. The chart below shows the margin between pollock blocks and tilapia blocks are very near their all time low. Converting to tilapia from pollock has never been more attractive. This makes the markets for U.S. origin Alaska pollock extremely vulnerable if any one of the significant attributes, such as supply reliability, is compromised.

Price Premium: 3-5 oz. Frozen Tilapia Fillets over PBO Pollock Blocks



Source: Urner-Barry's Seafood Price Current

The Regulatory Impact Review suggests that if the pollock fishery were shut down prematurely due to a hard bycatch cap or if the fishery were unable to catch the quota due to a large area closure, there would be a loss of revenue due to the foregone production, but that loss would be mitigated by an increase in price as a result of the reduced supply. This severely understates the negative impact of such a closure on the market for U.S.-produced pollock products. We believe strongly that a bycatch management system that substantially increases the risk that the fishery will be closed prior to reaching the quota with little or no advance notice removes the strongest advantage the fishery holds in world wild whitefish markets – the reliability of the supply. Without the confidence that the quota will be taken, large restaurant chains and large processors that produce breaded and battered products will be unwilling to enter into long-term agreements or create marketing campaigns or promotions

that require a stable supply of raw material. Single-frozen pollock fillet blocks from the U.S. fishery will lose their current advantage in the marketplace and large customers who are unwilling to risk abruptly running out of product will convert to the more reliable supplies of aquacultured finfish or simply drop whitefish menu offerings altogether. The negative effect on prices and quantities demanded from the fishery would be dramatic—and perhaps permanent.

Loss of Protein to Consumers

Closure of the directed fishery due to bycatch regulations would deprive the U.S. and world of substantial quantities of high-quality, relatively low-cost protein. The chart below shows the quantity of finished product foregone for every 100,000 mt of pollock lost. Assuming an average of four ounces of fish per meal, for every 100,000 mt of pollock lost, we forego protein for more than 250 million meals, or enough to feed the combined populations of Dallas, Detroit, Indianapolis, Seattle, San Francisco, and Anchorage one meal per week for an entire year.

Therefore, For every 100,000 mt of pollock lost, we lose:

	Whole Fish MT	Product Weight MT	Product Weight Pounds
DSAP	24,000	4320	9,525,600
PBO	32,000	7360	16,228,800
PBI	2,000	620	1,367,100
Surimi (whole)	38,000	9120	20,109,600
Surimi (recovery)	-	3,418	7,536,690
H&G	4,000	2480	5,468,400
	100,000	27,318	60,236,190

Assuming 4 ounce portion,total # pollock meals lost is 240,944,760.

Source: National Marine Fisheries Service Processed Product Reports

For all these reasons, I urge the NPFMC to limit bycatch restrictions to practicable measures that are reasonably calculated to reduce bycatch without resulting in a premature closure of the Bering Sea pollock fishery.

Thank you again for the opportunity to comment on the EIS/RIR.

Sincerely yours,

Ronald Rogness
Sr. Director, Purchasing
Unified Foodservice Purchasing Cooperative, LLC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1011 E. Tudor Road
Anchorage, Alaska 99503-6199

IN REPLY REFER TO:

FWS/AFES

FEB 9 2009

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

Re: Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis

Dear Mr. Mecum:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (DEIS/RIR/IRFA) to evaluate salmon bycatch reduction measures for the Bering Sea and Aleutian Islands (BSAI) Management Area. Bycatch is of concern to the Service because it may affect salmon populations we are responsible for managing in accordance with U.S. laws and international agreements. Below, we offer our perspectives and recommendations for establishing measures to minimize Chinook salmon bycatch in the Bering Sea Pollock fishery and we raise some technical issues in our Specific Comments. Background on our trust responsibilities as identified in the Alaska National Interests Lands Conservation Act, the Yukon River Salmon Act of 2000, and the U.S./Canada Yukon River Salmon Agreement of 2002, was provided in a February 7, 2008 letter to your agency commenting on the Notice of Intent for this DEIS.

General Comments

We appreciate that BSAI pollock fishery bycatch is not the only impact to Western Alaska Chinook salmon stock returns, but it has been shown to contribute significantly to mortality.[1] We support responsibly managed, sustainable fisheries and recognize that nearly every fishery has some level of bycatch. Based on our experience with the Yukon River fishery, a BSAI bycatch near 40,000 Chinook salmon appears to allow in-river escapement, subsistence harvest, and Canadian border passage goals to be achieved, while also providing for in-river commercial fishing opportunities. It appears when bycatch levels exceed 40,000, some segment of in-river

[1] Myers, K.W., R.V. Walker, J.L. Armstrong, and N.D. Davis . 2004. Estimates of the bycatch of Yukon River Chinook Salmon in U.S. Groundfish Fisheries in the Eastern Bering Sea, 1997-1999. Final Report to the Yukon River Drainage Fisheries Association, Contr. No. 04-001. SAFS-UW-0312, School of Aquatic and Fishery Sciences, University of Washington, Seattle. 59p.

escapement or harvest is likely reduced. Therefore, based on our review of the alternatives presented in the DEIS, a hard-cap bycatch threshold of 38,891 Chinook salmon, beyond which the Bering Sea Pollock fishery would close, would be most consistent with our management responsibilities. We do not advocate combining an industry incentive program with a cap level higher than 38,891 because this would increase the likelihood of greater Chinook salmon mortality, thereby decreasing the in-river returns and negatively impacting escapements and harvest opportunities. Among the alternatives presented in the DEIS/RIR/IRFA, we believe the hard cap of 38,891 Chinook salmon is the most likely to provide for the long-term conservation of Federal in-river Chinook salmon trust resources.

Specific Comments

- We are concerned that the current genetic analysis and the adult savings calculations were based on an insufficient number of opportunistically collected samples which inadequately represent the actual stock contributions being harvested by the BSAI pollock fishery. This appears to be substantiated by Tables 5-47 to 5-51 on pages 297-301. These tables purport to show the adult reductions in equivalent numbers under various scenarios. Using the last row of Table 5-51, as an example, the bycatch for Chinook salmon bound for western coastal Alaska (column 3) would be reduced by 37,492. However, the bycatch reduction to the middle and upper Yukon (columns 5 and 9) would only be reduced by 449 and 389, respectively. This appears to be at odds with our general understanding of run magnitudes in Western Alaska, considering that the Yukon run tends to be the largest in western Alaska and that the middle and upper Yukon stocks typically comprise greater than 75% of the Yukon run in most years. For example, if the Yukon run was of average magnitude of 250,000 and 75% were middle or upper Yukon origin, this would mean that the western coastal abundance of Chinook salmon would be nearly 8.4 million, which seems exceptionally high. While we realize the stock composition estimates being used are the only ones available, that does not mean they are representative of the entire bycatch. Certainly, the samples were not collected for the purpose of supporting an analysis of such broad scope. The likely inadequacy of the existing samples to represent the entire bycatch seriously undermines the apparent conclusion that few Yukon River Chinook salmon occur in the bycatch.

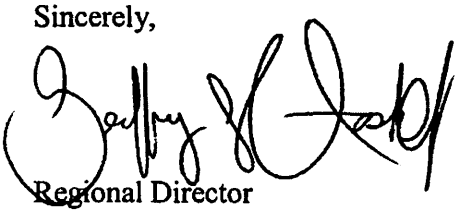
- The DEIS indicates in Chapter 8, Section 8.2.4.1 on page 414 that "*the USFWS has been working with Dr. Paul Sievert and Dr. Javier Arata of the U.S. Geological Survey (USGS) to develop a status assessment of Laysan and Black-footed Albatrosses. This assessment is in response to growing concerns regarding the current status and population trends of these two north Pacific albatrosses, particularly the black-footed.*" The final EIS would be enhanced if findings from this assessment could be incorporated into the final analyses and appropriately cited.

In conclusion, reductions in BSAI salmon bycatch to a level below 40,000 should provide for the long-term sustainable health of salmon populations, allow subsistence harvest priorities to be met consistent with ANILCA, and allow international border passage obligations to be met consistent with the Pacific Salmon Treaty.

We believe the best way to achieve these goals is to implement a hard-cap threshold, based on the best available information, beyond which additional BSAI Chinook salmon bycatch would be prohibited.

We appreciate this opportunity to comment. Please contact Russ Holder (907-455-1849 or russ_holder@fws.gov) if you have any questions concerning these comments.

Sincerely,



Regional Director

BCS
Bellingham Cold Storage Company

February 11, 2009

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668
Sent via email to: salmonbycatcheis@noaa.gov

Re: Draft Environmental Impact Statement on Chinook salmon by-catch limits in the Bering Sea pollock fishery (the DEIS)

Dear Mr. Mecum:

I am writing on behalf of Bellingham Cold Storage to comment on the above referenced DEIS and the analysis contained therein. Our company supplies several hundreds of thousands of dollars worth of freezing, storage and handling services for several of the companies that participate in the Bering Sea Pollock fishery. We employ approximately 180 employees here in Washington State.

The DEIS describes a number of alternative management measures designed to limit or control the amount of Chinook salmon that Bering Sea fishermen can take as by-catch in their pollock fishing operations. Once those limits or "caps" are reached, the fishermen must either stop fishing altogether for the remainder of the fishing year or at least for the remainder of the fishing season in which they've been operating.

Depending on the option chosen, the analysis suggests that such caps might result in foregone pollock harvests worth hundreds of millions of dollars to the pollock fishing industry each year. Such losses would have significant impacts in terms of lost revenues, jobs and other economic activity-- not only for the fishing companies themselves, but for companies such as ours that provide goods and services to the pollock industry.

Unfortunately, the analysis does not attempt to describe, much less quantify those impacts on companies such as Bellingham Cold Storage. Without a full understanding of the potential costs that such measures might have on companies such as ours, the North Pacific Council will not have the information it needs to make an informed decision as to what the appropriate balance should be between the benefits that the proposed caps might provide to salmon fishermen on the one hand and the costs to pollock fishermen and their related support industries on the other. For these reasons, it is imperative that the analysis be expanded to consider both the direct and indirect costs associated with each of the proposed alternatives before the Council takes final action on the proposed by-catch amendment.

2625 Roeder Avenue, P.O. Box 895
Bellingham, WA 98227-0895
Phone: (360) 733-1640
Facsimile: (360) 671-1259
Website: www.bellcold.com

BCS
Bellingham Cold Storage Company

If you have any questions about our company, the goods and services it provides to the Bering Sea pollock fleet, and/or the possible impacts on our business that would flow from premature closures of the fishery, please give me a call.

Sincerely,

Douglas G. Thomas
President & CEO
Bellingham Cold Storage
www.bellcold.com
doug.thomas@bellcold.com
(800)-628-5542

2825 Roeder Avenue, P.O. Box 895
Bellingham, WA 98227-0895

Phone: (360) 733-1640
Facsimile: (360) 671-1259

Website: www.bellcold.com

CITYICE Cold Storage

Pier 91, Building 391
Seattle, WA 98119
FAX 206/285-7428
206/285-6500

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Date February 12, 2009

sent via email to:
salmonbycatcheis@noaa.gov

Re: Draft Environmental Impact Statement on Chinook Salmon Bycatch Limits in the Bering Sea Pollock Fishery (the DEIS)

Dear Mr. Mecum:

I am writing on behalf of Cityice Cold Storage to comment on the above referenced DEIS and the analysis contained therein. Our company supplies *cold storage and Logistics services* to companies and vessels engaged in the Bering Sea pollock fishery. We have 75 permanent employees here in Seattle. The Bering Sea pollack fishery produces product that accounts for more than 50% of our total revenue. The continued health of this fishery is vital to our long term viability.

The DEIS describes a number of alternative management measures designed to limit or control the amount of Chinook salmon that Bering Sea fishermen can take as bycatch in their pollock fishing operations. Once those limits or "caps" are reached, the fishermen must either stop fishing altogether for the remainder of the fishing year or at least for the remainder of the fishing season in which they've been operating.

Depending on the option chosen, the analysis suggests that such caps might result in foregone pollock harvests worth hundreds of millions of dollars to the pollock fishing industry each year. Such losses would have significant impacts in terms of lost revenues, jobs and other economic activity, not only for the fishing companies themselves, but for companies such as ours.

It is our understanding that the analysis being done does not attempt to describe, much less quantify those impacts on companies such as Citylce Cold Storage. Without a full understanding of the potential costs that such measures might have on companies such as ours, the North Pacific Council will not have the information it needs to make an informed decision as to what the appropriate balance should be between the benefits that the proposed caps might provide to salmon fishermen on the one hand and the costs to pollock fishermen and their related support industries on the other. For these reasons, we ask that that the analysis be expanded to consider both the direct and indirect costs associated with each of the proposed alternatives before the Council takes final action on the proposed bycatch amendment.

It is our hope that the council will find a reasonable and balanced solution to both protecting the salmon runs and allowing the Pollack fishery to be conducted in a sustainable and economic way.

If you have any questions about our company, the goods and services it provides to the Bering Sea pollock fleet, and/or the possible impacts on our business that would flow from premature closures of the fishery, please give me a call.

Sincerely,

Kim Suelzle
President
Cityice Cold Storage Company

206 285-6500

Bristol Bay Economic Development Corporation

P.O. Box 1464 • Dillingham, Alaska 99576 • (907) 842-4370 • Fax (907) 842-4336 • 1-800-478-4370

February 13, 2009

Doug Mecum
Acting Administrator
Alaska Region, NMFS
PO Box 21668
Juneau, AK 99802

Via email to: salmonbycatcheis@noaa.gov

Dear Mr. Mecum,

Please find attached comments by the Bristol Bay Economic Development Corporation on the Bering Sea Chinook Salmon Bycatch Management Draft EIS/RIR/IRFA.

In brief, we find this document sufficient to take final action, and recommend that the Council adopt version 2 of the Preliminary Preferred Alternative (PPA2), with one change, and with two additions.

The change is to the weighting of history to allocation in calculating sector caps, from 75:25 history to pollock allocation to 25:75. All other aspects of the sector cap calculations, specifically including the adjustment of CDQ and CDQ harvesting sector history as described in the Council's June 2008 motion, would remain unchanged.

The additions are:

1. adoption of the B season triggered closure analyzed in Alternative 3 applied at the coop or entity level such that if October 7 or any date thereafter, an entity has met or exceeded its share of the applicable bycatch cap, it is subject to the closure. The cap share would be calculated using the methodology of PPA2 modified by the change above, but for a cap level of 29,300; and
2. that the current rolling hot spot system and exemption from the savings area closures be left in place such that the hard cap and triggered closure are in addition to status quo.

In our opinion, the two changes will provide adequate protection for Chinook stocks in low encounter years and will be much simpler to implement than the incentive plans currently being proposed.

The agency would have to document how these components would interact prior to release of the final EIS, but as all three components have been analyzed, this should not delay final action.

We note that the process envisioned in PPA1 has significant weaknesses. The Council's SSC spelled out many at the February 2008 Council meeting. In our opinion, PPA1 is not a viable option for that reason alone.

Nor do we believe that the higher cap is justified. The direct correlation between encounters and abundance is not borne out by the analysis, yet that underpins the argument for a higher cap in exchange for an incentive plan. It's fairly clear that the

recent high encounter years are due to other factors, such as increased overlap in the ranges of Chinook and pollock, as the EIS notes. In years when high encounters don't correlate with high abundance, a higher cap simply translates to a higher rate of interception and larger impact to the other users of Chinook and to the resource.

Low encounter years don't necessarily correspond to low abundance either, and there are other effective ways to limit bycatch at those times, such as the current RHS system.

Lastly, we are involved in nearly all sectors of the pollock industry, and have paid close attention to Chinook bycatch avoidance efforts for years. It is quite clear that the industry will make considerable efforts to avoid Chinook when faced with a hard cap, and that using historic bycatch with no savings due to avoidance measures greatly overstates the impact of a hard cap. As Kochin et al (almost) acknowledge in their analysis, the industry could probably have stayed under a hard cap of 68,600 if they'd had the current RHS system, including the fixed A season closure in place, and had not fished in October.

Our analysis indicates that parts of the industry may struggle to harvest their TAC share under PPA2, but that most operators will be impacted far less than the RIR suggests. Using a retrospective analysis similar to that used in the RIR but assuming savings similar to those suggested by Kochin et al shows that only seasons similar to 2006 and 2007 A seasons would have been challenging. In our opinion, a 47,591 hard cap would focus the necessary minds on the problem and the likelihood of foregone harvest is low.

Finally, we support implementation in 2011, and do not want that delayed. If something we're proposing would require analysis that would delay that implementation date, the most important thing to us is to get the 47,591 hard cap in place as described in PPA2.

Please don't hesitate to call my staff or me if any clarifications are needed.

Sincerely

H. R. Samueslen Jr
President and CEO

United States Surimi Commission
Organized under the 1982 Export Trading Company Act

February 13, 2009

Mr. Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Sent via email to:
salmonbycatcheis@noaa.gov

Re: Comments on Draft Environmental Impact Statement prepared for Chinook Salmon Bycatch Limits in the Bering Sea Pollock Fishery

Dear Mr. Mecum:

I am writing on behalf of the United States Surimi Commission (the "USSC" or the "Commission") to comment on the above-referenced Draft Environmental Impact Statement (the "DEIS"), and the Chinook salmon bycatch measures that are analyzed in the document. **As will be explained more fully below, the USSC is not opposed to reasonable measures designed to reduce the amount of Chinook salmon taken as bycatch in the Bering Sea pollock fishery. We are, however, opposed to any of the proposed management options that would impose unrealistic or impracticable bycatch caps that could result in a closure of the fishery part way through the fishing year. We are also concerned about the failure of the document to fully assess the implications that such premature closures might have on our member companies and on our ongoing efforts to supply surimi, roe and other pollock-based products to export markets in Asia and Europe.**

BACKGROUND

By way of introduction, the USSC is an export trading company that was formed in May of 1990 by a group of United States at-sea fishing/processing companies in an effort to develop and expand export markets for the surimi and certain other pollock-based products (e.g., roe and fishmeal) that American at-sea processing companies had begun to produce from the Bering Sea pollock fishery. As I'm sure you know, surimi is a raw material that is used in the production of hundreds, if not thousands, of seafood-based analog products, such as those containing imitation crab and shrimp. The primary export markets for US produced surimi are in Asia and Europe.

At the time of the USSC's formation, the need for an export trading company was prompted by the fact that the largest potential export market for US-produced surimi, the Japanese market, was to a large extent dominated and controlled by several large Japanese fishing and trading companies. Access to the Japanese market was significantly limited by import restrictions, quotas and a tightly controlled distribution system that made it difficult for foreign producers such as US fishing/processing companies to sell pollock-based products into that market.

THE EXPORT MARKETS

Since its formation in 1990, the USSC has been actively involved in efforts to develop export markets for at-sea produced surimi and other pollock-based products. Among other activities, the USSC has engaged in a number of programs designed to develop quality standards and grading specifications for US produced surimi; sponsored regular trade delegations to meet with potential buyers in Japan; hired a trade-facilitation firm with offices in Tokyo; hosted numerous delegations of Japanese suirmi buyers/users here in the United States; become a regular participant in the seafood shows and other expositions that are held annually in Japan; sponsored an ongoing advertising campaign in the Japanese trade press; and worked with representatives of the National Marine Fisheries Service's Trade office and the US Trade Representative (USTR) in Washington to seek better and more equitable access for US produced surimi and other pollock products to the Japanese market place. I am pleased to report that, as a result of these efforts, USSC members now export close to $300 million dollars worth of at-sea produced surimi, roe and meal to Japan each year.

In addition to its efforts in Japan, the USSC has initiated a number of projects designed to diversify its members' export opportunities in other Asian countries and in Europe. In those countries, too, our efforts have been successful to a significant extent. Today, the surimi and other pollock-based products produced by at-sea processing companies have become the products of choice in a number of Asian and European markets—a fact recognized in the DEIS (see discussion at pp. 502-509 of the document). As a result, and aided by certification of the Alaska pollock fishery as a "sustainable fishery" by the Marine Stewardship Council (MSC), USSC and other US-based companies now export close to $1 billion per year of Bering Sea pollock products to various countries around the world. We cannot, however, be complacent about that success as competing products produced by aquaculture and other whitefish producers are becoming more and more competitive from a price and quality standpoint in the world whitefish market.

Throughout this time, the most successful and persuasive selling point in the USSC's efforts to develop export markets for its members' products has been the fact that pollock from the Bering Sea is produced from a sustainable, well-managed fishery—a fishery that can be relied upon as a stable and predictable source of supply. That theme served us well when the Russian pollock fishery collapsed from overfishing in the early part of this decade, and as other whitefish fisheries around the world have come and gone over the years. But the Russian pollock fishery in the Sea of Okhotsk has recovered and the Russian fishery is now seeking certification from the MSC as well (even though it is

unlikely that the Russian management authorities would ever impose a constraining salmon bycatch cap on the Russian pollock fishery). Also of concern are the inroads that lower cost aquaculture products made from tilapia and pangasius have begun to make into the USSC's hard-won export markets.

DEPENDABILITY OF SUPPLY AS A MARKETING CONCERN

As noted above, we are particularly concerned about some of the more onerous caps that are evaluated in the DEIS—caps that would threaten to shut down some or all of the Bering Sea pollock fishery in unpredictable ways and at unpredictable times once the Chinook salmon bycatch measures are implemented in 2011. Such caps (e.g., the ones lower than 68,392) would introduce a risk factor into our ability to fill contracts that will cause the larger surimi buyers/users around the world to seek alternative sources of supply that are more reliable and predictable. The loss of our competitive edge may be permanent in the face of competing products and fisheries—especially when fisheries and/or aquaculture projects that are not subject to such risk factors (e.g., the newly re-emergent Russian pollock fishery) are able to commit to long term output or production contracts in the world whitefish market.

Unfortunately, the DEIS does not consider or evaluate the market implications of such premature closures or the effects that such closures would have on the US balance of payments in seafood products. Nor does it consider the effect that such closures would have on the continuing viability of USSC members as reliable suppliers to the world market for seafood. **Indeed, the document is void of any such considerations—even though food production and seafood exports were principal objectives of Congress when the Magnuson Act was passed in 1976, and when the "maintenance of optimum yield on a continuing basis" requirement of National Standard #1 was first implemented.** Absent such considerations, the DEIS is, in our view, inadequate to support any of the options that would impose unrealistic or otherwise impracticable restrictions on the Bering Sea pollock fishery.

Thank you for your consideration of these comments. If you have any questions concerning them, please do not hesitate to give me a call. During business hours, I can be reached at 206-547-6557.

Sincerely,

Doug Christensen, President
United States Surimi Commission

To: National Marine Fisheries Service
<http://www.fakr.noaa.gov/sustainablefisheries/bycatch/default.htm.>

February 2009

From: Fred Huntington Sr. <fredsrhuntington@hotmail.com>

In response to the 2009 Chinook (Yukon River King Salmon) projections.
I have always stated the fact that the Bering Sea Pollock Fishery and the Yukon River Drainage as been harvesting the same fish for the last half a century, and ADF&G have not concern this issue and have always regulated the Yukon Fisheries. Using Window openings, Limited hours, Limit gear, Limit Commercial fishing, not giving the Yukon River fisherman be it commercial or subsistence use a fair share of the Yukon River Chinook Salmon. Over the last twenty years its been stated that over and over the Chinook salmon have been getting smaller in size and numbers have been smaller. The run have been targeted to a science with today's technology it is not hard to know when and where the fish are passing any fishing site at and what depth.
This issue has a number of issues, Gas prices, Hours of fishing, how many fish allowed taking, and this is from the mouth of the Yukon to the head waters, across the Canada border.
With this issue a change in the way of lively hood is taking place, Most of the fisherman in this Middle Yukon River have been fishing because of the most important stable diet that one could use during the long winter months in which we have been using for time memorial. At present this is Natives and non Natives, be it use for personnel consuming or for trade or barder. Either way at the price we pay for a gallon of milk or a loaf of bread has no comparison as to what it cost in any city in the United States. We pay for a gallon of gas at $7.00 a gallon and for heating fuel at $6.30 for a gallon.
During the winter a hundred gallons of heating fuel could last 10 days for some homes in this area during the minus 50 degree Fahrenheit. This has had a negative effect on the populations in the rural villages; many folks have moved to the bigger cities Fairbanks, or Anchorage.
We have sacrificed a lot in order to have a life out in our Yukon River villages. When and how this problem could be solved is near impossible. Last year as stated 150,000 Chinook salmon have passed the sonar at Pilot Station, It was also stated that 122,000 Chinook had been caught by the Pollock fisheries in the Bering Sea. This was the December season, There was also an earlier season with no record of by catch. These Chinook bound for the Western Rivers of Alaska, Out of the 275,000 Chinook a very small portion have made it pass the Canada border. It is also the Tanana River, Andreiska River, and all the tributaries on the Yukon River do have spawning grounds.

There are also the possibilities of the Hatcheries that are putting fish in the river system. This is also larger than the wild salmon been heading down the river to head out to the sea. Which could also be eating the wild stock of salmon while heading to the high seas. One concern is what I will do if I couldn't be allow to catch my winter supply of fish. There are other salmon in the river, Summer Chums, Fall Chums, and the White fish, Shee fish. However will I be able to fish during the Chinook run? I use a set net which is in an Eddie along the banks of the river. I harvest all the fish I catch in my salmon net. A lot of the openings as they are limited I can't afford to let many salmon go no mater if its Chinook or Chum. I use all including the White fish, and Shee Fish.

Now if I wasn't able to get a moose too. You know with the limited jobs in this region of the Yukon, I would be in for a very hard winter, I have three boys at home with me and they have been trying to get the education available to them. Two don't have diplomas the other has been taking courses with the University of Alaska rural campus for a trade with the dreams of a job on the future gas pipeline. Or other mining companies. I feel most of what I am saying go for most of the River Population.

Should we limit the fishing? We have no choice however the same goes for the Bering Sea fisheries too. It cannot and will not do any good to limit the Yukon Fisheries and continue to let the Pollock fisheries to harvest any by catch bound for any Alaskan rivers. As I see it I and a lot of folks will be looking for handouts of the Government although because we are who we are may not qualify for the benefits of a hand out.

I have been fishing this area of the Yukon River all of my life. I grew up here and have no intentions of moving to the bigger City of Anchorage, or Fairbanks.

Should the regulations be to limit than it should be only for the Chinook salmon through out the Yukon, Kuskokom and the Bering Sea, The falls pass and many of the state fisheries who are harvesting the Chinook salmon until numbers can be stabilized. I have been taught that what I have would be passed down to the next generation and they would enjoy the same of what I have been enjoying the most of my life. With all this said and done. I do believe we are in for some changing times as we continue to wipe out the stock Of Chinook salmon on the Alaskan rivers. As I notice I may have spell Kuso wrong but we know where that is. Thank you for letting me voice my statement may it take you closer to your task of saving the Chinook salmon.

ARCTIC STORM MANAGEMENT GROUP, LLC
400 North 34th Street, Suite 306
Seattle, Washington 98103 U.S.A.

Robert D. Mecum, Acting Administrator
National Marine Fisheries service
P.O. Box 21668
Juneau, AK 99802

February 22, 2009

RE: Comments on Bering Sea Chinook Salmon Bycatch Management DEIS

Dear Mr. Mecum,

Arctic Storm Management Group is deeply concerned about the inadequacies of the Draft Environmental Impact Statement (DEIS) prepared for the proposed action on Bering Sea Chinook Salmon Bycatch Management dated December 2008. Based on these inadequacies, we do not feel the National Marine Fishery Service, North Pacific Fishery Management Council or the public can engage in an informed decision-making process.

The Arctic Storm Management Group (ASMG) is a long time participant in the Bering Sea pollock fishery. ASMG manages four American Fisheries Act (AFA) qualified vessels including two catcher processors and two catcher vessels. All our vessels are participants in the Bering Sea offshore pollock fishery. Approximately, three hundred and fifty people are employed on our vessels and in our home office. The future financial viability of these vessels and the job security of the people that work on these vessels and income to their families could be seriously jeopardized if the pollock fishery were closed prematurely by proposed actions to reduce Chinook bycatch. The DEIS provides very little information on the costs to participants in the pollock fishery, their families and communities and to the nation of a premature closure of the pollock fishery. As participants in the pollock fishery we find this deeply disturbing.

While we appreciate the time and effort staff invested in developing the DEIS under a truncated timeline, it simply was an inadequate amount of time to develop a properly analyzed document. Equally inadequate was the time allowed for the public to comment on the 762-page document. Members of the public requested an extension of the comment period. While we appreciated the twenty-day extension, it was simply inadequate to prepare a proper review of the document.

In addition to an inadequate comment period, the document additionally fails to meet the requirements of the National Environmental Policy Act (NEPA) insofar as it fails to include an adequate range of alternatives for considered action. Specifically, among the four proposed alternatives, there does not exist one that includes the current Bering Sea Chinook bycatch management regulation, Amendment 58. This regulation triggers the closure of a large area of

the Bering Sea, known as the Chinook Salmon Savings Area, when 29,000 Chinook salmon are caught as bycatch in the pollock fishery. Instead, the Status Quo (SQ) alternative includes only the exemption to that regulation as embodied in Amendment 84a. This action allowed AFA coops to be exempt from the triggered Chinook closure if they were party to an Inter-Coop Salmon Bycatch Agreement that manages monitors and enforces a Vessel Hot-Spot Closure program. Even though Amendment 58 is described as the backdrop to the SQ alternative, it is not a reachable alternative for the Council to recommend as long as the exemption allowed through Amendment 84a is in place. So in effect, the SQ alternative is the exemption to the current Chinook bycatch regulation. This exemption is considered an innovative program to avoid salmon bycatch. However, since the exemption was allowed, Chinook salmon bycatch has increased significantly. It is unknown if the increase in salmon bycatch is coincidental to implementation of the hot-spot closure program or if it was less effective in reducing Chinook bycatch in years of high interaction with pollock. Nonetheless, it seems an entirely inadequate range of alternatives *not* to include a proven bycatch management measure that is currently in place and was in place when the Salmon Treaty was signed with Canada. If this alternative were available, it would be ASMG's preferred alternative. We believe it is a proven management measure that best balances the legal requirements of National Standard 1 and National Standard 9. Unfortunately, we do not have the opportunity to support it because it is not included in the current range of alternatives.

In closing, ASMG would like to note that we fully appreciate the economic, social and cultural significance of salmon, particularly Chinook salmon, to the fishermen and residents of Western Alaska and the need to limit bycatch of salmon in the Bering Sea pollock fishery to the extent practicable. Our vessels have among the lowest Chinook salmon bycatch rates in the pollock fleet. Our vessels have volunteered to test the use of salmon excluder devices now under development. We are committed to actions now and in the future that will reduce our salmon bycatch further. Nevertheless, we feel that the DEIS is not adequate to support informed decision-making designed to reduce Chinook salmon bycatch while allowing for the reasonable prosecution of the pollock fishery. It is deficient in the range of alternatives it analyzes as well as in providing adequate biological and economic information to make a reasonable assessment of management alternatives.

Finally, ASMG endorses separate comments on this issue provided to you by the law firm, O'Connor & Hannan on behalf of the pollock industry and by the At-Sea Processors Association.

Sincerely,

Doug Christensen
President
Arctic Storm Management Group

KeyBanc
Capital Markets

James C. Johnson
Director & Team Leader
KeyBanc Capital Markets
Pacific Northwest Banking
Mailcode: WA-31-13-2373
1301 Fifth Avenue, 23rd Floor
Seattle, WA 98101
Tel: (206) 684-6255
Fax: (206) 684-6247
jjohnson@keybanccm.com

February 13, 2009

Robert D. Mecum
Acting Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Re: Draft Environmental Impact Statement on Chinook salmon bycatch limits in the Bering Sea pollock fishery (the DEIS)

Dear Mr. Mecum:

I am writing on behalf of KeyBank National Association ("Key" or "KeyBank") to comment on the above referenced DEIS and the analysis contained therein. Our firm provides investment management, retail and commercial banking, retirement, consumer finance, and investment banking products and services to individuals, companies and vessels engaged in the Bering Sea pollock fishery. As a strong proponent for local economic growth, Key provides and arranges funding of over $600 million annually to local fishery organizations in the Pacific Northwest and Alaska. Additionally, Key's approximate 2,500 employees are leaders in non-profit organizations and contribute significant time and money to community involvement throughout the region.

The DEIS describes a number of alternative management measures designed to limit or control the amount of Chinook salmon that Bering Sea fishermen can take as bycatch in their pollock fishing operations. Once those limits or "caps" are reached, the fishermen must either stop fishing altogether for the remainder of the fishing year or at least for the remainder of the fishing season in which they've been operating.

Depending on the option chosen, the analysis suggests that such caps might result in foregone pollock harvests worth hundreds of millions of dollars to the pollock fishing industry each year.

Such losses would have significant impacts in terms of lost revenues, jobs and other economic activity-- not only for the fishing companies themselves, but for companies such as ours that provide goods and services to the pollock industry.

Unfortunately, the analysis does not attempt to describe, much less quantify those impacts on companies such as KeyBank. Without a full understanding of the potential costs that such measures might have on companies such as ours, the North Pacific Council will not have the information it needs to make an informed decision as to what the appropriate balance should be between the benefits that the proposed caps might provide to salmon fishermen on the one hand and the costs to pollock fishermen and their related support industries on the other. For these reasons, it is imperative that the analysis be expanded to consider both the direct and indirect costs associated with each of the proposed alternatives before the Council takes final action on the proposed bycatch amendment.

If you have any questions about our company, the goods and services it provides to the Bering Sea pollock fleet, and/or the possible impacts on our business that would flow from premature closures of the fishery, please give me a call.

Very truly yours,

KEYBANC CAPITAL MARKETS, INC.

_____

James C. Johnson
Managing Director

Bering Sea Fishermen's Association
110 W. 15th Avenue, Unit A
Anchorage, Alaska 99501
(907) 279-6519 or (888) 927-2732
FAX (907) 258-6688

February 20, 2009

Robert Mecum, Acting Administrator
NOAA/NMFS, Alaska Region
PO Box 21668
Juneau, AK 99802

Re: Comments on the Draft EIS/RIR/IRFA, Bering Sea Chinook salmon bycatch

Dear Mr. Mecum,
Our comments on the draft EIS/RIR/IRFA focus mainly on the shortcomings within the document that attempt to estimate the in-river consequences of Bering Sea Chinook salmon bycatch and the estimation of adult equivalent (AEQ) mortality (Chapter 3.3). In addition to our specific comments on AEQ methodology, we have some general comments on parts of the draft EIS/RIR/IRFA that will most likely be covered in more detail by groups such as the Yukon River Drainage Fisheries Association, Kawerak Inc., Nome Eskimo Community and others. We have also included a few specific, but minor recommendations.

General comments:
It seems there has been very little examination of the economic impact upon western Alaska residents from the reduced Chinook salmon returns. The draft EIS/RIR/IRFA goes to very great lengths to analyze the economic impacts to the pollock industry as a consequence of the various alternatives and options. In many cases, these estimates simply represent a "worst case scenario," as indicated by this statement (page 163, second paragraph):

> *"This analysis assumes that past fleet behavior appropriately approximates operational behavior under the alternatives and does not estimate changes in behavior. While it is expected that the fleet would change its behavior to fully harvest the pollock TAC and mitigate potential losses in pollock revenue, explicitly predicting changes in fleet behavior in a reasonable way would require data and analyses that are presently unavailable."*

However, no similar approach is taken to estimating many of the cultural and economic impacts to western Alaskans (such as the cost of replacing lost subsistence Chinook salmon harvests with local, store-bought food, as just one example) the draft EIS/RIR/IRFA simply throws up it's hands and says that such estimates are too difficult to make. A more comprehensive examination of the importance of Chinook salmon to western Alaskan residents needs to be included throughout the draft EIS/RIR/IRFA. Without this information it would appear that there are considerable data gaps and the translation of this leads us to the notion that there was little attempt to address the impacts of the alternatives on subsistence users. The Division of Subsistence personnel within the Alaska Department of Fish and Game would be an invaluable asset to help NMFS improve these significant

deficiencies throughout the draft EIS/RIR/IRFA. The value of subsistence fisheries to the cultures and economies of the AYK region requires this attention. This document is noticeably written from a commercial fisheries perspective and that is not lost on those whose livlihoods rely on subsistence harvest and use. Commercial fisheries are, of late, a fraction of what subsistence fisheries are to the AYK residents. The draft EIS/RIR/IRFA fails to deal with the basic fundamental necessity of salmon and how the subsistence users might be impacted should the alternatives be applied.

There is also not enough discussion about the impacts of the alternatives on meeting the treaty obligations with Canada through the Yukon River Salmon Agreement, as well as other aspects of the 2002 Agreement particularly the pledge to, **"increase the in-river run of Yukon River origin salmon by reducing marine catches and bycatches of Yukon River salmon."** How do these alternatives impact the United States' ability to reduce bycatch below pre-2002 levels?

At the February 2009 meeting of the North Pacific Fishery Management Council (Council), the Council's Scientific and Statistical Committee voiced strong concerns about the fact that the draft EIS/RIR/IRFA does not analyze the incentive plans being proposed by the pollock industry that are a component of the 68,392 Chinook salmon cap under annual scenario 1 of the Preliminary Preferred Alternative (PPA). While it is true that the Council will be selecting just the hard cap, the only major difference between annual scenarios 1 and 2 of the PPA (and the difference between hard caps of 68,592 and 47,591, respectively) is the proposed incentive plans from the pollock industry. We find it disturbing that such a key factor to the Council's decision making process is not being analyzed <u>at all</u> in the draft EIS/RIR/IRFA.

<u>Specific comments:</u>

Page 241, first paragraph. It is not entirely accurate to state that the Northern District stocks "continue to trend sharply upward and most escapement goals are being met or exceeded." Perhaps based on older information (as the Clark, 2006 reference eludes) this might be appropriate, but some Northern District stocks declined as of late, particularly in the Deshka River in 2008 and Alexander Creek. This section should perhaps be updated with more current information from the Alaska Department of Fish and Game.

Figures 5-27 through 5-31. The first four of these figures appear to be paired (27&28 and 29&30), where the second in the pair is a continuation to the right of the first. However it is somewhat confusing. Why is the information presented in 5-31 (which portrays the B season) so different in format than the previous 4 figures, that showed the A season? I think consistency across these figures would be helpful.

Page 259, first paragraph: It seems the three tables referenced in the text of this paragraph (5-9 through 5-11) is incorrect. Perhaps it should have referred to tables 5-33 through 5-35?

Page 319, Table 5-75: Not a comment on this specific table referring to the mothership sector, but why are there not similar tables for the shoreside and catcher/processor sectors within this cluster of tables?

Page 530, last paragraph: the second sentence of this paragraph makes a reference to "...approximately 4,500 households residing in 38 communities in the region..." this is certainly incorrect. Perhaps these figures mistakenly refer to one of the sub-regions within the AYK area? By our quick calculations, there are close to 120 federally recognized tribes (which may not each represent a "community") within the combined service regions of some of the major Native non-profit organizations like Kawerak, Tanana Chiefs Conference, and Association of Village Council Presidents. While this is a rough estimate, an accurate accounting of communities and households throughout the affected AYK region needs to be included throughout the draft EIS/RIR/IRFA.

Chapter 2.5: We agree with the recommended expansion of the observer coverage for shoreside processing plants and catcher vessels, however we think this expansion of coverage is necessary regardless of the alternative and option(s) ultimately chosen, in order to more accurately account for Chinook salmon bycatch.

Chapter 6 and Chapter 10.3.2: It is quite surprising that there is no mention of the fact that chum salmon in the Nome subdistrict (subdistrict 1) were under a Tier II subsistence management strategy for quite some time. Tier II was enacted when chum salmon numbers were so low that there was not enough of a surplus to meet everyone's subsistence needs, so a scoring and permit system were put in place that significantly limited effort and harvest. Tier II management has been used on several game populations throughout the State of Alaska, however this was the first and only time that it has ever been used on a fish stock.

Page 537, last paragraph: The sentences that states, *"Chinook harvests peaked in 1997, at 8,989 fish. Since then, subsistence Chinook harvests have declined in nearly every year and the 2007 harvest of 2,646 fish was the lowest level recorded since 1994."* It is most likely that the subsistence harvests in 2008 were even lower than in 2007, since the 2008 Chinook return was the lowest on record. From page 2 of ADFG's 2008 Norton Sound season summary (http://www.cf.adfg.state.ak.us/region3/finfish/salmon/catchval/08nssalsum.pdf):

> *"Chinook salmon runs have been poor throughout the 2000s in the Shaktoolik and Unalakleet Subdistricts and the 2008 run ended up being the worst on record. Subsistence fishing for Chinook salmon was closed on July 5 in both the marine waters in the Shaktoolik and Unalakleet Subdistrict and in the Unalakleet River drainage. The North River, a tributary of the Unalakleet River, had the lowest tower count of Chinook salmon in the project's history".*

Chapter 3.3, *Estimating Chinook salmon adult equivalent bycatch*: We have serious concerns about the approach used in the draft EIS/RIR/IRFA to estimate "adult equivalents" (AEQ) and, specifically, the genetic data used to derive those estimates. The draft EIS/RIR/IRFA relies heavily upon new genetic data from two studies cited in the Chapter 3 bibliography as:

> *Seeb, J.E,. S. Abe, S. Sato, S. Urawa, N. Varnavskaya, N. Klovatch, E.V. Farley, C. Guthries, B. Templin, C. Habicht, J.M. Murphy, L.W. Seeb. 2008. The Use of Genetic Stock Identification to Determine the Distribution, Migration, Early Marine Survival, and Relative Stock Abundance of Sockeye, Chum, and Chinook Salmon in the Bering Sea. Poster presentation at the North Pacific Anadromous Fish Commission International Symposium on Bering-Aleutian Salmon International Surveys (BASIS): Climate Change, Production Trends, and Carrying Capacity of Pacific Salmon in the Bering Sea and Adjacent Waters. Seattle, Washington. November 23-25, 2008.*
>
> *Templin, W. D., L.W. Seeb, J.M. Murphy, J. Seeb. 2008. High-Resolution Stock Identification for Migratory Studies of Chinook Salmon. Poster presentation at the North Pacific Anadromous Fish Commission International Symposium on Bering-Aleutian Salmon International Surveys (BASIS): Climate Change, Production Trends, and Carrying Capacity of Pacific Salmon in the Bering Sea and Adjacent Waters. Seattle, Washington. November 23-25, 2008.*

As far as we know, to date, these two studies have not been made publicly available. And have most certainly not been peer reviewed. The 'preliminary' nature of these two studies and the lack of an opportunity to fully review their methodology and sampling techniques makes their inclusion in the draft EIS/RIR/IRFA questionable. We recommend that the published Myers (2003) methodology be the sole methodology utilized by the draft EIS/RIR/IRFA.

In an attempt to better understand the impacts of BSAI bycatch of Chinook salmon on Chinook salmon populations, a method was developed by NPFMC staff (mechanics described by Jim Ianelli in a NPFMC in-house document, 2007) to estimate how the different bycatch numbers would propagate to adult equivalent salmon numbers in regional stocks (spawning, harvest). Estimating the adult equivalent bycatch is necessary because not all salmon caught as bycatch in the pollock fishery could be expected to survive to return to their spawning streams. Some natural mortality does occur. For this EIS/RIR/IRFA, AEQ estimates assumed a variable mortality rate of 30% for age-3, 20% for age-4, 10% for age-5, 5% for age-6 and zero mortality for age-7 fish (draft EIS/RIR/IRFA, page 136, Model 2). Younger fish are more likely to remain at sea than older fish (draft EIS/RIR/IRFA Table 3-13). Fishing sector and seasonal Chinook salmon bycatch numbers were stratified by individual bycatch fish lengths and redistributed to age classes using methods similar to previous analysis (Myers et al. 1984, Myers and Rogers 1988, Myers et al 2003). Applying the AEQ formula to the bycatch numbers stratified by age class and stock of origin information provides an estimate of impacts on regional stocks (Tables 3-9, 3-11, 3-14).

Two significant deviations in this EIS/RIR/IRFA from methods employed in all previous bycatch AEQ estimates were 1) the use of ADFG's genetic (SNP) analysis (Page 111, last paragraph), instead of the traditional scale pattern analysis for determination of stock of origin; and 2) seemingly biased bycatch sample collections for the genetics studies (page 118 2nd paragraph).

It is unfortunate that SNP analysis of bycatch are unable to allocate fish stocks at least to the major drainages (Yukon, Kuskokwim, Columbia, etc) as this is the primary metric for, and where, Chinook salmon management is based. Scale pattern analysis provides this information, and although suggested (in this EIS/RIR/IRFA) to have been part of the genetic feasibility study, but similar to the lack of documentation of the aforementioned feasibility study, no scale pattern information or data is presented relative to these 2005-2007 genetic analysis (draft EIS/RIR/IRFA page 118, 2nd paragraph). That said, the different methodologies (scale pattern and genetic analysis) did provide similar overall proportions of between 54-60% for western Alaska (draft EIS/RIR/IRFA page 112, first paragraph) and much praise is made in this EIS of the similarity between the two types of analysis and general outcomes.

The following is presented to demonstrate the significant differences between the genetic and scale pattern analysis' estimates for Yukon Chinook salmon AEQ:

Because SNP analysis does not provide a total Yukon estimate AEQ bycatch (at least not in the draft EIS/RIR/IRFA) a direct comparison is not readily possible. However, if the SNP estimates for the upper and middle Yukon bycatch are combined and assumed to represent 75% of the total Yukon Chinook salmon bycatch attributed to the Yukon, similar to the Yukon spawning and harvest stock compositions, an estimate of total Yukon Chinook salmon bycatch (add mid and upper Yukon plus 25%) is possible using SNP information. Using scale pattern analysis and much larger (than SNP analysis) sample sizes, Myers (2003) estimated interceptions of Yukon River Chinook salmon by the BSAI fisheries were 7,266 fish in 1997, 8,908 fish in 1998, and 3,074 fish in 1999. Myers' AEQ bycatch estimates were 6,522 fish in 1997, 7,510 fish in 1998, and 2,721 fish in 1999. The draft EIS/RIR/IRFA estimates based on genetics are, by this estimate, of the difference near one order of magnitude (draft EIS/RIR/IRFA Table 3-14). For example, in 1997 Myers' AEQ Yukon estimate is 6,522 (Myers 2003) whereas in this EIS/RIR/IRFA using SNP information the AEQ is roughly 1,000 fish (413 middle Yukon + 343 upper Yukon, or 746 for 75% of typical total Yukon or about 1,000 for total Yukon(draft EIS/RIR/IRFA Table 3-14)).

This pattern of underestimating the stock composition of Yukon River Chinook salmon (via the SNP methodology) and an associated overestimate of other stocks (i.e. Alaska Peninsula) is consistent over the years

where comparable information is presented in the draft EIS/RIR/IRFA as well. For 1998 Myers' AEQ Yukon Chinook salmon estimate is 7,150 (Myers 2003) whereas in this EIS/RIR/IRFA the AEQ is about 300 fish (103 middle Yukon + 87 upper Yukon, or 190 for 75% of typical total Yukon or about 300 for total Yukon (draft EIS/RIR/IRFA Table 3-14)). For 1999 Myers' AEQ Yukon estimate is 3,074 (Myers 2003) whereas the draft EIS/RIR/IRFA is about 750 fish (297 middle Yukon + 245 upper Yukon, or 542 for 75% of typical total Yukon or about 750 for total Yukon (draft EIS/RIR/IRFA Table 3-14)).

Issues of Sampling Bias:
The draft EIS/RIR/IRFA states that, "the samples used for the ADFG genetic analysis were obtained during a feasibility study," and that "[u]nfortunately, [...] the collected samples failed to cover the bycatch in groundfish fisheries in a comprehensive manner" (page 118, 2nd paragraph). Biased genetic tissue sampling in the 2005 B and 2007 A seasons is apparent and acknowledged in the draft EIS/RIR/IRFA (page 118, paragraphs 1-3). As an example the draft EIS/RIR/IRFA states that in 2005 most genetic tissue sampling was completed prior to when most the bycatch occurred (draft EIS/RIR/IRFA Fig. 3-4) and, all of the 2007 samples came from a single vessel fishing in a closed area using experimental salmon excluder trawl gear (draft EIS/RIR/IRFA page 118 p.1).

Another concern with this information is that the 2007 A season tissue collections seemed to have an unusually high proportion (55%) of age-4 Chinook salmon in the bycatch compared to the historic average of roughly 30% (table 3-5). This is important in final analysis in that younger/smaller fish tend not to be AYK stocks contrary to older/larger fish which do (tend to be AYK stocks) and that the A season bycatch has historically been dominated by older fish (contrary to 2007 bycatch), thus likely misallocation and bias estimates of regional impacts over the long term (draft EIS/RIR/IRFA Table 3-8, Myers et. al. 2003). All prior AEQ impact analysis suggested the bulk of the AYK stock bycatch occurred in the A season, contrary to the draft EIS/RIR/IRFA analysis (draft EIS/RIR/IRFA Table 3-11). This issue is compounded even further by the very small genetic tissue sample size (N=360) which is only about 0.5% of the total 2007 A season Chinook salmon bycatch of 69,261 (draft EIS/RIR/IRFA Tables 3-10 and 3-11). Earlier studies by Myers and others commonly had sample sizes greater than 1,000. Using an estimate of 1% of the 2007 A season bycatch tissue samples being Yukon stock (0.1 upper Yukon plus 0.5 middle Yukon plus 0.4 lower Yukon *(based on the above estimate that middle- and upper-Yukon Chinook salmon stocks represent approximately 75% of the total annual Yukon returns)*) would mean that just 3 or 4 of those 360 fish taken as 2007 A season samples (draft EIS/RIR/IRFA table 3.9) were of Yukon origin, suggesting a high potential for error due just to insufficient sample size.

Thank you for the opportunity to provide comments.

Respectfully,

Art Nelson
Policy and Outreach Coordinator

Elizabeth Andrews PhD
USA

Co-Chairs

Frank Quinn
Canada

Yukon River Panel 100-419 Range Road Whitehorse, Yukon Y1A 3V1

February 20, 2009

Robert D. Mecum, Acting Administrator
National Marine Fisheries Service, Alaska Region
PO Box 21668
Juneau, AK. 99802

RE: Salmon Bycatch EIS

Dear Mr. Mecum:

This letter conveys comments and recommendations of the Yukon River Panel regarding the Bering Sea Chinook Salmon Bycatch Management Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (DEIS/RIR/IRFA) which was filed in November 2008 (*Federal Register*, Vol. 73, No. 235, 12-05-08) for public review.

The Yukon River Panel is an international advisory body established under the Yukon River Salmon Agreement for the conservation, management, restoration, and harvest sharing of Canadian-origin salmon between the United States and Canada. This Agreement constitutes Chapter 8 of the Pacific Salmon Treaty[1], which means it has the full power and force of an international treaty between our two nations.

In December 2008, Dr. Diana Stram of the North Pacific Fishery Management Council (NPFMC) presented to Panel members an overview of the management alternatives. Members much appreciated this presentation and the opportunity to ask questions of Council members and staff about the alternatives and information presented. Since then, some Panel members have attended one or more presentations of draft reports on industry incentive-based programs, as the concept of an incentive program is a key element of the preliminary preferred alternative (PPA) described in the DEIS. These presentations were in Anchorage in December 2008 and January 2009; and in Seattle in February 2009.

[1] http://www.psc.org/pubs/treaty.pdf accessed February 2009

The Yukon River Panel recommends immediate action by the National Marine Fisheries Service (NMFS) to reduce salmon prohibited species bycatch in the Bering Sea pollock fishery. The Panel recommends that NMFS have emergency regulations ready to adopt until such time as the preferred alternative adopted by the North Pacific Fishery Management Council (NPFMC or Council) and associated regulations go into effect in 2011, the current estimated year for implementation. Reducing salmon bycatch is a key element in the international Yukon River Salmon Agreement and further delay is unacceptable.

The Yukon River Panel recommends immediate action to adequately fund and conduct a long-term, scientific genetic sampling program designed to fully represent, annually, the genetic contributions of the salmon bycatch. These samples need to be analyzed to provide information on the salmon stock composition in the pollock fishery prior to and after implementation of management changes for the Bering Sea fishery. It is grossly inadequate to evaluate impacts of the Pollock fishery on the salmon genetic stock using an unsatisfactory number of opportunistically collected samples during recent years. The EIS analysis indicated a moderate percentage of Pacific Northwest Chinook salmon stocks in samples collected to date. If those stocks are present at the identified levels, one would expect observers would be collecting fin-clipped (marked) hatchery fish from the Pacific Northwest. However, the analysis only identified the fin-clipped/coded-wire-tagged fish recovered for two Pacific Northwest ESA Chinook salmon stocks (p. 244). The actual or estimated coded-wire-tag recoveries for all Pacific Northwest stocks caught as bycatch should be evaluated against the estimated Pacific Northwest genetic estimates to assess concordance. Long-term genetics data collection and analysis is essential for designing a program to avoid catches of western Alaska and Canadian-origin Chinook salmon stocks and should be checked against other data sources to evaluate agreement. Techniques for in-season stock identification are now possible and should be used.

The Yukon River Panel supports final action by the Council in April 2009 to meet the goal as stated in the EIS of controlling and reducing salmon bycatch regardless of annual abundance. Any further delay would be detrimental to the salmon resource, meeting escapement objectives, and the communities and people who depend on the salmon resource, both in the US and Canada. The Panel recognizes there are deficiencies in the EIS. The public has been commenting on these and these will be included as part of the process.

The Yukon River Panel supports regulations and programs that may close areas where high Chinook bycatch rates occur; or time periods when bycatch rates are high and a hard cap is projected to be exceeded. The EIS clearly showed a trend of increased Chinook bycatch during the month of October. The Panel recognizes that some areas may change from season to season, whereas others may be closed indefinitely based on consistently high bycatch rates. Regulations and programs must be flexible enough to address existing hot spots and new hot spots during the fishing season.

The Panel supports continued efforts by the pollock industry to develop and implement programs and fishing techniques to reduce salmon bycatch. Both regulatory and non-regulatory measures are necessary in reducing salmon bycatch. We encourage incentive programs that are likely to work from the outset of implementation, recommending they be evaluated against meaningful performance measures.

The Panel supports 100% observer coverage for all sectors and vessels. It is essential to improve the salmon bycatch estimate through better accounting, location of harvest, genetic stock identification, and bycatch rate information. Full observer coverage will improve scientific genetic sampling of the salmon bycatch for all parameters and assessment of the impact of the pollock fishery on the salmon resource.

The Yukon River Panel does not support a regulatory cap of 68,392 in any scenario. Since 1991, this cap would only have effectively reduced bycatch in 2006 and 2007. Because the EIS analysis is focused on bycatch in years 2003-2007, it appears such a cap would have affected two out of five years (2003-2007). However, these are the highest years of bycatch on record. Having a hard cap based on the highest bycatch years would not serve to reduce marine catches and is contrary to the Yukon River Salmon Agreement to reduce bycatch. A cap of 68,392 has the effect of maximizing bycatch rather than minimizing bycatch as required under National Standard 9 and under the Yukon River Salmon Agreement signed in 2002. Precautionary measures are necessary to conserve Yukon River Chinook salmon.

The Yukon River Panel recommends an interim hard cap of 37,000, under Alternative 4 (PPA2). Consistent with the Panel's previous communications with the NPFMC (letters of February 5, 2008, June 3, 2008, and January 26, 2009, among others), the primary concern is when Bering Sea salmon bycatch exceeds 37,000 Chinook salmon, some portion of the Yukon River Alaskan and/or Canadian escapements or harvests have been less than expected, reduced, or restricted. The Panel is opposed to a hard cap of 47,591 as this appears to jeopardize meeting salmon escapement goals in both the US and Canada. Establishing a hard cap of 47,591, even in conjunction with triggered closures or incentive programs, essentially continues to place the burden of conservation solely on in-river managers and fishermen while the marine fishery continues unchecked. Our responsibility is to endeavor to increase in-river runs by reducing marine catches of Yukon River salmon. We recommend an immediate interim cap level of 37,000, with a subsequent reduction within five years to a hard cap of 32,482 or less. A hard cap of 32,482 is based on the 1992-2001 average prior to when the Agreement was signed in 2002.

The Yukon River Panel does not support Alternative 1: Status Quo. The annually increasing salmon bycatch amount that has been harvested since 2001, shows that the current Chinook Salmon Savings Area closures and the inter-cooperative agreement, under the BSAI Fishery Management Plan (FMP) Amendment 84, have not effectively reduced or minimized bycatch of Yukon Chinook salmon stocks. If changes in the American Fisheries Act (AFA) and associated regulations resulted in increased bycatch during the 2000s, it should not be construed as a justification to allow a higher take of prohibited species above those taken on average from 1992-2001.

The Yukon River Panel does not support the preliminary preferred Alternative 4 (PPA1), which is based on an industry incentive program to reduce Chinook bycatch. The industry incentive program cannot be analyzed historically to determine its effectiveness, nor can an analysis be done to determine its effectiveness in the future. Currently, this incentive program is tied to high bycatch levels such as 68,392. As noted above, the Yukon River Panel cannot support these high bycatch caps. If the incentive program works well then a lower cap should suffice. There is no

greater incentive to reduce bycatch than a cap that reduces bycatch to the historical average (1992-2001) prior to 2002.

The Yukon River Panel does not support a rollover of bycatch from A season to B season if the cap is 47,591 or higher, because these caps do not effectively minimize bycatch. It appears that a rollover could result in higher bycatch in the following B season. However, if the hard cap is 37,000 or lower, then a rollover provision would be more acceptable, because a lower cap will result in minimizing the overall bycatch.

The Panel makes these recommendations because the Yukon River Salmon Agreement when signed in 2002 included the provision in the Pacific Salmon Treaty, Chapter 8, paragraph 12: "the Parties shall maintain efforts *to increase the in-river run of Yukon River salmon by reducing marine catches and by-catches of Yukon River salmon. They shall further identify, quantify, and undertake efforts to reduce these catches and by-catches.*" At that time, Chinook salmon bycatch was roughly one-half the 2003-2007 bycatch used in the analysis. Furthermore, approximately 50 percent of Yukon River Chinook salmon are of Canadian-origin, making the international impact of marine bycatch an important element to include as a supplement to the analysis. In spite of very conservative in-river management actions since 2000, these conservative management actions, the Canadian escapement objective for Canadian-origin Chinook in 2007 and 2008 was not achieved.

We support responsibly managed and monitored, sustainable fisheries and recognize that nearly every fishery has some level of bycatch. We urge the continuation and expansion of scientifically collected and analyzed genetics data as this is essential for designing a program to avoid catches of Western Alaska and Canadian-origin Chinook salmon stocks. We support continued studies on bycatch reduction efforts, such as salmon excluder devices and studies on the effect of fishing tow speed and depth on salmon bycatch.

We urge an immediate cap of the Chinook salmon bycatch at 37,000 using emergency regulatory authority, until the preferred Council final action goes into effect. We also strongly support final action by the Council in April 2009 on an alternative that achieves protection of Chinook salmon stocks of US and Canadian-origin and provides a sustainable resource for the many people whose livelihoods and traditions depend upon them, including the people of the Yukon River drainage. We will continue our work to conserve and manage Chinook salmon in-river to meet agreed upon escapement objectives of Canadian-origin stocks. Appropriate regulatory and non-regulatory measures for reducing Chinook salmon bycatch in the marine fisheries; complete monitoring by observers; full accounting of the bycatch, and identifying stocks of origin are essential to this work.

Sincerely,

Elizabeth Andrews

Elizabeth Andrews
Co-Chair

Frank Quinn
Co-Chair

C34

From Jeffrey Demientieff <jeff_d_sr@hotmail.com>
Sent Friday, February 20, 2009 8:44 pm
To salmonbycatcheis@noaa.gov
Subject Salmon Bycatch EIS

Dear Dr. Mecum:

I am a subsistence fisherman in Holy Cross. I am writing to comment on the Draft Environmental Impact Statement (DEIS) on salmon bycatch measures in the Bering Sea management area. The high salmon bycatch numbers of recent years threaten our salmon and our way of life. Salmon serves a very important cultural and economic role in my community and throughout Western Alaska. Salmon provides a primary source of food for my family and the commercial salmon harvest provides the only means of income for many who live in the remote villages of the Yukon River. Salmon is a irreplaceable resource that must be protected.

The model utilized in the DEIS drastically underestimates the impacts to Western Alaska Chinook salmon stocks, and to Chinook salmon users. We recommend that the Council and NMFS should set a cap of 32,500 immediately to protect Western Alaska Chinook salmon.

Sincerely,
Jeffrey Demientieff Sr.
Holy Cross Tribe/Holy Cross, Alaska

February 17, 2009

Robert Mecum, Acting Administrator

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802

Dear Mr. Mecum:

We are subsistence salmon fishermen from the Norton Sound region, fishing actively for about 25 years here, and are contributing our comments regarding the four options proposed to reduce Chinook salmon by-catch by the Bering Sea pollock fishery. We already wrote the Council our concerns about by-catch earlier this year, and we are pleased that they came to Nome to present the options and to hear testimony last month.

We favor a hard cap on by-catch for the following reasons. In looking at any of these options, the first consideration must be the preservation of salmon runs. Of the fisheries, subsistence salmon fisheries in Western Alaska must be first priority, and commercial salmon fisheries , where they exist, should be second priority. Third priority should be preserving the profits of the pollock fishery. This is not meant in any way to disregard the success of the pollock industry, which also benefits Western Alaska much, but because of more wide-reaching long-range benefits of the subsistence fishery to the resident families, and the fragility of this harvest. We cannot know what the future of the pollock harvest will be, or its market. But we do know that the Western Alaska families, economically and culturally, have a huge investment in the Chinook (and other salmon) runs (as do the Canadian subsistence communities on the Yukon) and that these runs must continue to be there for them. Even though we applaud the CDQ program and see many values from it, there is no economic benefit coming into the regions, from CDQs or other sources, that could in the foreseeable future override this need to protect salmon and rebuild runs. There are also other salmon stocks mingled in the Bering Sea, some of them protected stocks from areas with serious run depletions (B.C.,WA, OR, CA) affecting those fishing families, from both tribal and non-tribal fisheries.

We understand that the serious reduction in Chinook salmon runs is caused by multiple factors, not just by-catch, and we understand that the pollock fleet would be happy not to have by-catch. But by-catch has been recognized for years as a big problem, and not enough progress has been made toward solving it. The pollock industry has been enormously profitable and can afford to do more determined research in how to overcome its by-catch problem.

In the meantime, the salmon fishermen have been cut back seriously for years, to the point of complete closure for Chinook in some districts this year. In other words, the solutions to the by-catch problem

have not been fairly applied in the past, as the strategies proposed for the pollock fishery, such as rolling hot-spots, have not been successful, but salmon fishermen have been successfully stopped from harvesting. In Nome sub-district we subsistence fishermen were forced to go to Tier II for chum salmon for five or so years recently, and we must not see this happen for western Alaska Chinook. We subsistence fishermen have had years of "hard caps", in effect, beginning in the late 1980s.

Therefore, we recommend a pollock fleet by-catch level of about 45,000 for 2010-2011 with hard cap. However, if/when the escapement of Chinook all along the coast returns to the biologically acceptable level for a period, as recommended by AK Fish and Game scientists, then the allowable by-catch levels could also be raised in a safe proportion. If there is a hard cap level on each boat, based on its pollock quota, there should be no increased problem of a race for fish. We do not have recommendations regarding transferring of quota from A to B seasons as we don't have enough technical information on that. We do not favor locked-in targeted area closures because there is too much noticeable movement of pollock stocks to make that feasible.

We need to look very seriously at the long-term health of the salmon stocks, and for that reason we don't like Option 4 that allows trading of by-catch quotas. This form of cooping gives boats the opportunity to sell their unused by-catch quota to boats less successful at avoiding by-catch and encourages less committed boat owners to not try harder to solve their problem. Instead they rely on other boats to sell them leftover quota. The overall by-catch is reduced, so there is a short-term gain, but there is no long-term gain through a serious commitment by the boats to conservation of salmon (and other) stocks. This is what we must all share if we want fisheries in the future. Business agreements that trade quota back and forth with profits in mind will not get us there.

We would also like to see pollock boats be rewarded for reduced by-catch, if it could have a long-term benefit for all the fisheries, not just for them. Rewards make sense. However, experimentation by the pollock industry that successfully reduces by-catch should be its own reward when it prevents them from going over their hard cap. We also have not received any more information about what other "rewards" are being considered by the pollock fleet , so we can't comment on whether these would be successful , or fair, or not. If the fleet wants to create a fund of its own from dockside fees they collect to reward boats with low by-catch, such as is done with vessel buy-backs, that is worth trying.

In closing, we have told you our reasons for insisting on making salmon stocks protection first priority along with subsistence salmon harvests , for favoring hard caps for the pollock fleet, for not recommending by-catch quota-sharing coops, and for favoring any kind of rewards that the pollock fleet wishes to sponsor for itself that will encourage experimentation in methods of by-catch reduction.

Sincerely,

Perry Mendenhall Nancy Mendenhall

Perry and Nancy Mendenhall

P.O. Box 1141, Nome, Alaska 99762 907-443-2455 ptmen@alaska.com

CC: NPFMC, BSFAAK, YSEDC, Kawerak, Inc., Nome Eskimo Community

C37

From Corriene Demientieff <corriened@gmail.com>
Sent Monday, February 23, 2009 8:27 am
To salmonbycatcheis@noaa.gov
Subject DEIS

Dear Dr. Mecum:

Every summer I travel to my hometown of Holy Cross and subsistence fish in our family's fishcamp. I am writing to comment on the Draft Environmental Impact Statement (DEIS) on salmon bycatch measures in the Bering Sea management area. The high salmon bycatch numbers of recent years threaten our salmon and our way of life. Salmon serves a very important cultural and economic role in my community and throughout Western Alaska. Salmon provides a primary source of food for my family and the commercial salmon harvest provides the only means of income for many who live in the remote villages of the Yukon River. Salmon is a irreplaceable resource that must be protected.

The model utilized in the DEIS drastically underestimates the impacts to Western Alaska Chinook salmon stocks, and to Chinook salmon users. We recommend that the Council and NMFS should set a cap of 32,500 immediately to protect Western Alaska Chinook salmon. Thank you for considering balance in management of our priceless salmon resource.

Sincerely,
Corriene Demientieff

Coastal Villages Region Fund

711 H Street, Suite 200 ● Anchorage, Alaska 99501 ● Phone 907.278.5151 ● Fax 907.278-5150

February 23, 2009

Robert D. Mecum, Acting Administrator
NMFS, Alaska Region
P.O. Box 21668
Juneau, Alaska 99802-1668

RE: Comments on the Bering Sea Chinook Salmon Bycatch - Draft Environmental Impact Statement/ Regulatory Impact Review/ Initial Regulatory Flexibility Analysis (DEIS/RIR/IRFA)

Dear Mr. Mecum,

Coastal Villages Region Fund (CVRF) is a non-profit corporation that represents 20 communities along Alaska's west coast from Platinum north to Scammon Bay. The approximately 9,000 residents of our communities are among the poorest in Alaska and in the nation. Our residents participate in traditional subsistence salmon fisheries as well as in a vast commercial salmon and halibut fishery in our region that is heavily subsidized by our earnings from the Bering Sea/Aleutian Islands (BSAI) Pollock fishery. This salmon and halibut operation provides hundreds of jobs to our residents at seven CVRF plants in our region as well as a market for more than 500 commercial permit holders from the region. In 2009, with the completion of our new salmon plant in Platinum, Alaska, CVRF will become the third largest employer in the region, all the result of our earnings from the BSAI pollock fishery.

CVRF is deeply concerned about deficiencies in the chinook bycatch EIS/RIR/IRFA, including: 1) insufficient socio-economic data about the CDQ program and scope of its impact on western Alaska, including in non-CDQ member communities; 2) invalid/outdated data about the CDQ program, including with respect to the level of western Alaska ownership in the BSAI Pollock fishery; and 3) chinook bycatch limit alternatives for the CDQ program that penalize our "clean" fishing history and may also violate the federal CDQ statute.

CVRF is the primary beneficiary with respect to about 10 percent of the entire BSAI Pollock fishery (2.4 percent through the CDQ Program, and around 8% through our pro rata ownership interest in American Seafoods) -- and CVRF is just one of six western Alaska CDQ groups with significant ownership in the BSAI pollock fishery. The DEIS does not contain a factually accurate summary of these investments by western Alaska in the BSAI pollock fishery, nor a complete description of the economic and social benefits that the BSAI pollock fishery provides to western Alaska. In fact, the DEIS/RIR/IRFA contains gross misstatements about the CDQ program, such as the statement in Chapter 10 (p. 498) that "less than 1% of the BS catch is harvested by vessels owned by Alaska residents" and that this

percentage has "remained stable since 2002..." Not only is this statement shockingly inaccurate in 2009, but it was highly inaccurate in 2002 as well! Though other sections of the DEIS/RIR/IRFA contain valid data about the CDQ program, on the whole, the information about the CDQ program is incomplete, outdated and alarmingly misleading.

The large-scale BSAI pollock fishery has been taking place for more than 40 years without a "hard cap" on chinook salmon bycatch. While we are concerned about protecting the chinook that our residents have relied upon for centuries, we are also concerned with ensuring an informed decision about any action that could potentially cripple a significant part of our region's economy. The DEIS/RIR/IRFA simply does not describe the economic and social harm to western Alaska that may come from the various limits on chinook bycatch under consideration. The DEIS/RIR/IRFA as presently drafted could cause decision-makers to adopt BSAI pollock fishery restrictions that provide little or no improvement in subsistence and local commercial chinook salmon fisheries while causing serious economic and social harm throughout western Alaskas.

For more than 30 years, the North Pacific Council has been applauded for making tough decisions based on the best available data. The best available data is not yet included in the chinook bycatch DEIS/RIR/IRFA. With the DEIS/RIR/IRFA as drafted, it will be impossible for decision makers to understand the foreseeable impacts and probable socio-economic consequences to western Alaska of the alternatives under consideration (i.e. loss of jobs related to the CDQ program, labor wages, near shore fishery opportunities subsidized by CDQ groups, scholarships, and significant other economic development activities).

CVRF believes that is critical that the DEIS/RIR/IRFA include the following: a more detailed analysis of the current dire socio-economic situation in western Alaska, including current and more accurate data on the western Alaska economy; the relative importance of CDQ program to the Western Alaska economy; and more detail about the magnitude and importance of CDQ investments in BSAI pollock industry. Given the possibility of catastrophic consequences from the various alternatives, we believe the overall costs of obtaining the necessary data is not exorbitant.

Specific Comments:

1. **The DEIS Overlooks, Underestimates, and Misstates the Massive Pollock Benefits to Western Alaska** -- For instance, on page 154, section 3.4.4.2 that DEIS states that *"CDQ groups had a total of $134 million in revenue in 2005, earned primarily from Pollock royalties."* This is misleading and/or incorrect: the revenue received by CDQ investments exceeds revenue from Pollock royalties for most or all CDQ groups, and has for nearly 5 years. In 2007, CVRF alone earned more than $26 million in revenue from investments, and $11 million from royalties. The ratio of our investment earnings to our royalty earnings appears to have been even greater in 2008.

   In addition, the DEIS does not take into account the substantial benefits flowing to our communities as a result of these investments. The following list includes just some of the benefits provided to our residents and region in 2007 as a result of CVRF's participation in the BSAI pollock fishery. By ignoring or misstating these and many

other CDQ benefits, the DEIS/RIR/IRFA cannot accurately compare the potential cost and benefits of the proposed alternatives:

SOME OF THE 2007 BENEFITS PROVIDED BY CVRF WITH EARNINGS FROM THE BSAI POLLOCK FISHERY:

- *$8 million spent on Platinum Salmon Plant construction (2007 alone)*
- *$4.7 million spent to upgrade the CVRF tender/tug/barge fleet that serves more than 500 commercial salmon and halibut fishermen from our region*
- *Over $1 million in wages to 90 of our residents in 2007 working aboard BSAI pollock vessels in which CVRF is a major owner*
- *$1.7 million paid to almost 400 residents working in our salmon, halibut processing plants and tendering operations -- with the opening in our new plant in Platinum, AK, CVRF will provide jobs to over 500 residents in summer 2009*
- *Total CDQ royalty earnings by CVRF of $13 million in 2007 alone*
- *Total investment earnings by CVRF -- the majority from pollock -- of $26 million, about double the amount we earned in 2007 royalties.*
- *$1.2 million paid to over 350 salmon permit holders in 2007 by Coastal Villages Seafoods, LLC (CVS), a CVRF subsidiary whose existence and annual operations are heavily subsidized by CVRF pollock earnings*
- *$1.1 million paid to over 200 halibut fishermen in 2007 by CVS (see above)*
- *More than 100 jobs for region residents each year at six CVRF halibut plants (all built with pollock earnings, and operated with a pollock subsidy)*
- *$650,000 in scholarship and training to 120 residents in 2007 alone -- more than 80 percent of which was paid for with CVRF pollock earnings*
- *$3.8 million to build additional Fisheries Support Centers (FSCs) in our region -- CVRF has built and now operates FSC facilities in 14 communities -- in addition to our 7 seafood plants that stretch across the region (in 2009, CVRF pollock earnings will pay for the operation of 22 facilities throughout our region that provide in-region jobs for more than 1,000 Alaskans each year, paid for almost entirely by pollock earnings)*
- *$280,000 provided in 2007 directly to the governing bodies of CVRF member villages for various projects such as winter trail makers and survival shelters, city clean up and dump site improvements, youth and elders conference, etc...*

This is just a partial list of the annual benefits that could be significantly reduced if BSAI pollock earnings for western Alaska are restricted by the alternatives under consideration in the DEIS/RIR/IRFA.

2. **Minimal Salmon Improvements for Our Communities:** The DEIS suggests that our communities will receive very little benefit as a result of the Chinook caps in the Bering Sea Pollock fishery. This is somewhat shocking on its own, but even more so when taking into account the enormous potential economic cost to our communities that would result from the restrictions in the BSAI pollock fishery.

   The DEIS projects (Table ES-13, page ES-19) that the greatest benefit under alternative 2 (the lowest cap of 29,300) to the Kuskokwim and Yukon river areas would be 9,710 and 14,938 Chinook salmon returning, respectively. While CVRF

firmly acknowledges the significant social, spiritual, cultural and economic importance of the Chinook salmon to western Alaska, we also recognize that there are substantial negative economic consequences that may result from a hard cap, such as decreased CDQ benefits to our communities. The DEIS largely ignores these significant impacts. As a result, CVRF believes the draft DEIS does not have the information required for the agencies to make an informed decision about the social and economic consequences of the proposed Chinook caps. CVRF believes that it is very possible that a hard cap could inflict far more economic pain in the region than economic gain. With respect to the estimated Kuskokwim chinook savings (9,710 salmon) under alternative 2, we would point out that CVRF purchases more than 20,000 chinook from our local commercial salmon fleet every year! The return of an estimated 9,710 Kuskokwim chinook would have little or no discernable benefit in either our subsistence or local commercial fisheries but could have a crippling effect on the tens of millions of dollars entering our economy each year from the BSAI pollock fishery.

3. **Chinook Bycatch Allocation to CDQ Program:** None of the alternatives appear to give the CDQ program a fair pro rata share of the Chinook allocation. CDQ participants would receive less Chinook per ton of Pollock than most or all other participants -- thereby being penalized for having fished cleanly in the past. The Chinook bycatch situation is being driven in part by the effort to help western Alaska, yet places the greatest burden on the very western Alaskans that the DEIS alternatives are purported to help. We would also draw your attention to language in the federal CDQ statute that seems to explicitly prohibit such disparate treatment of CDQ participants in fisheries -- such as the BSAI pollock fishery -- that have quotas or fishing cooperatives (see 16 U.S.C. 1855(i)(1)(B)(iv)):

   > ***(iv) Regulation of CDQ Harvest:*** *Regulation of harvest.--The harvest of allocations under the program for fisheries with individual quotas or fishing cooperatives shall be regulated by the Secretary in a manner no more restrictive than for other participants in the applicable sector, including with respect to the harvest of nontarget species.*

4. **Additional Suggested Revisions:**

   a. **Executive Summary**
      - **Bering Sea Pollock Fishery** (ES-2 & ES-3):

   1. Lacks relevant information on CDQ investments in the BSAI Pollock fishery.

      - **Costs of Forgone harvest in the Pollock fishery, (ES-29 and ES-30)- TABLES ES-20, 21, and 22:**

   1. No mention of CDQ investments in the other Pollock sectors.

   b. **Chapter 3: Methodology**

      - **3.4.4.2: CDQ Investments in western Alaska (pg 153)**

1. *The report references 2005 data and states "CDQ groups had total revenues in 2005 of approximately $134 million, primarily from Pollock royalties..."*
    a. *More recent data available, the 2007 WACDA report shows CDQ entities generated nearly $170 million in revenue during 2007.*
    b. *See also the State's Blue Ribbon Report on the CDQ Program which shows that investments earnings outpaced royalty earnings across the CDQ program in 2004 -- in other words, our investments in the BSAI pollock fishery are providing more to western Alaska than our CDQ program royalty earnings*
    c. *In 2007, CVRF earned about twice as much from our BSAI investments as from our royalties (we earned a total of $23.24 million from our pollock investments, and $11.02 million from our pollock royalties).*

c. **Chapter 9 Environmental Justice**

- **9.3.2 Are low income populations present?**

1. *Table 9-2 – Analysis includes 1999 data from the 2000 census.*
    a. *Data is old and outdated. Because of the benefits to western Alaska from the BSAI pollock fishery have been increasing at a significant pace, it may be difficult to fully describe the situation. The relevant documents that we would recommend include the annual reports of all six CDQ groups for the past few years (2008 reports will be published in late-spring, early-summer), the State's Blue Ribbon Report on the CDQ Program, the 2007 WACDA report on the CDQ Program, and the January 2009 Northern Economics study for the Marine Conservation Alliance, which includes a section on the CDQ program*
    b. *CVRF alone will be providing over 1,000 jobs for region residents in 2009, and continues to provide tens of millions of dollars of benefits to our region annually.*

- **9.4.8 Community Development Quota (CDQ) Program: Second paragraph (Pg 463):**

1. *States CDQ groups have invested in inshore processing plants, and cites CVS processing salmon and halibut, but does not mention that these operations are fully subsidized by the Pollock fishery.*
2. *The CVS Goodnews Bay/Platinum operation is the largest investment in CDQ history at over $35 million.*
3. *Over 600 permit holders delivered 412,000 pounds of halibut and 2.8 million pounds of salmon to CVS facilities in 2007.*
4. *The 2007 WACDA report includes more detailed data on the CDQ investments and benefits.*

- **9.4.8 Community Development Quota (CDQ) Program: Third Paragraph (Pg 463): "CVRF made loans to two aluminum welding businesses for boat repair and buildings in Eek and Hooper Bay."**

1. Incorrect - CVRF planned, constructed, and operates a total of 14 Fisheries Support Centers in the communities of Scammon Bay, Hooper Bay, Chevak, Tununak, Toksook bay, Nightmute, Mekoryuk, Chefonak, Kwigillingok, Kongiganak, Napakiak, Napaskiak, Eek, and Goodnews Bay. In addition CVRF is completing the construction of a $35 million salmon processing facility in Goodnews Bay/ Platinum, operates an existing salmon plant in Quinhagak, and operates six halibut plants in the region -- all paid for with earnings from the BSAI pollock fishery.

- **9.4.8 Community Development Quota (CDQ) Program: Last paragraph (Pg 463)**

1. *Data referenced is very outdated and is from a 2002 Northern Economics study, with 1999 data. The CDQ program has evolved and grown substantially since 1999.*
2. *CVRF has constructed/maintained 6 halibut plants, Improved/maintained the Quinhagak salmon plant, is constructing a $35 Million Salmon plant in Goodnews Bay/Platinum, operates boats and employs decks hands, crew members, welders, mechanics, liaisons, program managers, etc.*
3. *Annually CVRF employs approximately 340 workers at 7 processing plants in the region, with an additional 120 expected with the opening of the Goodnews Bay/Platinum salmon plant.*

- **9.4.8 Community Development Quota (CDQ) Program: Second Paragraph (Pg 464):**

1. *"Pollock allocations benefit member communities, they do not provide significant benefits to non-member communities."*
    a. *CVRF provides a market to hundreds of salmon fishermen from Bethel and other non-member villages -- paid for with BSAI pollock funds.*
    b. *More than 10 percent of the hundreds of jobs we provide in our in-region seafood plants are held by residents from non-CVRF member western Alaska villages*
    c. *CVRF employs around 40 people at our administrative office Anchorage, Alaska*
    d. *CVRF conducts regular employment recruitment in Bethel and in other communities outside our member communities*
    e. *CVRF generates/supports many indirect jobs as a result of our economic activity (such as flights throughout the region, hotels and meals in our regional hub of Bethel, etc.)*

In addition to these comments, CVRF recommends that the DEIS/RIR/IRFA team undertake a more thorough literature review (in addition to the reports listed below), conduct additional research and incorporate the most current data available including both quantitative and qualitative, in order to analyze the full range of socio-economic impacts. We believe this critical information is lacking in the current analysis and is essential in order for the council to make an informed decision.

Additional data sources include:

1. Western Alaska Community Development Association, CDQ sector report, 2007
2. Report to the Governor, State of Alaska, The CDQ Blue Ribbon Report, 2005
3. Marine Conservation Alliance/ At-Sea-Processors Association, Northern Economics, The Seafood Industry in Alaska's Economy, January 2009
4. Coastal Villages Region Fund, Catalogue of Benefits, 2009
5. CVRF "Pollock Provides" Video, 2008
6. 2005 Annual Reports of the Six CDQ Groups
7. 2006 Annual Reports of the Six CDQ Groups
8. 2007 Annual Reports of the Six CDQ Groups
9. 2008 Annual Reports of the Six CDQ Groups (available in spring/summer 2009)

As one of the six CDQ groups, whose communities are among the poorest in the state, whose economic opportunities are extremely limited, and whose residents rely heavily on subsistence, CVRF feels it is very important that the above issues be adequately addressed. Failure to incorporate appropriate and relevant data will result in an insufficient analysis of the alternatives, and possibly unintentional and catastrophic consequences to western Alaska and to the villages and residents we serve.

CVRF is an Alaska non-profit company that represents 20 Alaskan communities and 9,000 Alaskan's who reside along the coast of the Bering Sea from Scammon Bay to Platinum. Our 20 member villages include Scammon Bay, Chevak, Hooper Bay, Newtok, Tununak, Toksook Bay, Nightmute, Chefornak, Kipnuk, Kwigillingok, Kongiganak, Tuntutuliak, Napakiak, Napaskiak, Oscarville, Eek, Quinhagak, Goodnews Bay, and Platinum.

Thank you for the opportunity to comment on this DEIS/RIR/IRFA.

Sincerely,

Neil Rodriguez
Community and Government Affairs Manager
Coastal Villages Region Fund

NOSSAMAN LLP
O'Connor & Hannan

ATTORNEYS AT LAW

1666 K Street, NW
Suite 500
Washington, DC 20006
T 202.887.1400
F 202.466.3215

George J. Mannina, Jr.
D 202.887.1491
gmannina@nossaman.com

February 23, 2009

Robert D. Mecum, Acting Administrator
National Marine Fisheries Service
Alaska Regional Office
P.O. Box 21668
Juneau, AK 99802

Dear Mr. Mecum:

On behalf of the Pacific Seafood Processors Association ("PSPA"), At-Sea Processors Association ("APA"), and United Catcher Boats (UCB"), I am pleased to submit these comments on the Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Bering Sea Chinook Salmon Bycatch Management dated December 2008 ("DEIS"). Collectively, APA, PSPA, and UCB represent the vast majority of the catcher vessels, catcher-processors, motherships, and on-shore processors involved in the Bering Sea Aleutian Islands ("BSAI") pollock fishery. Their members rely on the pollock fishery for their economic livelihood.

The issues presented by the proposals pending before the North Pacific Fishery Management Council ("NPFMC") are extraordinarily complex. APA, PSPA, and UCB each recognize the importance of, and are dedicated to, reducing salmon bycatch. Indeed, the pollock fishery has had a long history of working to reduce the incidental bycatch of Chinook salmon. In 1996, the BSAI Groundfish Fishery Management Plan was amended to close three areas to trawling when 48,000 Chinook salmon were incidentally taken. The pollock industry supported this proposal. In 2000, this program was refined through Amendment 58 to the BSAI Groundfish Fishery Management Plan to lower the closure trigger from 48,000 to 29,000 and to refine the closure dates and areas. Again, the industry supported this measure. In 2001, the pollock fleet voluntarily implemented a Voluntary Rolling Hotspot System ("VRHS') in which chum salmon bycatch is monitored on a real time basis so the fleet can move to different areas to avoid bycatch. In 2002, the fleet voluntarily extended VRHS to include Chinook salmon. In 2007, the VRHS program was codified as Amendment 84 to the BSAI Groundfish FMP. Today, the pollock fleet is working on several different fronts to reduce salmon bycatch, including the development of an effective salmon excluder device. Over the last four years, the pollock industry has supported an applied research program regarding salmon excluder devices. One such device is currently being tested pursuant to an Experimental Fishery Permit. In addition, variations of a salmon excluder device are currently being used in normal pollock fishing operations by a number of vessels.

APA, PSPA, and UCB appreciate the very important and unique role subsistence has in the fabric of Alaskan life and the importance of salmon in satisfying subsistence needs. We also understand and respect the place that salmon occupies in the cultural heritage of Native peoples.

APA, PSPA, and UCB are equally aware of the responsibilities they have, and of the important role the pollock fishery has, in the life of Alaska's economically disadvantaged communities that depend on the pollock fishery through the Community Development Quota ("CDQ") program. For the residents of many of these communities, the jobs and income generated by the pollock CDQ program provide an alternative to subsistence.

Beyond CDQ communities, the pollock fishery has a significant role in all parts of Alaska's economy providing jobs, generating income, and generating tax revenue for coastal communities. For many of Alaska's communities, the pollock fishery is a pillar of the local economy.

For the NPFMC and the National Marine Fisheries Service ("NMFS") to make informed decisions about how to balance all of these important interests, they must have a complete environmental analysis that fully and accurately examines all of the issues. As the Supreme Court has said, the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4331, requires that there be a hard look at all of the issues. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971). Sadly, the DEIS fails to provide decision makers with the information they need to make an informed decision because the DEIS does not take a "hard look" at the issues.

To assist in developing the analyses required by NEPA, PSPA, APA, and UCB requested an extension of the public comment period. Although we appreciate that an extension of the comment period was granted, the overall length of the comment period remains inadequate to prepare analyses on every issue that must be thoroughly examined before the DEIS can be considered compliant with NEPA.

For ease of reference, these comments are divided into sixteen Parts addressing (1) legal issues, (2) the benefits of the proposed action on the salmon resource and the salmon fishery, and (3) the burdens of the proposed action on the pollock resource and the pollock fishery. Part I is an Executive Summary.

I. EXECUTIVE SUMMARY

The Draft Environmental Impact Statement ("DEIS") fails to meet the standard set forth in the National Environmental Policy Act that an environmental impact statement ("EIS") must take a hard look at the issues. The DEIS fails this standard because it ignores critical issues and fails to fully and accurately analyze other issues. Each of the points summarized below are discussed in the detailed comments following the Executive Summary.

- There is no biological need to severely curtail Chinook salmon bycatch in the pollock fishery. Forty-six percent of this bycatch originates in waters outside western Alaska. The DEIS variously describes these stocks as trending "sharply upward," with "escapement goals met or exceeded" in some cases by 125%-265%, and as "rarely taken" in the pollock fishery. As to the 54% of incidentally taken Chinook originating in western Alaska, none of

these stocks has been listed as a stock of concern because of inadequate escapement. Even if there were zero Chinook salmon incidentally taken in the pollock fishery, the increase in the number of fish escaping to spawn would range between 1.9% and 5.5% depending on the river system. These are numbers too small to make a real biological impact on either escapement rates or the species.

- Although the annual Adult Equivalent ("AEQ") mortality (the number of Chinook salmon that would have returned to the natal river had they not been captured in the pollock fishery) ranged from 9,697 to 45,682 fish between 1994 and 2008, that is a relatively small percentage of the Chinook salmon returning to western Alaska. In the same period, the number of Chinook returning to western Alaska was between 393,000 and 1,100,000 fish annually.

- The DEIS states "sufficient opportunities for subsistence harvests have occurred in most areas in recent years." The DEIS also states "there is no indication that any of the alternatives being considered [including the status quo] would result" in a health risk to subsistence users.

- If zero Chinook were incidentally taken in the pollock fishery, it would have added just under one fish per subsistence household in the Kuskokwim area, 1.7 fish per subsistence household in the Yukon River area, one-tenth of a fish per subsistence household in the Norton Sound area, and less than three fish per subsistence permit holder in Bristol Bay. The issue is not the importance of subsistence, which we acknowledge, but whether restricting the pollock fishery makes a real difference in the amount of fish that would be available for subsistence.

- Given the small number of fish that would be added to each subsistence household if 100% of the Chinook salmon bycatch were eliminated, there is no support for the assumption in the DEIS that restricting the pollock fishery will allow subsistence fishermen to take their subsistence catch more quickly and to pursue other subsistence or economic opportunities.

- None of the proposed bycatch reduction plans propose eliminating the entire bycatch as doing so would mean the complete closure of the pollock fishery. Thus, in <u>every</u> instance where these comments provide a number of fish that would be added to escapement or to subsistence, commercial, or sport harvests, that number <u>overstates</u> the benefits of the proposed action because that number is based on what would happen if zero Chinook salmon were taken as bycatch. It should also be noted that the difference in AEQ mortality between a cap of 68,000 and 47,000 is a difference of only 17,640 Chinook salmon. Since only 54% of the Chinook taken in the pollock fishery originate in western Alaska, the total difference to all of western Alaska would be 9,526 fish.

- The DEIS contains no analysis showing that subsistence fishermen are, in fact, taking longer to harvest their subsistence catch and fails to examine the relationship of ichthyophonus infection and other factors to any delay that might be occurring. Ichthyophonus infection rates have been detected as high as 45% in samples of Chinook salmon taken in the Yukon River. Yukon River processors are discarding up to 20% of purchased fish because of tissue damage caused by ichthyophonus. This means that if a subsistence fisherman wants to harvest 100 Chinook, he or she will need to take the time to catch 125.

- Reductions in Chinook salmon bycatch in the pollock fishery will not have a significant measurable impact on commercial salmon fishermen. In the Norton Sound area, only 0.17% of all of the salmon caught by commercial fishermen since 2000 were Chinook. In the Kuskokwim area, only 1.9% of the commercially taken salmon between 2000-2007 were Chinook. In the Yukon, completely eliminating the entire Chinook bycatch in the pollock fishery would add only 1,439 fish to the total average annual Yukon River commercial catch. In Bristol Bay, Chinook salmon comprises only 0.26% of the commercial salmon harvest. Divided by the number of commercial fishermen, the effect of eliminating 100% of the Chinook bycatch in the pollock fishery is minimal, adding between less than one and three fish to each commercial fisherman's annual harvest depending on the region.

- Restricting the Chinook salmon bycatch in the pollock fishery will not have a significant measurable impact on sport fisheries. In the Kuskokwim, Yukon, and Bristol Bay areas, the average annual take of Chinook in the sport fisheries ranged from near 0% to 1% of the salmon taken. In the Norton Sound region, the average annual take of 444 Chinook salmon in the sport fishery is 4.3% of the sport harvest.

- Any non-use value of Chinook salmon, what the General Accountability Office calls the psychological value of "knowing that the resource exists," is fully satisfied if the resource exists. There is no claim in the DEIS or elsewhere that the incidental harvest of Chinook salmon in the pollock fishery threatens the existence of this species. Nor is there any evidence in the DEIS that this incidental take is interfering with the cultural needs of Native peoples.

- The DEIS fails to meet even the minimum accepted and established standards for proper economic analysis.

- The DEIS estimates the impact on the pollock fishery of proposed Chinook salmon bycatch plans by measuring "foregone gross revenue," an estimate of lost wholesale revenue. The DEIS' analysis, which shows an actual loss of up to $500,000,000 to the pollock fishery, understates the loss by 49%-69% because the DEIS uses outdated prices.

- The DEIS confines its analysis of the economic impact on the pollock fishery of bycatch restrictions to lost wholesale revenue. The DEIS never examines the multiplier effects of economic activity. The actual economic impact of the proposed bycatch restrictions is multiples of what is estimated in the DEIS. The actual loss to the nation is over $1 billion using current wholesale prices and accounting for the economic multiplier.

- The DEIS does not examine the job losses that will occur in the pollock fishery and in the related and dependent support, service, and distribution sectors because of foregone product and foregone revenue.

- U.S. companies export close to $1 billion annually in Bering Sea pollock products to countries around the world. The DEIS does not examine the impact on the U.S. trade deficit that will occur because of foregone export product. Nor does the DEIS examine the consumer price impact in the U.S.

- The DEIS does not examine the impact of foregone catch and sudden fishery closures on large end use pollock purchasers who need long term and reliable supply contracts. Nor does the DEIS examine or account for the adverse economic impact of such market disruptions on the desirability and price of Alaska's fishery products.

- The DEIS fails to recognize that the pollock fleet cannot shift to other groundfish fisheries because of legal restrictions governing which vessels can participate in these fisheries.

- The DEIS suggests the pollock fleet will shift to other pollock fishing grounds to mitigate the losses from the proposed restrictions but fails to examine the costs and increased energy use associated with this effort transfer. For example, if the 70 catcher vessels now delivering to shoreside processors make the expected number of trips to the more distant fishing grounds, it will increase fuel consumption by approximately 3,136,000 gallons and increase operational costs for these vessels by $8,153,600, not including increased operational costs for non-fuel items or increased vessel repair costs.

- The DEIS ignores the impact of restricting the pollock fleet on economically dependent CDQ communities. For many residents of these economically disadvantaged communities, the job opportunities from the CDQ program are an alternative to subsistence. In one community alone, $123 million in wages has been paid to community residents because of the CDQ program since 1993. In other communities, pollock CDQ revenue supports educational scholarships, job training programs, infrastructure development, and salmon conservation and management projects. All of these programs and benefits are at risk from restrictions on the pollock fishery.

- The DEIS recognizes that restrictions on the pollock fishery will reduce local tax revenues in non-CDQ communities. However, the DEIS does not examine the impacts that will occur in terms of lost municipal services such as education and health programs.

- The DEIS makes no attempt to measure and weigh the costs and benefits of the proposed alternatives. Such an analysis would reveal that the benefits to the salmon resource and to salmon fishermen are illusory or very small while the costs to the people involved in and dependent on the pollock fishery are real and enormous.

- According to the DEIS, the pollock bycatch reduction program was designed to satisfy a legal interpretation that National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act ("MSA") requires that bycatch be reduced "to the maximum extent practicable" and that "every" effort be made to reduce bycatch. The courts have expressly rejected that interpretation of National Standard 9. Alternatives 2-4 were designed to meet a non-existent legal standard.

- According to the DEIS, the pollock bycatch reduction program was designed to meet the requirements of the Pacific Salmon Treaty. The Treaty does not apply to the pollock fishery. Even if the Treaty applied to the pollock fishery, it would be satisfied by the status quo.

- Alternatives 2-4 each violate National Standard 1 of the MSA by preventing the achievement of optimum yield in the pollock fishery.

The reality is that the DEIS is fundamentally flawed legally and analytically. For example, the DEIS assumes that benefits will flow to subsistence users from implementing Alternatives 2, 3, or 4 but fails to analyze if the facts support that assumption. They do not. Similarly, the DEIS adopts a crabbed and inaccurate interpretation of the burdens on the pollock fishery and either severely underestimates those burdens or refuses to analyze them. The end result is that this 762 page DEIS has emphasized quantity over quality. It has failed to provide decision makers with the necessary information and tools to make an informed decision as required by the National Environmental Policy Act. Consequently, it does not comply with that Act.

II. THE DEIS AND THE PROPOSED ACTION ARE FUNDAMENTALLY FLAWED BECAUSE THEY PROCEED FROM AN INCORRECT BASIS REGARDING THE LEGAL REQUIREMENTS OF NATIONAL STANDARD 9

The proposed restrictions on the pollock fishery to reduce Chinook salmon bycatch were crafted to satisfy a strict legal standard that is nowhere found in the law. Therefore, the legal premise that the NPFMC must take these actions to reduce bycatch is wrong. National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act ("MSA"), 16 U.S.C. § 1851(a)(9), provides:

> Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The Chinook salmon bycatch plan was developed to meet the objectives of National Standard 9. However, what is required by National Standard 9 has been hotly debated before the courts with various parties offering different interpretations. According to the DEIS, the interpretation of National Standard 9 used to justify the proposed bycatch reduction proposal is that National Standard 9 "expressly requires that bycatch be avoided to the maximum extent practicable" and that "every" practicable effort be made to avoid bycatch. DEIS at 688-689. This interpretation of National Standard 9 has been expressly rejected by the courts as unnecessarily and unlawfully strict.

National Standard 9 only requires that bycatch be minimized "to the extent practicable...." Contrary to the DEIS, National Standard 9 does not "expressly" require that bycatch be avoided to the "maximum" extent practicable. The word "maximum" is nowhere found in National Standard 9. Courts interpreting the term "to the extent practicable" in National Standard 9 have held that the words mean exactly that. "NMFS is required to minimize bycatch only 'to the extent practicable . . . .'" *National Coalition for Marine Conservation v. Evans,* 231 F.Supp.2d 119, 137 (D.D.C. 2002).

In enacting National Standard 9, Congress did not say that the goals of National Standard 9 are to be met to the "maximum" extent practicable. Congress also did not say that the Secretary is to use "every" practicable means to achieve National Standard 9's objective. The imperative to employ "every" practicable means is used in statutes such as the NEPA which requires that federal agencies use "all practicable means" to comply with the requirement of that law that the environmental consequences of a proposed action be fully examined before a decision is made. 42 U.S.C. § 4331(b). Similarly, in the Endangered Species Act ("ESA"),

Congress provided that the impacts of an action on protected species must be minimized "to the maximum extent practicable." 16 U.S.C. § 1539(a)(2)(B)(ii). In the MSA, Congress used a lesser mandate requiring only that the goal of National Standard 9 be met "to the extent practicable."

It is also important to understand that "practicable" is not the same thing as "possible." In the preamble to the Guidelines interpreting National Standard 9, the National Marine Fisheries Service ("NMFS") stated:

> For the purposes of this national standard, the term "practicable" is not synonymous with the term "possible," because not all reductions that are possible are practicable.

63 Fed. Reg. 24,212, 24,226 (May 1, 1998).

This view is supported by the courts. In *Conservation Law Foundation v. Evans,* 360 F.3d 21 (1st Cir. 2004), the plaintiffs argued that the word "practicable" should be interpreted to mean "possible." The issue arose with respect to compliance with National Standard 9 as well as compliance with section 303(a)(7), 16 U.S.C. § 1853(a)(7), which requires that a fishery management plan ("FMP") minimize adverse effects on essential fish habitat "to the extent practicable."

> [T]he plaintiffs essentially call for an interpretation of the statute that equates "practicability" with "possibility," requiring NMFS to implement virtually any measure that addresses [essential fish habitat] and bycatch concerns so long as it is feasible. Although the distinction between the two may sometimes be fine, there is indeed a distinction. The closer one gets to the plaintiffs' interpretation, the less weighing and balancing is permitted. We think by using the term "practicable" Congress intended rather to allow for the application of agency expertise and discretion in determining how best to manage fishery resources.

Id. at 28.

National Standard 9 also does not require the elimination of gear types causing bycatch. In the preamble to the Guidelines interpreting National Standard 9, NMFS noted that one commenter had argued that National Standard 9 encourages, if not requires, the elimination of non-selective gear types. NMFS rejected this view stating:

> [T]he legislative history [of National Standard 9] includes a floor statement by Congressman Young that "it is not the intent of Congress that the [Councils] ban a type of fishing gear or a type of fishing in order to comply with this standard."

63 Fed. Reg. at 24,224 *citing* 142 Cong. Rec. H11437 (daily ed. Sept. 27, 1996).

Again, the courts have concurred. In *National Coalition for Marine Conservation v. Evans,* conservation groups claimed that regulations governing the Atlantic highly migratory species fishery violated National Standard 9 by failing to adequately address billfish bycatch. Plaintiffs sought gear and other restrictions effectively closing the fishery to one gear type. The agency's defense was that the FMP needed to minimize bycatch only "to the extent practicable" and that eliminating all fishing was not reasonable. The court agreed with NMFS that to guarantee the bycatch reductions sought by plaintiffs NMFS would have to eliminate all pelagic longline fishing – an unreasonable alternative not required by the MSA. 231 F.Supp.2d at 137.

Finally, and critically important for the proposed Chinook salmon bycatch plans, the courts have not found failed compliance with National Standard 9 simply because NMFS could have done more to reduce bycatch. In *The Ocean Conservancy v. Gutierrez,* 394 F.Supp.2d 147 (D.D.C. 2005), *aff'd,* 488 F.3d 1020 (D.C. Cir. 2007), the court rejected the plaintiffs' arguments that National Standard 9 was to be given the top priority among the National Standards. Instead, the court noted that "[a]lthough the NMFS *might* have done more to reduce bycatch, '*more*' is not the standard that NMFS must follow." *Id.* (Emphasis in original.)

In sum, according to the DEIS, the proposed action was developed to meet a legal standard requiring that bycatch be reduced to the "maximum" extent practicable and that "every" practicable effort must be adopted to achieve that goal. That legal standard is nowhere found in the statute. Indeed, that standard has been rejected by the courts. National Standard 9 does not require that these bycatch reduction measures be adopted.

III. THE DEIS AND THE PROPOSED ACTION ARE FUNDAMENTALLY FLAWED BECAUSE THEY PROCEED FROM AN INCORRECT BASIS REGARDING THE LEGAL REQUIREMENTS OF THE PACIFIC SALMON TREATY

The DEIS states the proposed action is an element of the NPFMC's efforts to "ensure" compliance with the Pacific Salmon Treaty ("Treaty"). DEIS at 19. The Problem Statement adopted by the NPFMC states salmon bycatch "must" be reduced in order to meet the U.S. "obligation" under the Treaty and its associated Yukon River Annex. DEIS at 1. The legal position is that additional actions to address bycatch are required by the Treaty. As is the case with National Standard 9, that supposition is incorrect.

The Treaty sets forth objectives only with respect to "Fisheries." A "Fishery" is defined as "the activity of harvesting or seeking to harvest salmon." Pacific Salmon Treaty, Article I. Nowhere in the Treaty documents or implementation precedents is there any hint that the term "fishery" applies to anything other than directed salmon fishing. Given that the pollock fisheries do not target salmon, the Treaty's general provisions do not apply to activities of the pollock fleet. While there are Treaty provisions not limited to "Fisheries" that do relate to "incidental mortality" or "bycatch," these provisions relate only to estimating and reporting incidental mortality and/or bycatch. *See* Annex IV, Chapter 1, ¶ 3(a)(1)(iv)b; Annex IV, Chapter 1, ¶ 3(a)(2)(iii)b; Appendix to Annex IV, Chapter 3, ¶ 1(b)(ii); Appendix to Annex IV, Chapter 3, ¶ 3(c); Appendix to Annex IV, Chapter 3, ¶ 3(e); Appendix to Annex IV, Chapter 3, Understanding on the Application of Annex IV, Chapter 3 relating to assignments for the Chinook Technical Committee, section (1); Appendix to Annex IV, Chapter 5, ¶ 6(d)(3); Appendix to Annex IV, Chapter 6, ¶ 12.

Only two Treaty provisions impose affirmative obligations regarding bycatch reduction for "fisheries." The first relates to test fishing sanctioned by the Fraser River Panel of the Pacific Salmon Commission and states that such activities are to be conducted in a manner that "minimizes Coho bycatch mortalities." Pacific Salmon Treaty, Appendix to Annex IV, Chapter 5, Southern Coho Management Plan, February 14, 2002. That section is inapplicable here. The second provision addressing bycatch reduction in "fisheries" applies directly to bycatch of Yukon River origin salmon. That provision states:

> The [United States and Canada] shall maintain efforts to increase the in-river run of Yukon River origin salmon by reducing marine catches and bycatches of Yukon River salmon. They shall further identify, quantify and undertake efforts to reduce these catches and bycatches.

Pacific Salmon Treaty, Annex IV, Chapter 8, ¶ 12. Recall that a "fishery" within the meaning of the Treaty is one that targets salmon. Therefore, this provision is only applicable to the fisheries it governs. The pollock fishery is not a fishery governed by the Treaty or by this provision. Nevertheless, and for the sake of argument, assume for a moment that the pollock fishery is a fishery as that term is defined in the Treaty.

The issue is what obligations are imposed on the United States by the Treaty's Yukon River Annex. First, the U.S. and Canada are to "maintain efforts" to increase the in-river run of Yukon River origin salmon. Pacific Salmon Treaty, Annex IV, Chapter 8, ¶ 12. This obligation requires the continuance of equivalent programs to those existing when the Annex was signed in December 2002. Second, the U.S. and Canada "shall further identify, quantify, and undertake efforts to reduce these catches and bycatches." Nowhere is a specific activity identified, let alone required.

Even if the Treaty were applicable to the pollock fishery, the salmon bycatch reduction measures for that fishery existing when the Annex was signed have been continued and improved upon, thereby satisfying the Treaty's requirement to "maintain" efforts. In January 1996, NMFS approved Amendment 21b to the BSAI Groundfish Fishery Management Plan that established measures to control the amount of Chinook salmon taken as bycatch in the BSAI trawl fisheries. Specifically, the management measure closed three areas to trawling when 48,000 Chinook salmon were taken as bycatch. In February 2000, this amendment was modified with the approval of Amendment 58 to the BSAI Groundfish Fishery Management Plan, which reduced the Chinook salmon bycatch trigger level to 29,000 Chinook salmon, refined the closure dates, and refined the closure areas based on more recent data. These measures, though modified to improve them, remain in effect.

Moreover, even if the Treaty were applicable to the pollock fishery, additional bycatch reduction actions taken since 2002 satisfy the standard regarding "further ... efforts." In 2005, the NPFMC recommended and in 2007 NMFS approved Amendment 84 to the BSAI Groundfish Fishery Management Plan modifying salmon bycatch management measures by establishing a Voluntary Rolling Hotspot System. The VRHS provides real-time salmon bycatch information so that the fleet can avoid areas of high chum and Chinook salmon bycatch rates. Prior to implementation of this amendment, the pollock fleet voluntarily implemented a VRHS program starting in 2002 for Chinook salmon and in 2001 for chum salmon.

Even if the pollock fishery fell within the definition of a "fishery" covered by the Treaty, the statute implementing the Treaty provides for a determination of when the U.S. may be in violation of its Treaty obligations and when further actions need to be taken to comply with the Treaty. No determination of non-compliance has been made. Therefore, there is no legal foundation for the NPFMC assertion that bycatch restrictions must be imposed on the pollock fishery to satisfy U.S. treaty obligations.

The statute implementing the Treaty provides that if the Secretary of State determines the United States "is in jeopardy of not fulfilling its international obligations under the Treaty" the Secretary of State shall so notify the U.S. Section. The certification shall include the reasons for the Secretary of State's determination and specify a date by which action by the U.S. Section "is desired." 16 U.S.C. § 3632(g)(8). Absent a certification by the Secretary of State, the U.S. must be considered to be in compliance with the Treaty, including the bycatch reduction objectives of the Yukon River Annex. While some may argue or wish for more to be done, absent a certification by the Secretary of State, U.S. compliance with the Treaty is presumed. The assumption that the Treaty requires more action to reduce salmon bycatch in the pollock fishery is legally incorrect.

Furthermore, even if a certification is issued by the Secretary of State, that certification is not that the U.S. is in violation of its obligations under the Treaty, only that the U.S. is in jeopardy of being in violation. Also note that even if a certification is issued, no action is required. The Secretary of State simply provides a certification to the U.S. Section together with a date by which action "is desired," as opposed to required. If the U.S. Section fails to act, the recourse given the Secretary of State is to report the matter to the President who is under no obligation to take further action. 16 U.S.C. § 1632(g)(8). Again, the legal premise that the NPFMC or NMFS are somehow required by the Treaty to impose additional restrictions to reduce salmon bycatch is incorrect.

Finally, even if the pollock fishery were governed by the Treaty, it is factually impossible to argue that new restrictions on pollock fishing are required to meet some presumed deficiency in U.S. compliance with the Treaty. The DEIS admits the Chinook salmon escapement target set by the Yukon River Panel for the Canadian portion of the Yukon River has been exceeded "each year" from 2001-2005, exceeding the average escapement in the 1989-1998 period by 42%. DEIS at 212, 222. In 2006, the escapement goal was essentially met in that 27,990 Chinook salmon spawned compared to the goal of 28,000. Joint Technical Committee of the Yukon River U.S./Canada Panel, Summary and 2008 Season Outlook Alaska Department of Fish and Game, Regional Information Report No. 3A08-01. Escapement goals for Canada were not met in 2007 or 2008 when Chinook salmon runs in the Yukon River were relatively small, ADFG 2008, and when the U.S.-Canada Joint Technical Committee had established new and higher escapement goals.

Assuming that the pollock fishery is a "fishery" covered by the Treaty, the events of 2007 and 2008 do not provide justification for severe restrictions on the pollock fishery. Chinook salmon bycatch in the pollock fishery is not a significant contributing factor to whether escapement goals into Canada are or are not met. The DEIS calculates the adult equivalent ("AEQ") mortality of Chinook salmon. The AEQ mortality is the number of fish that would have returned to the natal river had they not been captured in the pollock fishery. The AEQ number is less than the total bycatch because some of the salmon captured in the pollock fishery would

have died naturally before returning to freshwater. If zero Chinook salmon bycatch were taken in the pollock fishery, then the total AEQ mortality for Canadian origin fish in 2007 would have been 608 fish. DEIS at 140, Table 3-14; Gregory T. Ruggerone (Natural Resources Consultants); Effects of Chinook Salmon Bycatch in the Bering Sea Pollock Fishery on Salmon Harvests, Escapements, and Abundances in Western Alaska; February 10, 2009 ("NRC 2009"), attached hereto as Appendix 1. This was less than 1% of the total run of Canada bound Chinook salmon. NRC 2009. While some of these fish would have escaped in-river fisheries and reached the spawning grounds in Canada, the magnitude of the increase in the spawning population would have been almost unnoticeable.

In short, Chinook salmon bycatch in the pollock fishery has virtually no impact on Canadian origin fish. There is no factual basis for arguing that the Treaty, even if it were applicable to the pollock fishery, requires the imposition of severe restrictions on the pollock fishery.

Indeed, genetic sampling during 2005-2007 indicates that Alaska origin Yukon River stocks represent about 97% of the total Yukon River AEQ Chinook mortality in the pollock fishery with only 3 % coming from Canadian origin Yukon River stocks. DEIS at 125, Table 3-12; NRC 2009. This suggests that the Upper Yukon Canadian origin stock has a unique distribution in the ocean. This in turn suggests that the actual result of forcing the pollock fleet to change fishing patterns and areas may be adverse to Canadian interests and, therefore, contrary to the objective set forth in the NPFMC Problem Statement.

IV. THE DEIS AND THE PROPOSED ACTION ARE FUNDAMENTALLY FLAWED BECAUSE THEY VIOLATE NATIONAL STANDARD 1

The new Chinook salmon bycatch plans being considered by the NPFMC and evaluated in the DEIS violate National Standard 1 in four separate ways. To understand the nature and extent of the violations, these comments will first review what is required by National Standard 1.

A. National Standard 1 Requires That Optimum Yield Shall Be Achieved

National Standard 1 requires that "[c]onservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry." 16 U.S.C. § 1851(a)(1). At the outset, note the difference between National Standard 1 and National Standard 9. The objectives of National Standard 1 "shall" be met while the objectives of National Standard 9 are to be met only "to the extent practicable."

Although the MSA gives the Secretary of Commerce ("Secretary") broad authority to manage and conserve fisheries, *The Ocean Conservancy v. Gutierrez,* 394 F.Supp.2d 147, 156 (D.D.C. 2005), *aff'd,* 488 F.3d 1020 (D.C. Cir. 2007), the ultimate goal of any fishery management plan ("FMP") is to establish conservation and management measures that allow a fishery to produce its optimum yield – and each National Standard is to be implemented with that goal in mind. *Recreational Fishing Alliance v. Evans,* 172 F.Supp.2d 35 (D.D.C. 2001), *A.M.L. International Inc. v. Daley,* 107 F.Supp.2d 90 (D. Mass. 2000).

To achieve the MSA's ultimate purpose, the statute sets out ten National Standards with which FMPs "shall be consistent." 16 U.S.C. § 1851(a). However, the courts have recognized that the different goals of these standards may be in conflict and the tension among the different standards necessarily requires that each goal be sacrificed to some extent to meet the others. *National Coalition for Marine Conservation v. Evans,* 231 F.Supp.2d 119, 132 (D.D.C. 2002).

> Congress, while aware of the potential conflicts among the Magnuson-Stevens Act's provisions, nevertheless "required [NMFS] to exercise discretion and judgment in balancing among the conflicting national standards . . . ."

Id. at 141, *quoting Alliance Against IFQs v. Brown,* 84 F.3d 343, 350 (9th Cir. 1996).

In *The Ocean Conservancy v. Gutierrez,* 394 F.Supp.2d at 159, the court was more direct noting: "Simply stated, National Standard 9 is not entitled to greater weight than any of these other Standards." The court cited *National Coalition for Marine Conservation v. Evans,* 231 F.Supp.2d at 137, for the proposition that:

> [B]ecause bycatch could only be entirely avoided by eliminating *all* commercial activity in the fishery, National Standard 9 only made sense within the larger context of the Magnuson-Stevens Act if it was interpreted as requiring the NMFS to find the combination of regulations that would best meet the statute's various objectives.

The Ocean Conservancy v. Gutierrez, 394 F.Supp.2d at 159. The court concluded:

> All ten of the national standards were promulgated to influence and shape the NMFS rule-making process. When viewed in this context, fishery regulations issued by the NMFS must undoubtedly minimize bycatch, but also promote safety on the high seas (National Standard 10) and minimize the economic impact of regulations on fishing communities (National Standard 8).

Id. at 158-59.

However, in finding the appropriate balance among the different National Standards, it must be recognized that Congress awarded some National Standards a higher priority than others. The objectives of National Standard 9 and certain other National Standards are to be achieved only "to the extent practicable." In contrast, other National Standards are stated as an imperative. National Standard 1 provides that FMPs "shall" prevent overfishing and achieve optimum yield. National Standard 2 provides that FMPs "shall" be based on the best scientific information available. National Standard 4 provides that FMPs "shall not" be discriminatory, etc. National Standard 6 requires that FMPs "shall" allow for variation among and contingencies in fisheries. The requirements of these National Standards are not modified by the "to the extent practicable" clause Congress inserted into National Standard 9. When Congress created the National Standards, it did so using words that gave some standards a higher priority than others.

National Standard 9 was added to the MSA years after National Standard 1 was enacted. That fact alone demonstrates the two standards have very different purposes. Equally important, it is clear that when Congress enacted National Standard 9, it did so with the intent that bycatch management not undermine the objective of National Standard 1. Senator Breaux, a member of the reporting Committee, in discussing the new National Standard 9 stated that preventing bycatch had to be done "without destroying the fishermen who are going after a targeted species." 142 Cong. Rec. S10818 (daily ed. Sept. 18, 1996). The Senate Report on the bill adding National Standard 9 to the MSA stated National Standard 9 was intended to minimize bycatch only "where possible." S. Rep. No. 104-276 (1996) at 14, *reprinted in*, 1996 U.S.C.C.A.N. 4073, 4086.

In summary, when considering the requirements of National Standard 1 and then what is required by the term "to the extent practicable" in National Standard 9, it is important to bear in mind the complete statutory context. First, the ultimate goal of the MSA is to conserve and manage fisheries to achieve their optimum yield. Reducing bycatch is not the MSA's top priority. Second, in seeking to realize the objective of achieving optimum yield, the goals of the different National Standards may be in conflict given the facts of a particular fishery. This means that the goals of one National Standard may be sacrificed to some extent in order to achieve the goals of another National Standard. Third, in striking the overall balance, not all National Standards are created equally and National Standard 1 provides a mandate that optimum yield be achieved.

B. Optimum Yield Shall Be Achieved On A Continuing Basis

National Standard 1 also requires that optimum yield be achieved on a continuing basis. Thus, in *J.H. Miles & Co., Inc. v. Brown,* 910 F. Supp. 1138 (E.D. Va. 1995), the court stated:

> Moreover, as National Standard One expressly states, management measures must aim to achieve, on a *continuing* basis, the optimum yield from each fishery, not the optimum yield in a single year. *See also* 50 C.F.R. § 602.11(b) ("most important limitation on the specification of [optimum yield] is that the choice of [optimum yield]-and the conservation and management measures proposed to achieve it-must *prevent overfishing*")

Id. at 1148. (Emphasis in original).

The same issue regarding National Standard 1's requirement to achieve optimum yield in the regulated fishery "on a continuing basis" was considered in *North Carolina Fisheries Ass'n, Inc. v. Daley,* 16 F.Supp.2d 647 (E.D. Va. 1997). The court stated:

> Furthermore, optimum yield is measured on a continuing basis, therefore management measures must aim to achieve, on a continuing basis, the optimum yield from each fishery, not the optimum yield in a single year.

Id. at 654-655.

Similarly, in *Northwest Environmental Defense Center v. Brennan,* 958 F.2d 930, 932 (9th Cir. 1992), the U.S. Court of Appeals for the Ninth Circuit found:

> The Magnuson Act contemplates maximum utilization of fishery resources consistent with the long-term health of the fishery. The National Standards prescribe achievement of "optimum yield" on a continuing basis. 16 U.S.C. § 1851(a)(1). Optimum yield is the amount of fish "which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities;" it is calculated "on the basis of the maximum sustainable yield ... as modified by any relevant economic, social, or ecological factor." 16 U.S.C. § 1802(21).

Id. at 935. The key point is that optimum yield is to be achieved "on a continuing basis."

C. The Proposed Action Will Prevent The Achievement Of Optimum Yield On A Continuing Basis

The process by which the optimum yield and the annual Total Allowable Catch ("TAC") for each of the BSAI groundfish species is established is a careful and rigorous one. Each fall, the Bering Sea Groundfish Management Plan Team, comprised of federal and state scientists, fishermen, managers, and other experts, meets to review the most current biological and management data. After that review, the Plan Team recommends an Overfishing Level ("OFL") and an Allowable Biological Catch ("ABC") for each species in the groundfish fishery. This recommendation is forwarded to the NPFMC's Scientific and Statistical Committee ("SSC") comprised of scientific experts. The SSC conducts a scientific peer review of the Plan Team's recommendations, makes whatever revisions it deems appropriate, and forwards the revised recommendations to the NPFMC. Based on the SSC's recommendations, public testimony, and any other scientific input from the SSC, the NPFMC selects an OFL, ABC, and TAC for each of the 18 groundfish species in the BSAI groundfish complex.

In making its TAC decisions, the NPFMC is constrained by the overall boundaries on optimum yield set forth in the BSAI Groundfish Fishery Management Plan. That FMP provides that, subject to a lower limit of 1.4 million metric tons and an upper limit of 2.0 million metric tons, the optimum yield for the BSAI groundfish fishery is the sum of the 18 individual species TACs. Thus, in a given year, the optimum yield equals the sum of the individual species TACs, but it cannot exceed 2.0 million tons or fall below 1.4 million tons.

The critical point is that the optimum yield for the groundfish fishery has been set after a very careful and rigorous process. The optimum yield has been established based on "prevailing ecological and environmental conditions." 50 C.F.R. § 602.11(d)(i). This optimum yield is what the fishery is capable of producing on a continuing basis. However, adoption of the additional Chinook salmon bycatch reduction plans considered in the DEIS will prevent the optimum yield from being achieved, violating National Standard 1 in three ways.

First, as the DEIS readily admits through its calculations of foregone catch and revenue, the bycatch reduction measures will prevent the harvest of the pollock TAC. Achieving the optimum yield for the BSAI groundfish fishery depends on fully harvesting the pollock TAC. The

optimum yield for the BSAI groundfish fishery cannot be achieved if the pollock TAC is not harvested. In 2007, the optimum yield and TAC for the 18 species that comprise the BSAI groundfish fishery was 2.0 million metric tons. The pollock TAC was 1.413 million metric tons, 71% of the TAC and optimum yield. 72 Fed Reg. 9453 (March 2, 2007). It is axiomatic that management measures that prevent the harvest of the pollock TAC will prevent the achievement of optimum yield and violate National Standard 1.

Second, adopting additional Chinook bycatch reduction measures will prevent the fishery from achieving the optimum yield on a continuing basis. The DEIS admits that Alternatives 2-4 will cause a shift in fishing patterns that "will result in ... harvesting pollock of smaller sizes...." DEIS at 165. The DEIS then states that fishing more concentrated on younger and smaller fish "could result in lower ABC and TAC...." *Id.* at 165. Two paragraphs later, the DEIS concludes that adopting additional salmon bycatch restrictions will "likely" cause the pollock fleet to fish more heavily on juvenile pollock and that will "likely result in smaller [pollock] TACs...." *Id.* at 166. Thus, adopting Alternatives 2-4 will change fishing patterns in a way that changes the age and size composition of the harvest. *Id.* at 165-166. The DEIS concludes that this result will harm the pollock resource, forcing a reduction in the ABC and the TAC. In other words, Alternatives 2-4 will prevent the achievement of the optimum yield of which the fishery is capable of producing on a continuing basis by forcing the harvest of less biologically acceptable age and size classes, all in violation of National Standard 1.

Third, food production is a key element of achieving optimum yield. 16 U.S.C. § 1802(33). Preventing the full harvest of the pollock TAC because of bycatch induced fishery closures will deprive the U.S. of substantial quantities of protein. If one assumes an average of four ounces of fish per meal, then for every 100,000 metric tons of pollock lost because of fishery closures, the U.S. foregoes approximately 250 million meals. That is enough to provide the combined populations of Anchorage, Dallas, Detroit, Indianapolis, Seattle, and San Francisco with one meal per week for an entire year. Given that food production is a key element of achieving optimum yield, restrictions on food production caused by Alternatives 2-4 violate National Standard 1.

V. THE DEIS AND THE PROPOSED ACTION ARE FUNDAMENTALLY FLAWED BECAUSE THEY RELY ON INAPPLICABLE STATUTORY AUTHORITY

The DEIS notes that Title VIII of the Alaska National Interest Lands Conservation Act ("ANILCA") creates a priority for subsistence uses of fish and wildlife over other purposes on public lands. DEIS at 18, *citing* 16 U.S.C. § 3114. The DEIS contains numerous statements regarding the need to implement this subsistence priority. The DEIS cites this priority as a legal rationale for restricting the offshore harvest of pollock.

No caring person would ever diminish the importance of protecting subsistence users. However, the legal argument advanced in the DEIS for doing so is without merit. The United States Supreme Court has ruled that ANILCA does not apply to the outer continental shelf ("OCS") of the United States. *Amoco Production Co. v. Village of Gambrell,* 480 U.S. 531, 546-47 (1987). *See also,* 16 U.S.C. § 3102(3), 50 C.F.R. 100.3 and 100.4. The action area for the proposed Chinook salmon bycatch management plan is the OCS region. DEIS at 18. ANILCA is not legally applicable, a fact the DEIS admits. DEIS at 18.

Nevertheless, the DEIS asserts that NMFS intends to implement ANILCA by using NEPA and the MSA. DEIS at 18. There are two legal defects with NMFS' approach. First, if ANILCA does not apply in the OCS region, it is not another applicable law under the MSA as that term is used in 16 U.S.C. § 1854(a). Thus, the MSA does not provide a legal basis to implement ANILCA. Second, NEPA does not provide the authority to enforce the substantive provisions of any statute, including ANILCA. The Supreme Court has ruled on at least four occasions that NEPA is a procedural statute only. *Kleppe v. Sierra Club*, 427 U.S. 390 (1976); *Vermont Yankee Nuclear Power Corp v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978); *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223 (1980); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989). It requires that issues be examined. It does not provide the authority for a particular result to be reached or enforced. Contrary to the legal position set forth in the DEIS, neither the MSA nor NEPA can be used to enforce ANILCA.

VI. THE DEIS OVERESTIMATES THE BIOLOGICAL ADVANTAGES OF THE PROPOSED ACTION TO CHINOOK SALMON

A. Overview

A careful analysis of the facts reveals no support for the argument that there is a biological need to severely curtail Chinook salmon bycatch in the pollock fishery. Forty-six percent of this Chinook bycatch originates in waters outside western Alaska. The DEIS variously describes these non-western Alaska stocks as trending "sharply upward," with "escapement goals met or exceeded" in some cases by 125%-265%, and as "rarely taken" in the pollock fishery. As to the 54% of the incidentally taken Chinook salmon originating in western Alaska, the DEIS notes that none of these stocks has been listed as a stock of concern because of inadequate escapement. Even if there were zero Chinook salmon incidentally taken in the pollock fishery, the increase in the number of fish escaping to spawn would be between 1.9% and 5.5% depending on the geographic area and whether one uses sonar data or mark recapture data to measure fish runs. These are numbers too small to make a measurable biological impact on either escapement rates or the species. Although the annual AEQ mortality for western Alaska stocks Chinook salmon ranged from 9,697 to 45,682 fish between 1994 and 2008, that is a relatively small percentage of Chinook salmon returning to western Alaska. In the same period, the number of Chinook salmon returning to western Alaska was between 393,000 and 1,100,000 fish annually. NRC 2009. The pollock fishery is simply not responsible for the swings in Chinook salmon abundance in western Alaska rivers over the past 15 years.[1]

Each of these points will be discussed in more detail below. Virtually none of these points are examined in the DEIS. For that reason alone, the DEIS fails to meet the requirement

[1] While the focus of the DEIS is Chinook salmon bycatch, it is also useful to step back and to put the overall bycatch rate of the pollock fishery into a larger perspective. In 2003-2007, the fish discard rate for the BSAI pollock fishery was only 1.3%. NMFS; Stock Assessment and Fishery Evaluation Report for the Groundfish Fisheries of the Gulf of Alaska and the Bering Sea Aleutian Islands: Economic Status of the Groundfish Fisheries Off Alaska; November 5, 2008 ("Economic SAFE Report"), at 28, Table 6. From that standpoint, the pollock fishery is one of the cleanest fisheries in the world.

set forth in *Citizens to Preserve Overton Park v. Volpe* that an EIS take a hard look at the issues.

B. The Pollock Fishery Is Not Adversely Affecting Escapement For Chinook Salmon Stocks Generally

The focus of the DEIS and of the Proposed Action is on the impacts in western Alaska of the incidental bycatch of Chinook salmon in the pollock fishery. However, it is important to understand that not all of the incidentally taken Chinook originate in western Alaska. Only 54% of those Chinook salmon originate in western Alaska (Arctic, Yukon, Kuskokwim, Bristol Bay) based on genetic data. Four percent originate in Cook Inlet, 2% in southeast Alaska transboundary rivers, 23% in British Columbia/Pacific Northwest, 13% in the North Alaska Peninsula, 2% in Russia, and 3% in a variety of other areas. DEIS at 125, Table 3-12. While the DEIS focuses on western Alaska, it is useful to briefly review other areas in order to provide a complete perspective.

Focusing first on the 4% of the bycatch involving Cook Inlet stocks, the DEIS admits these stocks "continue to trend sharply upward and most escapement goals are being met or exceeded...." DEIS at 530. The DEIS concedes that Chinook salmon bycatch in the pollock fishery is not adversely affecting the health of these stocks. *See also* DEIS at 241.

Turning to the 2% of the Chinook bycatch originating in southeast Alaska's transboundary rivers and to the 3% originating in other areas (which largely includes Alaska's southeast rivers), the DEIS again documents the absence of any adverse biological impact from Chinook bycatch in the pollock fishery. For the 11 southeast Alaska rivers reviewed in the DEIS, Chinook salmon escapement in the 2000-2004 period was 156% of the escapement goal. DEIS at 242, Table 5-18. In fact, escapement rates have increased steadily over the past 40 years. During the 1977-1979 period, Chinook salmon escapement on those 11 southeast Alaska rivers was only 74% of the escapement goal. In the 1980-1989 period, escapement rose to 113% of the goal. In the 1990-1999 period, escapement was 149% of the goal. In the 2000-2004 period, Chinook salmon escapement in these 11 southeast Alaska rivers was 156% of the escapement goal. *Id.* As to southeast Alaska, there is no conservation basis for the bycatch reduction plan. A closer look at the two major rivers in southeast Alaska confirms this fact.

The Taku River is the largest producer of Chinook salmon in southeast Alaska. The 1990-1999 escapement for Chinook salmon on the Taku River was 154% of the escapement goal. The 2000-2004 escapement was 125% of the escapement goal. DEIS at 242, Table 5-18. Unfortunately, in presenting this data, the writers of the DEIS chose to emphasize the relative escapement rates of the 1990-1999 and the 2000-2004 periods stating that the 2000-2004 escapement rate on the Taku River was low relative to the 1990-1999 rate. *Id.* at 530. That presentation neglects to acknowledge that Chinook salmon escapement in each period far exceeded the planned escapement goal. For the Stikine River, the other major river in southeast Alaska, the DEIS notes escapement has "increased greatly" since 1999. *Id.* In 2000-2004, Chinook salmon escapement on the Stikine River was 265% of the escapement goal, up from 166% in the 1990-1999 period. *Id.* at 242, Table 5-18. In fact, Stikine River Chinook salmon have met the escapement goal every year 1984-2008. McPherson, S., J. H. Clark, D. R. Bernard, J. Der Hovanisian, E. Jones, K. Pahlke, P. Richards, J. Weller, T. Johnson, R. Chapell, B. Elliot, and C. Hendrich; Chinook Salmon Status and Escapement Goals for

Stocks in Southeast Alaska, Alaska Department of Fish and Game Special Publication No. 08-18.

Turning to the Pacific Northwest, there are 26 salmon evolutionary significant units ("ESUs") designated under the Endangered Species Act ("ESA"), 17 for Chinook salmon. Chinook salmon from only two of these ESUs are taken incidentally in the BSAI groundfish fishery. DEIS at 530. For these two, the 2007 biological opinion issued under the ESA concluded that the BSAI groundfish fisheries, including the pollock fishery, were not likely to jeopardize these stocks or adversely modify their critical habitat. *Id.* at 242. One reason for this no jeopardy finding is that Chinook salmon from the two ESUs (Upper Willamette River and Lower Columbia River) are "rarely taken" in the BSAI groundfish fisheries. *Id.* at 243. In fact, since 1984, only 87 fish from these two ESUs were taken incidentally in the BSAI groundfish fisheries. *Id.* at 244, Table 5-19. Furthermore, since not all Chinook salmon incidentally taken in the BSAI groundfish fishery would necessarily return to spawn due to natural mortality, the DEIS estimates that only 52-87 of the 87 Chinook salmon taken in the BSAI groundfish fishery from these two ESUs since 1984 would have returned to spawn. *Id.* at 245. This is approximately 1.5 fish per year on average, divided between two rivers.

As to the North Alaska Peninsula, no escapement goals have been established for most of the rivers and streams in this area. For the one river for which a biological escapement goal has been set, the Nelson River, the Chinook salmon goal has been met during all recent years. Nelson, P. A., J. J. Hasbrouck, M. J. Witteveen, K. A. Bouwens, and I. Vining; Review of Salmon Escapement Goals in the Alaska Peninsula and Aleutian Islands Management Areas, Alaska Department of Fish and Game Fishery Manuscript No. 06-03.

Neither the DEIS nor these comments address the 2% of the Chinook salmon bycatch that is taken from Russian waters. Including that 2% with Chinook originating in areas outside western Alaska, there is no conservation rationale based on escapement goals for a bycatch reduction program with respect to 46% of the Chinook salmon incidentally caught in the pollock fishery.

Turning to the 54% of the incidentally taken Chinook salmon that originates in western Alaska, it is important to clarify the impact of bycatch on the health and biology of the resource. The DEIS notes that western Alaska salmon runs have experienced declines. However, the DEIS reports that weaker runs "have been attributed to reduced productivity in the marine environment rather than an indication of low levels of ... escapements...." DEIS at 196. In other words, reduced runs of Chinook salmon in western Alaska are not caused by bycatch. The DEIS goes on to cite the "evidence that salmon are food limited" in their ocean environment and notes this is the factor generally responsible for weaker runs. *Id.*[2] *See also* DEIS at 199.

Another indicator of the biological status of western Alaska's Chinook salmon is found in the stock status designations made under Alaska's Sustainable Salmon Fisheries Policy. That Policy establishes conservation categories for Alaska's salmon stocks. The first division is

[2] Chinook salmon consume predominantly nekton. DEIS at 196. Nekton populations are sensitive to ocean temperatures and the documented increase in ocean temperatures is impacting those populations.

based on whether there is any conservation issue. A stock for which such a concern exists is designated as a "stock of concern." DEIS at 203.

The DEIS divides western Alaska Chinook salmon stocks into four major geographic areas: (1) Norton Sound, (2) Yukon, (3) Kuskokwim, and (4) Bristol Bay. DEIS at 205. Only two of these stocks, Norton Sound and Yukon, are designated as stocks of concern. *Id.*, Table 5-3. This means that for the other two, Kuskokwim and Bristol Bay, there are no special conservation measures required and bycatch in the pollock fishery is not a conservation issue in terms of meeting escapement goals.

Regarding Norton Sound and Yukon stocks, once a stock is designated a stock of concern it is placed into one of three categories, a stock of (1) yield concern, (2) management concern, or (3) conservation concern. A conservation concern is more severe than a management concern which is more severe than a yield concern. DEIS at 203. The Norton Sound and Yukon stocks have been assigned the lowest level of concern and are designated only as stocks of yield concern. *Id.* at 205, Table 5-3.

A stock of yield concern is one for which there are problems with maintaining a harvestable surplus above a stock's escapement needs. DEIS at 203. In other words, there is no biological issue in terms of meeting escapement but there is an issue of providing more fish for harvest.

In sum, a review of western Alaska Chinook salmon stock status demonstrates that under the State's current conservation program, no western Alaska Chinook salmon stock is deemed to be one of biological concern. The next subsections of this Part provide a closer look at western Alaska Chinook salmon stocks by region.

C. Norton Sound Chinook Salmon

In Norton Sound, escapement goals have been established for three rivers. That goal is 1,600-3,250 Chinook. DEIS at 205. The average annual escapement throughout the Norton Sound area between 2000 and 2008 was 3,941 and the 2008 escapement was 2,712. NRC 2009. In considering the impact of Chinook salmon incidentally caught in the pollock fishery on these escapement numbers, it is useful to compare them to the actual AEQ mortality. The average annual AEQ mortality between 2000 and 2008 was 266 fish. *Id.* If none of those 266 fish were taken by terminal users, average annual escapement would have increased only 6.7%. However, the average annual in-river harvest rate for Norton Sound Chinook salmon between 2000 and 2008 was 52%. *Id.* If that harvest rate is applied to the 266 AEQ mortality fish, then only 48% of the returning fish, or 128 fish per year on average, would have been added to escapement. In other words, if 100% of the Chinook salmon bycatch in the pollock fishery was eliminated, it would add only 4.7% to the average annual escapement in Norton Sound.

However, none of the proposed bycatch reduction plans propose eliminating the entire bycatch as doing so would mean the complete closure of the pollock fishery. Thus, in <u>every</u> instance where these comments provide a number of fish that would be added to escapement or to subsistence, commercial, or sport harvests, that number <u>overstates</u> the benefits of the

proposed action because that number is based on what would happen if zero Chinook salmon were taken as bycatch.

D. Yukon River Chinook Salmon

Chinook salmon escapement goals in the Alaska portion of the Yukon River were generally met 2003-2007. DEIS at 211. Between 1996-2007, there were 49 escapement observations and in 39 (80%) escapements were met or exceeded. *Id.* at 212. For the seven rivers in the Yukon area with established escapement goals, those goals were met in every year 2002-2007 except for one river in 2005. NRC 2009, *citing* Hayes, S.J., D.F. Everson, and G.J. Sandone, Yukon River Chinook Salmon Stock Status and Action Plan: A Report to the Alaska Department of Fisheries, Alaska Department of Fish and Game Special Publication 06-38, Feb. 2, 2007; and Joint Technical Committee of the Yukon River US./Canada Panel, Summary and 2008 Season Outlook, Alaska Department of Fish and Game Regional Information Report 3A08-05.[3]

Between 2000 and 2008, the average annual AEQ mortality for Yukon River Chinook in the pollock fishery was 9,790 fish. NRC 2009. If 100% of this fish had been added to escapement, then average annual escapement would have increased only 5.6% using mark recapture data and only 9.4% using Pilot Station sonar reports. *Id.* However, if one assumes that the 42% in-river harvest rate that existed between 2000 and 2007 will continue, then 58%, or only 5,678 Chinook, would have been added to the average annual escapement. *Id.* This is an addition of only 3.2% or 5.5% depending on whether one uses mark recapture or sonar data, and assuming that 100% of the bycatch of Chinook salmon in the pollock fishery stops.

E. Kuskokwim Area Chinook Salmon

Escapement goals for Chinook salmon in the Kuskokwim area have been set for 14 rivers and total 25,050-59,730 fish in monitored streams. DEIS at 230, Table 5-11. These escapement goals are being met. *Id.* at 205, Table 5-3. Between 2000 and 2007, the average annual Chinook salmon escapement for the entire Kuskokwim area was 229,623. NRC 2009.

Between 2000 and 2008, the average annual AEQ mortality was 6,363. NRC 2009. The average annual escapement 2000-2007 was 229,623 Chinook. *Id.* If 100% of the AEQ mortality was added to escapement, it would have increased annual escapement an average of only 2.8%. However, the average in-river harvest rate 2000-2007 was 31%. *Id.* That means 69% of the fish would have been available for escapement. Thus, annual escapement would have increased by 4,390 fish, or 1.9%, assuming 100% of the Chinook salmon bycatch in the pollock fishery ends.

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[3] In 2008, high water levels hampered salmon counts in most rivers such that counts in all but two of the seven rivers in the Yukon area cannot be compared with prior years. NRC 2009, *citing* Alaska Department of Fish and Game, 2008 Preliminary Yukon River Summer Season Summary, October 20, 2008.

F. Bristol Bay Chinook Salmon

There are three escapement goals for Bristol Bay Chinook salmon. The cumulative goal is for escapement of at least 54,300 fish. DEIS at 236. Bristol Bay escapement goals are being met. *Id.* at 205, Table 5-3. Between 2000 and 2008, the average annual Chinook salmon escapement throughout the Bristol Bay area was 109,029. NRC 2009.

The AEQ mortality for Chinook salmon in the Bristol Bay area associated with the pollock fishery averaged 8,322 fish between 2000-2008. NRC 2009. If 100% of this AEQ had been added to the average annual escapement 2000-2008, escapement would have increased only 7.6%. However, the average annual in-river harvest rate 2000-2007 was 40%. *Id.* Assuming the same in-river harvest rate, then 60% of the fish would have been available for escapement. This means that only 4,993 Chinook would have been added to escapement. This represents an average annual increase of only 4.5%, assuming there is absolutely no Chinook bycatch in the pollock fishery.

G. Conclusion

Proponents of imposing additional restrictions on the pollock fishery to reduce Chinook salmon bycatch can find no biological basis for such restrictions based on escapement rates. The vast majority of the Chinook salmon stocks interacting with the pollock fishery are meeting or exceeding escapement goals. Even where runs are weaker, the number of Chinook incidentally taken in the pollock fishery is so small that it cannot be responsible for changes in salmon abundance. The fact that the DEIS glosses over and fails to examine these issues makes the DEIS legally inadequate. The DEIS simply fails to provide decision makers with a basis on which to make an informed decision.

Not only does the DEIS fail to undertake this broad overview analysis, but the DEIS fails to provide decision makers with the necessary refinement showing, for example, the relative impact of a bycatch salmon cap of 68,000 versus 47,000. This difference of 21,000 fish would result in an AEQ of returning fish of only 17,640. NRC 2009. However, since only 54% of the Chinook salmon taken in the pollock fishery originate in western Alaska, the total difference to all of western Alaska would be 9,526 fish. An addition of only 9,526 fish throughout western Alaska is a miniscule number when one considers the actual percentages that would be available for escapement by river system, let alone for subsistence and other uses as discussed below. The DEIS does none of this analysis.

VII. THE DEIS OVERESTIMATES THE ADVANTAGES OF THE PROPOSED ACTION TO SALMON SUBSISTENCE FISHERMEN

A. Overview

The Problem Statement adopted by the NPFMC states salmon bycatch "must be reduced" to address concerns about subsistence fishermen in rural areas who depend on local fisheries for their sustenance and livelihood. DEIS at 1. Recognizing the very real and important role that subsistence has in the life of many Alaskans, the sad reality is that restricting the pollock fishery will have not have the positive benefits for subsistence that the DEIS implies. In fact, the central problem with the DEIS is that it assumes these benefits will occur without

doing the analysis necessary to determine if the facts support that assumption. Absent such analysis, the DEIS fails to meet the requirement in *Citizens to Preserve Overton Park v. Volpe* that an EIS take a hard look at the issues. If the DEIS had done so, it would have found that even if 100% of the Chinook salmon bycatch was eliminated, the subsistence harvest would have increased by only one-tenth of one fish per household in the Norton Sound area, just over one fish per household in the Kuskokwim area, 1.7 fish per household in the Yukon, and less than three fish per permit holder in Bristol Bay.

B. The Availability of Chinook Salmon for Subsistence

At the outset, two facts must be recognized. First, the DEIS states "there is no indication that any of the alternatives being considered [including the status quo] would result" in a health risk to subsistence users. DEIS at 443, n. 27. Second, the DEIS admits that "sufficient opportunities for subsistence harvests have occurred in most areas in recent years...." *Id.* at 531. In other words, the DEIS, admits there is no need to restrict the pollock fishery in order to ensure adequate subsistence opportunities. An analysis by individual river system confirms that adequate opportunities for Chinook salmon subsistence harvests exist under the status quo.

Along the Alaska Peninsula, Chinook salmon accounted for 3% or less of the salmon subsistence harvest between 1985 and 2005. DEIS at 456. In the Aleutians, Chinook salmon accounted for 0% of the salmon subsistence harvest between 1985 and 2005. *Id.* In the Kotzebue District, which includes all waters from Cape Prince of Wales to Point Hope, Chinook salmon comprised 1% or less of the salmon subsistence harvest between 1994 and 2005. *Id.* at 456. Over 90% of the subsistence salmon harvests in the Kotzebue area are chum salmon and there are "no indications that subsistence chum salmon harvest opportunities are lacking in this region." *Id.* at 533.

In the Norton Sound region, extending from Point Romanoff to Cape Prince of Wales, Chinook salmon accounted for only 3% of subsistence meat and fish consumption. DEIS at 453. For the Port Clarence District within this region Chinook salmon accounted for between 0% and 2% of the subsistence salmon caught between 1994 and 2005. *Id.* at 456. In the Norton Sound District within this region, Chinook salmon accounted on average for only 4.9% of the subsistence salmon harvest in the last five years. *Id.* at 539, Table 10-16.

While admitting that Chinook salmon is not a major component of the subsistence harvest in the Norton Sound area, the DEIS fails to undertake any analysis of the actual impact on subsistence of additional bycatch restrictions on the pollock fishery. Had the DEIS done the analysis, it would have discovered the following facts. The annual average Chinook salmon subsistence harvest of Chinook salmon in the Norton Sound region 2000-2007 was 4,146 fish. NRC 2009. The average annual AEQ mortality of fish that would otherwise return to Norton Sound between 2000 and 2008 was 266. *Id.* if 100% of these 266 fish were taken for subsistence purposes, it would add only 6.4% more fish to the total subsistence harvest of Chinook salmon. However, in-river fishermen do not take 100% of the run. In the Norton Sound area, the average annual in-river harvest between 2000 and 2008 was 52% of the run. *Id.* Assuming the same level of in-river harvest, then only 138 additional fish (52% of 266) would have been taken by in-river fishermen. But not all in-river harvesters are subsistence fishermen. In the years 2000-2008, 97% of the average annual Norton Sound in-river harvest was for subsistence. *Id.* Applying that percent to the 138 additional AEQ fish that would have

been available means that eliminating 100% of the Chinook salmon bycatch in the pollock fishery would have increased the average annual subsistence harvest of Chinook salmon by only 130 fish per year, or 3.1%. Another way to look at this is that there were 935 subsistence households in the Norton Sound area in 2002. NRC 2009. If zero Chinook salmon were caught in the pollock fishery, it would add just over one-tenth of a fish to the subsistence harvest of each household annually.

Within the Kuskokwim region, the DEIS identifies two subsistence areas. In the Kuskokwim River, subsistence fishing was not restricted from 2003 to 2007. DEIS at ES-21-22; 560. In short, the salmon runs, including Chinook, have been sufficient in the last five years to support a full subsistence harvest. Similarly, in the Quinhagak and Goodnews Bay areas of Kuskokwim Bay, the DEIS reports that subsistence harvests were adequate and the Chinook salmon run has been such that "amounts necessary for subsistence use" were expected to be achieved. *Id* at 561.

After admitting that there is no need to restrict the pollock fishery to provide a full subsistence harvest in the Kuskokwim region, the DEIS conducts no analysis of the actual impact on subsistence of additional bycatch restrictions on the pollock fishery. Had such an analysis been done, the following facts would have been revealed. The average annual Chinook salmon subsistence harvest in the Kuskokwim area 2000 to 2007 was 73,728. NRC 2009. The average annual AEQ mortality for fish that would otherwise return to the Kuskokwim area between 2000 and 2008 was 6,363 Chinook. *Id.* If 100% of these fish were available for subsistence use, it would add only 8.6% more fish to the subsistence harvest. However, the average annual in-river harvest is not 100% of the returning fish, it is 31%. *Id.* Assuming the same level of in-river harvest in the future, it means that an annual average of only 1,973 fish (31% of 6,363) would become available for subsistence harvest if subsistence accounted for 100% of the in-river harvest. However, between 2000 and 2007, the subsistence harvest was only 76% of the total average annual in-river harvest. *Id.* Assuming the same allocation of harvest in the future, only 1,499 (76% of 1,973) of the AEQ fish would be used for subsistence. This means that if zero Chinook salmon were caught in the pollock fishery, it would add only 2% to the total Kuskokwim area average annual subsistence harvest. Another way to look at this is that there were 1,696 households in the Kuskokwim area that fished for subsistence purposes in 2002. NRC 2009. Thus, if no Chinook salmon were caught in the pollock fishery, it would add just under one fish each year to each subsistence household.

Regarding the Alaska portion of the Yukon River, subsistence fishing was not restricted 2003 to 2007. In other words, salmon runs, including Chinook, have been sufficient for the last five years to support a full subsistence harvest. DEIS at ES-21-22. For 2008, although the DEIS notes the 2008 Chinook salmon run was anticipated to be sufficient to provide for a normal subsistence harvest (*Id.* at 591), subsistence harvest levels were reduced because of the weak Chinook salmon run.

Although the DEIS assumes that restricting the pollock fishery would measurably improve the subsistence harvest in the Yukon River area, the DEIS conducts no analysis to determine if the facts support that assumption. If the DEIS had conducted the analysis required by NEPA, it would have found the following facts. In the Yukon River area, the average annual Chinook salmon subsistence harvest between 2000 and 2007 was 56,492 fish. NRC 2009. The average annual AEQ mortality for fish that would otherwise return to the Yukon area

between 2000 and 2008 was 9,790 fish. *Id.* If 100% of these fish were available for subsistence use, it would add only 17% more fish to the subsistence harvest. However, the in-river harvest of the Yukon River Chinook run is not 100% of the returning fish, it is 42%. *Id.* Assuming the same level of in-river harvest in the future, this means that an annual average of only 4,112 fish (42% of 9,790) would be available for subsistence harvest if subsistence accounted for 100% of the in-river harvest. But subsistence fishermen do not take 100% of the in-river harvest. Between 2000 and 2007, the subsistence harvest was only 62% of the in-river harvest. *Id.* Assuming the same allocation of harvest in the future, only 2,549 of the AEQ fish would be used for subsistence. This means that eliminating 100% of the Chinook salmon bycatch in the pollock fishery would add only 4.5% to the total Yukon River average annual subsistence harvest.

Another way to look at this is that an estimated 1,479 households in the Yukon River participated in subsistence harvests during 2005. NRC 2009, *citing* Busher, W. H., T. Hamazaki, and A. M. Marsh; Review of Subsistence and Personal Use Salmon Harvests in the Alaskan Portion of the Yukon River Drainage, 2005; Alaska Department of Fish and Game Fishery Manuscript 06-05. If only 2,549 Chinook salmon will likely be available for additional subsistence harvest then, each year, each subsistence household will get approximately 1.7 additional Chinook if 100% of the Chinook salmon bycatch is stopped.

In the Bristol Bay management area, which includes nine major river systems, the subsistence salmon harvest is comprised principally of sockeye salmon. DEIS at 598. Between 1997 and 2006, Chinook salmon comprised an average of only 11.9% of the total salmon subsistence harvest. *Id.* at 605. The important point is that from 2003 to 2007, subsistence fishing was not restricted in the Bristol Bay area. This means that salmon runs, including Chinook, were sufficient for the last five years to support a full subsistence harvest. *Id.* at ES 21-22.

In considering the relative importance of subsistence harvesting in Bristol Bay, recognize that every resident of Alaska is deemed to be a subsistence fishermen for purposes of fishing in Bristol Bay. DEIS at 601. A Bristol Bay subsistence salmon permit is given "to any Alaska resident who requests one." *Id.* From the richest state resident to the poorest, from residents of downtown Anchorage to residents of economically depressed rural villages, all are subsistence fishermen.

Leaving aside the issue of who is a truly subsistence dependent fishermen, the DEIS contains no analysis of the actual effect of restricting the pollock fishery on the availability of Chinook salmon for subsistence. Had the DEIS attempted such an analysis, it would have found the following. In the Bristol Bay area, the average annual Chinook salmon subsistence harvest between 2000 and 2007 was 14,131 fish. NRC 2009. The average annual AEQ mortality for fish that would otherwise return to the Bristol Bay area between 2000 and 2008 was 8,322 fish. *Id.* If 100% of these fish were available for subsistence use, it would add 59% more Chinook to the subsistence harvest. However, the average annual in-river harvest of the Bristol Bay Run is not 100% of the returning fish, it is 40%. *Id.* Assuming the same level of in-river harvest in the future, this means that an annual average of 3,329 fish would become available for subsistence harvest if subsistence accounted for 100% of the in-river harvest. But subsistence is not 100% of the in-river harvest. Between 2000 and 2008, it was only 19% of the total in-river harvest. *Id.* Assuming the same allocation of harvest in the future, only 1,581 of

the AEQ fish would be used for subsistence. This would add 19% to the total average annual statewide subsistence harvest in Bristol Bay. Another way to look at this is that 93% of the Chinook harvest comes from the westside Bristol Bay Districts. NRC 2009. There are 556 subsistence permits issued to fish in the westside Districts. *Id.* In other words, if these 556 permit holders took all of the 1,581 additional fish that would be available if the Chinook salmon bycatch was zero fish, it would increase the average annual subsistence harvest by less than three fish per permit holder.

While rightfully expressing concern about the needs of subsistence fishermen, the DEIS fails to evaluate the actual benefits these fishermen will derive from restrictions on the pollock fishery.[4] As noted above, the actual benefits are small.

In lieu of analysis, the DEIS points to the importance of subsistence. The DEIS asserts that fish comprise as much as 85% (by weight) of the subsistence fish and wildlife harvested in western Alaska and, of that amount, salmon contributes as much as 53%, or 650 pounds per capita.[5] DEIS at 531. The issue here is not the importance of subsistence but whether restricting the pollock fishery makes a real difference in the amount of fish that would be available for subsistence.

C. There Are No Lost Opportunity Costs For Subsistence Fishermen

The DEIS asserts if there were more Chinook salmon in Alaska's rivers, the time and resources expended by subsistence fishermen to meet their subsistence needs would be reduced thus allowing subsistence fishermen to pursue other subsistence or income producing activities. DEIS at 531, ES 21. Again, the DEIS contains no analysis to support this conclusion. Given that the benefit of catching subsistence fish faster is the principal benefit relied upon to justify severe restrictions on the pollock fishery, it is curious that the DEIS offers no proof to support the existence of this benefit. The DEIS does not, for example, provide even the most basic data to show that subsistence fishermen are actually needing more time to catch their

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[4] In considering the issue of meeting the need for food among economically disadvantaged people, it should also be noted that salmon bycatch in the pollock fishery is often used for this exact purpose. Because salmon incidentally caught in the groundfish trawl fisheries is a prohibited species that must be discarded, the Prohibited Species Donation ("PSD") program was initiated in 1996 to reduce the amount of protein being lost. The PSD program allows salmon bycatch to be retained and distributed to economically disadvantaged individuals by non-profit hunger relief organizations. While these individuals are not subsistence fishermen in Alaska, the facts are that during the 12 years the PSD program has been in place, the non-profit group administering the program has received a Marine Stewardship Award and has distributed 2 million pounds of steaked and finished salmon to poor and homeless people. DEIS at 527-529. This program provides nearly 650,000 meals each year to people who have access to "meagre and often inadequate food." *Id.* at 529. Over its 12 year life, the PSD program has provided approximately 7.8 million meals to the poor and homeless.

[5] This assertion strains credibility. If salmon subsistence consumption is 650 pounds per year, the average salmon consumption per capita per day is 1.8 pounds per day. It seems unlikely that every man, woman, and child who depends on subsistence is eating almost two pounds of salmon 365 days a year.

subsistence harvest, let alone that any such delay is caused by the loss of between one-tenth of a fish and three fish a year to pollock bycatch.

Nor does the DEIS provide the basic data about how many subsistence fishermen actually have commercial salmon limited entry permits in order to support the assumption in the DEIS that subsistence fishermen could enter the commercial fishery if they could finish their subsistence harvest in less time. At the outset, the claim that this benefit exists hardly seems supportable when it is likely that eliminating the entire Chinook bycatch by the pollock fleet would increase the subsistence harvest by between one-tenth of a fish and 1.7 fish per household in the Norton Sound, Kuskokwim and Yukon regions, and by less than three fish per permit holder in Bristol Bay.

The DEIS' assumption of benefits is further eroded by the fact that a person can participate in the commercial salmon fishery only if that person holds a limited entry salmon commercial fishing permit. If one compares the number of subsistence households with the number of commercial fishing permits, one finds little support for the DEIS' assumption that subsistence fishermen can shift into the commercial salmon fishery.

In the Norton Sound area, there are about 935 subsistence households and, between 2001 and 2005, the mean number of active commercial salmon limited entry permits was 34. NRC 2009. Even if each subsistence household was comprised of just one person, and if 100% of the limited entry permits were held by subsistence fishermen, then approximately 3.6% of subsistence fishermen would be allowed to enter the commercial fishery – again assuming that catching the additional one-tenth of a fish they would be able to harvest if zero Chinook salmon were taken in the pollock fishery allowed subsistence fishermen to finish their subsistence harvest faster.

In the Kuskokwim area, the mean number of active commercial limited entry salmon fishing permits between 2000 and 2003 was 496. NRC 2009. The number of subsistence households in the Kuskokwim region approximates 1,696. *Id.* Again, if catching the additional one fish per subsistence household that would occur if there were no Chinook bycatch in the pollock fishery enabled these subsistence households to finish their subsistence harvest earlier, not many members of these subsistence households would be able to enter the commercial fishery, even assuming 100% of the commercial fishing permits are held by subsistence fishermen.

The same situation obtains on the Yukon River where between 2002 and 2004 the mean active number of limited entry commercial fishing permits was 574. However, there are 1,479 subsistence households, whose subsistence catch would increase about 1.7 fish if all Chinook bycatch were stopped. NRC 2009. Again, absent any Chinook salmon bycatch, very few subsistence fishermen could have entered the commercial salmon fishery, assuming of course that adding 1.7 fish to each household's subsistence harvest would enable these fishermen to complete their subsistence fishery in a shorter timeframe.

Finally, as to Bristol Bay, there are about 556 subsistence households but the mean active number of limited entry salmon permits between 1996 and 2005 was 2,474. NRC 2009. Only here is it even possible that there could be some validity to the DEIS' assumption that there are enough commercial fishing permits that every subsistence fishermen could enter the

commercial fishery if they could finish their subsistence harvest in less time. Of course, the DEIS does not examine the all-important question of just how many of these subsistence fishermen actually have a commercial limited entry permit. And assuming 100% of the Chinook salmon bycatch stops, the DEIS does not explain how increasing the subsistence harvest by less than three fish per subsistence permit holder really shortens the time needed to complete the subsistence harvest for a subsistence fishermen.

D. Ichthyophonus and Other Issues

Not only does the DEIS offer no proof to support its assumption that it is taking subsistence fishermen longer to catch their subsistence harvest and that bycatch is the cause of any such delay, but the DEIS studiously ignores, and does not analyze, other factors that might be contributing to any slower subsistence harvest that may be occurring. Rather than examining these factors to determine if they are the real cause of any increased time required to take the subsistence harvest, the DEIS just assumes any problem is caused by the pollock fishery.

The DEIS admits that the cause of any weaker Chinook runs in western Alaska is not bycatch in the pollock fishery but food limitations for salmon in the ocean. DEIS at 196, 199. The food Chinook salmon rely on, nekton, is very sensitive to rising ocean temperatures. The DEIS contains no analysis of this issue and its effect on the availability of Chinook salmon for subsistence harvest.

Chinook salmon, like all species, are sensitive to water pollution and habitat degradation. The DEIS offers no analysis of these issues and how they affect subsistence harvests.

The DEIS fails to consider the effect of ichthyophonus on the availability of fish for subsistence harvest. Ichthyophonus is an infection that can render the fish unusable. Of the 762 pages in the DEIS, exactly 21 lines are devoted to ichthyophonus infection and none of this rather abbreviated text discusses the impact of the disease on subsistence. DEIS at 228.

The DEIS does cite Alaska Department of Fish and Game statistics that the ichthyophonus infection rate on the Yukon River averaged 20%, 2004-2007. DEIS at 228. However, the DEIS also cites a study by Dr. Richard Kocan as providing the "baseline" analysis of the extent to which the disease is present in Yukon River Chinook salmon. *Id.* After admitting the Kocan study establishes the baseline, the DEIS neglects to mention that the "baseline" showed the infection rate had already reached "about 45%" in the Yukon River by 2003. Kocan, R., P. Hershberger, J. Winton; Ichthyophoniasis: An Emerging Disease of Chinook Salmon in the Yukon River; Journal of Aquatic Animal Health, 2004 ("Kocan 2004") at 58. The DEIS also cites Hayes, *et al.* 2006 as documenting the ichthyophonus infection rate on the Chena River, but fails to mention that this study showed a 37% infection rate. DEIS at 228.

The DEIS also neglects to mention that the Kocan study reports ichthyophonus is "firmly established" in the Yukon River, "increasing to levels that impact subsistence and commercial fishing, as well as the resource itself." Kocan 2004 at 68. In that regard, the DEIS fails to mention that middle Yukon River fish processors are discarding up to 20% of purchased fish because of tissue damage caused by ichthyophonus. *Id.* at 58.

Assume a subsistence fisherman sought to catch 100 Chinook salmon. If 20% must be discarded because of ichthyophonus infection, then a harvest of 100 yields only 80 fish. To get to 100, an additional 25 fish need to be caught. In other words, ichthyophonus alone would be causing a 25% increase in time and effort for subsistence fishermen.

The DEIS never even mentions ichthyophonus as an issue for subsistence fishermen. The DEIS just assumes that any additional time required to take the subsistence harvest is caused by bycatch. Assumptions supported by no analysis, assumptions made in the face of contrary factual evidence, fail to comply with NEPA. Equally important, the Proposed Action is attacking the wrong problem.

VIII. THE DEIS OVERESTIMATES THE ADVANTAGES OF THE PROPOSED ACTION TO COMMERCIAL FISHERMEN

This section examines what benefits may accrue to commercial fishermen because of reductions in the Chinook salmon bycatch in the pollock fishery. The DEIS assumes such benefits will flow and bases the bycatch reduction plan, in part, on that assumption. However, the DEIS contains no analysis to support that assumption and, therefore, cannot meet the analytical standards required by NEPA. If the DEIS had done the analysis required to satisfy NEPA's "hard look" standard, the DEIS would have found the facts do not support the assumption that commercial salmon fishermen will benefit from restrictions on the pollock fishery. Apparently doubting whether the facts support its assumption, the strongest statement in the DEIS on this issue is that an increased number of in-river Chinook "may" enhance commercial fishery opportunities. DEIS at 629.

The assumption that commercial fishermen will benefit from Chinook salmon bycatch reduction fails for three reasons. First, the AEQ mortality by river system is so small that eliminating 100% of the chinook bycatch in the pollock fishery will offer little benefit to commercial salmon fishermen. In fact, the increase in the number of fish taken by commercial fishermen would be less than one to under three fish annually per commercial fisherman depending on the area. This is hardly the economic boom assumed in the DEIS. Second, in many river systems commercial Chinook salmon fisheries "have not occurred in recent years." DEIS at 626. There can be no expectation that a commercial fishery will suddenly become a possibility if a bycatch reduction plan is implemented, particularly given the low numbers of additional Chinook that would return to rivers. Third, Chinook salmon is simply not a large contributor to the in-river commercial fishery and to the income of commercial fishermen relative to income from other salmon fisheries. Reductions in Chinook salmon bycatch in the pollock fishery will, even under the most optimistic hopes, have only limited effects on the income of in-river commercial fishermen. Even then, it is difficult to see how successful a commercial fishery for Chinook salmon could be given the high levels of ichthyophonus infestation in western Alaska rivers such as the Yukon.

The final point in the preceding paragraph merits further discussion. An examination of the revenue earned by western Alaska commercial salmon fishermen from Chinook salmon is instructive. Those numbers by Alaska census district using a five-year average (2003-2007) are as follows: Aleutians East (0.4%); Aleutians West (0%); Bethel (8.8%); Bristol Bay (0%); Dillingham (2.4%); Lake and Peninsula (0.2%); Nome (7.8%); Northwest (0.4%); Wade Hampton (89.2%); and Yukon-Koyukuk (14.6%). DEIS at 458, Table 9-3.

The relative importance of Chinook salmon is also reflected in the actual revenue western Alaska commercial fishermen derive from it. Using a five-year average (2003-2007) for Alaska census districts, the annual income number from Chinook harvests for each commercial salmon fisherman are: Aleutians East ($727); Aleutians West ($296); Bethel ($1,323); Bristol Bay ($44); Dillingham ($1,975); Lake and Peninsula ($169); Nome ($596); Northwest ($33); Wade Hampton ($8,058); and Yukon-Koyukuk ($1,494). DEIS at 458, Table 9-4. The average annual value of the commercial Chinook salmon fishery in the last five years was $1,471.50 per fishermen.

In reviewing the alleged benefits to commercial fishermen from the Chinook salmon bycatch program, the DEIS mentions five geographic areas. These pages in the DEIS further demonstrate the weakness of its assumption that commercial salmon fishermen will experience measurable gains from a Chinook bycatch reduction program. For example, the DEIS introduces a table described as summarizing the Kotzebue area commercial salmon fishery. DEIS at 533. Chinook salmon is never mentioned. The only species described is chum salmon. *Id.* at 535, Table 10-14. It is hard to understand how there will be benefits to Kotzebue area commercial salmon fishermen from reductions in Chinook salmon bycatch when there is no commercial Chinook salmon fishery. Even if there was a commercial Chinook fishery, the DEIS identifies the factor limiting growth in any commercial fishery in the Kotzebue area as the lack of "buyer capacity," not the lack of Chinook salmon. *Id.* at 533.

In the Norton Sound District, 702,955 salmon have been caught by commercial fishermen since 2000. Of that number, 1,164, or 0.17%, were Chinook salmon. DEIS at 544, Table 10-18. The minor role of Chinook salmon in this area's commercial fishery is also reflected in the fact that the value of the Chinook salmon commercial harvest relative to the entire Norton Sound commercial salmon fishery since 2000 has averaged 2.3%. *Id.* at 545, Table 10-19. It is important to put these numbers into perspective regarding what it would mean in terms of actual fish for commercial fishermen if zero Chinook salmon were incidentally taken in the pollock fishery.

In Norton Sound, the average annual AEQ mortality of fish that would otherwise have returned to the Norton Sound area 2000-2008 was 266. NRC 2009. The average annual total in-river harvest Chinook salmon 2000-2008 was 4,430 and the percentage of the total harvest taken by commercial fishermen 2000-2007 was 3.3%, or 146, fish. *Id.* Assuming the same in-river harvest percentages continue, an additional 9 fish (266 x 3%) would have been added to the commercial harvest in the absence of any bycatch. That represents a 0.6% increase in the 2000-2007 average annual commercial harvest of 146 Chinook. *Id.* Given that the mean number of active limited entry commercial salmon fishing permits in Norton Sound in the 2001-2005 period was 34, *id.*, this means the average commercial fishermen could have added less than one third of one fish to his or her harvest if no Chinook were taken in the pollock fishery.

In the Kuskokwim River, the subsistence, commercial, sport, and test fish harvest of Chinook salmon totaled 578,762 fish between 2000 and 2007. DEIS at 562, Table 10-28. Of that amount, 10,804, or 1.9%, were taken by commercial fishermen. *Id.* Since 2000, Chinook salmon has comprised an average of only 0.5% of the total value of the total commercial salmon fishery. *Id.* at 563, Table 10-29. Again, it is important to place these numbers into context in terms of what it would mean to each commercial fishermen if 100% of the Chinook salmon bycatch ended.

Had there been no Chinook salmon bycatch in the pollock fishery, the average annual AEQ mortality for fish that would otherwise return to the Kuskokwim area 2000-2008 was 6,363 Chinook. NRC 2009. However, the average annual in-river harvest is 31% of the returning Chinook and given that between 2000-2007 commercial fishermen accounted for an average of 23% of the total average in-river harvest, ending all Chinook bycatch would have added 454 fish to the commercial harvest. *Id.* Since the average annual commercial harvest of Chinook salmon 2000-2007 was 22,351, *id.*, adding 454 to the total represents an increase of 2%. Between 2000 and 2003, the mean number of active limited entry commercial salmon fishing permits in the Kuskokwim region was 496. *Id.* In other words, if the entire Chinook bycatch in the pollock fishery ended, each commercial fisherman could expect to increase his or her catch by a little less than one fish.

In the Yukon River, the average annual commercial Chinook salmon harvest between 2000 and 2007 was 31,955 fish. NRC 2009. The average annual AEQ mortality for fish that would otherwise return to the Yukon area between 2000 and 2008 was 9,790 fish. *Id.* Between 2000 and 2007, the average annual in-river harvest of Chinook salmon by all users was 42%. *Id.* In other words, one could expect that the total in-river harvest of the saved AEQ fish would equal 4,112 fish. But 100% of these fish would not be taken by commercial fishermen. The 2000-2007 average annual commercial catch was only 35% of the total in-river harvest. *Id.* This means that if the bycatch of Chinook in the pollock fishery was reduced to zero fish, only 1,439 fish would be added to the average annual commercial catch. This would add exactly 4.5% on average to the total in-river commercial catch. To put these numbers into perspective for each commercial fisherman, recognize that between 2002-2004 the mean active commercial limited entry permits was 574. *Id.* In other words, if no Chinook salmon were taken in the pollock fishery it would have increased the harvest of each commercial fisherman by under three fish.

In Bristol Bay, over the 20-year period 1987-2006, the average annual commercial salmon harvest has been 24,000,000 sockeye salmon, 937,000 chum salmon, 231,000 pink salmon, 98,000 coho salmon, and 67,000 Chinook salmon. DEIS at 598. Chinook salmon comprises only 0.26%. Historically, the commercial value of Chinook salmon has never exceeded 2% of the total value of the commercial salmon fishery in Bristol Bay. *Id.* at 609. In fact, using the 1997-2006 average, the Chinook salmon comprised only 0.79% of the value of the Bristol Bay salmon commercial fisheries. *Id.* at 612, Table 10-46. Again, to place these numbers into perspective, had there been no Chinook bycatch the average annual AEQ mortality 2000-2008 in Bristol Bay would have been 8,322 Chinook. NRC 2009. Of that amount, the 2000-2007 average in-river harvest was 40%, or 3,329. *Id.* Commercial fishermen accounted for 77% of the in-river harvest or 2,563 fish. *Id.* Between 1996-2005, the mean active commercial salmon permits was 2,474. *Id.* This means that each commercial fisherman would have increased his or her catch by just over one fish if there were no Chinook salmon taken in the pollock fishery.

The DEIS, without explanation or analysis, states Chinook bycatch reduction could be "quite important" to commercial fishermen. DEIS at 629. Given the minimal contribution of Chinook salmon to western Alaska commercial salmon fisheries, and the small amount of AEQ fish that would actually return to western Alaska, the DEIS' optimism is without factual foundation.

IX. THE DEIS OVERESTIMATES THE ADVANTAGES OF THE PROPOSED ACTION TO SPORT FISHERMEN

This section examines the potential benefit of a Chinook salmon bycatch reduction plan to sport fishermen. As is the case with subsistence and commercial fisheries, the DEIS assumes there are benefits to the sport fisheries without conducting any analysis to determine if the facts support that assumption. Again, the DEIS fails to meet the standard that it take a hard look at the issues. If the DEIS had done the analysis required by NEPA, it would have discovered there is no factual basis to support the assumption that sport fishermen will derive measurable benefits from restricting the pollock fishery.

In the Kotzebue region, sport fishing is "relatively light" because of geographic limitations. DEIS at 534. When the DEIS presents data on the Kotzebue salmon harvest, the discussion is confined to chum salmon. *Id.* at 535, Table 10-14. That portion of the DEIS titled "Sport Fishery Situation and Outlook" which purports to describe the species taken in the sport fishery never mentions Chinook salmon. *Id.* at 534.

In the Norton Sound District, the DEIS reports that the number of Chinook salmon taken in the sport fishery averaged 444 in the last five years, or 4.3% of the average number of all Chinook salmon taken in the area's sport fisheries. DEIS at 551, Table 10-22.

For the Kuskokwim River and Bay, the DEIS' analysis of the sport fishery is confined to nine lines, four of which describe the geographic area and none of which discuss the effect of the bycatch reduction plan on sport Chinook fishing. DEIS at 565. That said, Table 10-28 reveals that 578,762 Chinook salmon were harvested in the Kuskokwim River between 2000 and 2007 of which 6,160, or 1%, were taken by sport fishermen. *Id.* at 562, Table 10-28. To suggest that Chinook salmon is an important sport fish in this region is not consistent with the facts.

Similarly, in the Alaska portion of the Yukon River, between 2000 and 2006, 559,228 Chinook salmon were harvested of which 6,895, or 1%, were taken by sport fishermen. DEIS at 568, Table 10-30. Again, the actual data does not support the assumption that Chinook salmon is a significant part of the sport fishery and that Chinook salmon bycatch in the pollock fishery is a real factor in the health of the sport fishery.

Finally, as to Bristol Bay, between 1987 and 2006, an average of 25,333,000 salmon was harvested. DEIS at 598. Of that amount, between 1994 and 2005 (the only years for which data is given in the DEIS), an average of 13,088 Chinook salmon were taken in the sport fishery, or 0.05%, of the total. *Id.* at 614, Table 10-47. Again, the facts do not justify the DEIS' assumption that Chinook salmon is a major contributor to in-river sport fisheries, let alone that these fisheries will derive measurable benefits from restrictions on the pollock fishery, particularly given the small numbers of AEQ salmon that would return to the rivers and other end uses of these fish.

X. THE DEIS IMPROPERLY ANALYZES NON-USE VALUES

One of the major categories of benefits the DEIS cites as justifying restrictions on the pollock fleet is "passive use (or non-use) benefits." DEIS at 625. There are multiple conceptual and analytical defects in relying on non-use values to justify restricting the pollock fleet.

At the outset, it may be helpful to define exactly what are "passive (or non-use)" values. The DEIS defines this concept as the value of knowing that the resource exists "and will continue to exist in perpetuity." DEIS at 627. The General Accountability Office defines non-use values as the "pleasure of knowing that the resource exists." General Accounting Office, Natural Resource Damages of the Department of Energy, GAO/RCED-96-260R, August 16, 1996, at 19. In short, passive use values are the psychological value of knowing that the resource exists.

The first fundamental problem with relying on existence values to justify restricting the pollock fishery is that there is no threat to the existence of the Chinook salmon resource caused by the pollock fishery. One searches the DEIS in vain for any claim, let alone proof, that the incidental take of Chinook salmon in the pollock fishery threatens the existence of that species. Any psychological existence values that are alleged to exist are satisfied if the resource exists.

The second fundamental problem with relying on existence non-use values to justify restrictions on the pollock fishery is that people generally do not place an existence value on Chinook salmon *per se*. The DEIS admits that "few" people who attribute existence values to marine resources "would likely be able to either explicitly recognize or express" such values for the living marine resources of the Bering Sea. DEIS at 628. If people are unable to "express," or even recognize, non-use values for the living marine resources of the Bering Sea, how can there be an identifiable and distinct existence value for just one species of salmon? The DEIS admits this analytical defect when it states that "isolating a passive-use value unique to Chinook salmon taken in the Bering Sea ... presents conceptual problems." *Id.* The DEIS states that salmon has a cultural existence value to the Native peoples of Alaska. *Id.* at 627. No one disputes, diminishes, or disrespects the cultural values of Alaska's Native Americans. The problem is that the DEIS contains not one shred of evidence that the Chinook salmon bycatch in the pollock fishery prevents Native peoples from harvesting sufficient Chinook salmon to meet their cultural needs.

Compounding these fundamental analytical defects is the statement in the DEIS that non-use values are measured by contingent valuation methodology ("CVM") and that CVM has been "carefully reviewed and accepted (when employed appropriately) by the federal courts." DEIS at 627, *citing Ohio v. United States Department of the Interior,* 880 F.2d 432 (D.C. Cir. 1989). The argument appears to be that non-use values must exist as to Chinook salmon because the courts have said CVM is a way to measure non-use values. Such logic begs the question of whether non-use values actually exist as to Chinook salmon. In fact, the DEIS admits there has been no study of non-use values for Chinook salmon and, therefore, non-use values "cannot be further analyzed." *Id.* at 628.

Even if a CVM study were undertaken, there would be serious doubts about the results. The DEIS, after admitting that the *Ohio* court found CVM a valid procedure only "when employed appropriately," neglects to mention that no court reviewing a CVM study has found it

was employed appropriately. In the only two court cases flowing from the *Ohio* decision where CVM was employed as a separate basis for damage claims, the courts rejected the results because the CVM analysis produced such unrealistic valuations.

The problem is inherent in the methodology. CVM studies are conducted by asking people what they are willing to pay to preserve a resource for the psychological value of knowing that it exists. That number is multiplied by the applicable population. Thus, if the survey showed that people might be willing to spend one dollar, and, if it is a national resource, the non-use value would be $1 times the population of the United States, or approximately $300 million. Such results are not based in reality.

For example, one leading CVM study showed the non-use value of 168 endangered whooping cranes to be $3.72 billion per bird. To suggest people are willing to support the expenditure of $625 billion in public money to preserve 168 birds strains credibility. The gap between CVM valuations and reality was also demonstrated by a recent state of the art CVM study by the Netherland's Institute for Environmental Studies. That study sought to determine the willingness of airline travelers to pay a fee that would be used to offset air pollution caused by airline travel. The CVM study revealed that 75% of the public would voluntarily pay such a fee. The CVM study then estimated that over $29 billion would be generated from implementing this policy. When such a voluntary payment policy was instituted based on the CVM study, only 0.5% of the public was actually willing to pay the fee. The difference between what the CVM study showed (75% of the public would pay) and actual results (0.5% paid) is striking. The reality is that CVM analysis typically produces inflated and incorrect valuations.

The DEIS states that the damage to non-use values is one of the pillars upon which a Chinook salmon bycatch program can be premised. DEIS at 625. However, the DEIS offers no proof that such values exist as to Chinook salmon specifically and, if they exist as to Chinook, that they are damaged, and if they are damaged, by how much. Nevertheless, the DEIS concludes, without analysis, evidence, or support that non-use values can be used to justify bycatch restrictions. Such "analysis" does not comply with NEPA.

XI. THE DEIS FAILS TO MEET THE MINIMUM STANDARDS FOR ADEQUATE ECONOMIC ANALYSIS

Societies must make choices of how to use their scarce resources. The branch of economics that deals with how economists evaluate the effects of social choices about resource use is known as welfare economics. Welfare economics focuses on using resources optimally so as to achieve the maximum well-being for the individuals in society. The objective of welfare economics is to help society make better choices.

The purpose of the DEIS is to provide decision-makers and the public with an evaluation of the environmental, social, and economic effects of alternative measures to minimize Chinook salmon bycatch in the Bering Sea pollock fishery. As such, it's theoretical basis and methods should correspond to those generally accepted and employed by practitioners of applied welfare economics. The literature on the theory and application of welfare economics is vast. However, Just, R.E., D. L. Hueth, and A. Schmitz, Applied Welfare Economics and Public Policy, 1982, provide a useful text which outlines the main theoretical foundations and analytical methods of

applied welfare economics. The major emphasis is on concepts that have empirical possibilities.

The main components of welfare economics can be summarized as the concepts of producer and consumer welfare and the development of methods for their measurement. Producer welfare concepts include producer surplus, economic rent, and profits. Consumer welfare concepts include primarily product demand curves, consumer willingness to pay, and consumer surplus. The DEIS contains very little of substance concerning these concepts and their measurement. On these grounds alone, it simply cannot be considered a sufficient or satisfactory accounting of the changes in producer and consumer welfare that are likely to accompany the alternative management measures contemplated to reduce Chinook salmon bycatch. It provides very little if any useful input into the policy-making process as regards potential welfare changes to U.S. citizens.

The DEIS adopts foregone pollock revenue as its measure of the costs and benefits to the pollock fishery of the alternative bycatch management options under consideration. Adoption of foregone pollock revenue as a measure of costs and benefits is misleading because the measure is neither a cost nor a benefit. Additionally, this measure bears no direct relationship to generally accepted concepts of producer welfare that have been in use since the 1940s. *See* Hicks, J.R, The Foundations of Welfare Economics, The Economic Journal, 49 (196): 696-712, 1939; Kaldor, N., Welfare Propositions of Economics and Interpersonal Comparisons of Utility, The Economic Journal, 49 (195): 549-552, 1939.

Even the most introductory text on welfare economics will point to profits as the most obvious measure of producer welfare, given that maximizing profit is the assumed objective of any business enterprise. No discussion of pollock producer profits or their relationship to foregone revenues appears in the DEIS. Instead, what appears is the following statement:

> A benefit/cost framework is the appropriate way to evaluate the relative economic and socioeconomic merits of the alternatives under consideration in this RIR. When performing a benefit/cost analysis, the principal objective is to derive informed conclusions about probable net effects of each alternative under consideration (*e.g.*, net revenue impacts). However, in the present case, necessary empirical data (*e.g.*, operating costs, capital investment, debt service, opportunity costs) are not available to the analysts, making a quantitative net benefit analysis impossible. Furthermore, empirical studies bearing on other important aspects of these alternative actions (*e.g.*, subsistence-use values, domestic and international seafood demand) are also unavailable, and time and resource constraints prevent their preparation for use in this analysis.
>
> The following regulatory impact review, initial regulatory flexibility analysis, and supporting text use the best available information and quantitative data, combined with accepted economic theory and practice, to provide the fullest possible assessment (both

> quantitative and qualitative) of the potential economic benefits and presumptive costs attributable to each alternative action.

DEIS at 264. Evidently it is the opinion of the DEIS that this statement is sufficient to support the omission of any serious discussion of producer welfare concepts and changes other than foregone pollock revenues.

An alternative to profit, defined by Marshall as the excess of gross receipts over their prime cost — that is, over the extra cost that the firm incurs in order to produce those things which it could have escaped if it had not produced them, is termed rent. Marshall. A., Principles of Economics, 1930.

The concept is called rent because it is a rent on fixed factors employed by the firm but, unlike factor rent, may not persist over a long period of time. Specifically, rent is defined as the excess of gross receipts over total variable costs. Marshall went on to suggest the area below the price line and above the supply curve, commonly called producer surplus, as a measure of this benefit. The discussion of variable cost changes in the DEIS contains no discussion of this concept as it relates to changes in producer welfare. DEIS at 695-697.

If the DEIS had informed the public as to the nature and composition of producer welfare measures, then it might have been discovered that the pollock CDQ groups collect royalty payments from the lease of pollock harvest privileges, and that these royalty payments could be used as a basis for approximating changes in producer welfare (profits or rent) due to the alternative management measures. A very simple assumption in this regard would be that producer rents are approximately twice the annual per-ton pollock lease values received by the CDQ groups (*i.e.*, it could be assumed that a competitive negotiation leads to an approximate splitting of the rents). NMFS has access to information on pollock lease values received by the CDQ groups to fulfill its responsibilities as regards CDQ program administration and oversight. The advantage of this approach is that it does not mislead the public by (1) declaring that a revenue is a cost, and (2) stating that the analysis is based on the best available science and data.

Although changes in producer profits are a useful measure of changes in producer welfare for many regulatory changes, this is not the case for a policy change that prevents a firm from producing during a period. In such case, a firm would be willing to pay more than its current profits to remain in production because its fixed costs cannot be avoided even if production is shut down. The DEIS discussion regarding fixed costs contains no discussion of this concept as it relates to changes in producer welfare. DEIS at 693.

The DEIS provides even less information about changes in consumer welfare than it does about producer welfare. The only mention of consumer surplus is a brief summary of the results of several studies on the estimated values of subsistence and sport catches of salmon. DEIS at 532. Apparently, the results are dismissed simply because they show very low implicit values (consumer surplus) for subsistence and sport-caught salmon. The only mention of consumer benefits is the single occurrence within a brief discussion about costs to consumers. DEIS at 702. As such, the DEIS contains no information about the potential for and/or scale of the changes in consumer welfare that may accompany the bycatch management alternatives.

The entire economic analysis of changes in consumer welfare is contained in the following sentence:

> Provisions of the proposed Chinook salmon bycatch minimization actions could reduce the value consumers of seafood (and associated fish products) receive from the fisheries for several reasons, including 1) consumers may be supplied fewer fish products; 2) consumers may have to pay a higher price for the products they do consume; and 3) the quality of fish supplied by the fishing industry may be reduced and, thus, the value consumers place on (and receive from) them will decline.

DEIS at 702. In particular, the DEIS contains no mention of the suspected size of the changes in U.S. consumer welfare for any alternative of lower pollock catches, or how these changes might compare to changes in the welfare of salmon users due to assumed increases in Chinook-salmon returns to western Alaska river systems.

The DEIS goes on to state that:

> The second part, corresponding to a reduction in consumer benefits because consumers have to pay higher prices for the fish they continue to buy, would be offset by a corresponding increase in revenues to industry (i.e., producers' surplus gains). While a loss to consumers, this is not a loss to society. It is a measure of the benefit that consumers used to enjoy, but that now accrues to industry in the form of increased prices and additional revenues.

DEIS at 702. However the market conditions under which this assertion could be considered even approximately correct are so restrictive that the statement does nothing but mislead the public (*e.g.*, see Just, Hueth, and Schmitz, Chapter 9 Multimarket Analysis and General Equilibrium Considerations).

Another incorrect and misleading statement is that:

> The actual loss to society cannot be measured with current information about the fisheries. Estimation would require better empirical information about domestic consumption of the different fish species and products, and information about the responsiveness of consumers to the reduction in the supply (*e.g.*, their willingness and ability to substitute other available sources of protein). In addition in the present case, because, under the status quo, society is already in a suboptimal state (*i.e.*, incurring a welfare loss associated with the externalities imposed by salmon bycatch), actions taken to reduce these externalities(*i.e.*, minimizing pollock trawl fishing impacts on salmon) will result in an aggregate welfare improvement to society, offsetting any apparent welfare reduction in the retail/wholesale domestic

> seafood/fish products commercial marketplace (*i.e.,* no deadweight loss is incurred).

DEIS at 702. With this statement, the reader is led to believe that welfare changes cannot be measured with current information about the demand for different fish species and products. Yet, for the past 30 years NMFS has collected and analyzed information about fish prices and the quantities consumed by the public. Indeed, NMFS is the nation's pre-eminent source for information about seafood markets and trade. The current version of the Economic Status of the Groundfish Fisheries Off Alaska, 2008, produced by the NMFS Alaska Fisheries Science Center, is approximately 300 pages and documents the prices paid and catch quantities landed for all groundfish off Alaska (Hiatt et al. 2008). The current Fisheries of the United States 2007 (NMFS 2008) includes data and information on U.S. commercial fishery landings, world fisheries, U.S. production of processed fishery products, U.S. imports, U.S. exports, and the U.S. supply fishery products, including per-capita estimates of consumption and value added. It is not correct to state that welfare changes cannot be measured with the available information. The DEIS simply does not do the analysis.

Given all that is missing from the putative analysis of costs and benefits contained in the analysis, it strains credulity to read that any action taken to reduce salmon bycatch in the pollock fishery" will result in an aggregate welfare improvement to society, offsetting any apparent welfare reduction in the retail/wholesale domestic seafood/fish products commercial marketplace." DEIS at 702.

While welfare economists typically focus their analyses on measures of consumer and producer welfare, many decision makers as well as members of the public are equally interested in the changes in economic activity that are anticipated to accompany regulatory changes. Changes in economic activity are typically measured in the context of an economic impact analysis and rely on the tracking and analysis of expenditures on inputs used to catch and produce seafood products. Seung, C., Estimating Dynamic Impacts of Seafood Industry in Alaska, Marine Resource Economics, 23:87-104, 2008; Seung, C. K., and E. C. Waters, A Review of Regional Economic Models for Alaska Fisheries, AFSC Processed Report 2005-01, National Marine Fisheries Service, 2005.

The economic impacts of expenditures are estimated using a regional economic model (*e.g.,* input-output model, economic base model, general equilibrium model) that is often supplemented with baseline information useful for assessing community impacts. *See* Seung and Waters 2005; Norman, K., Sepez, J., Lazrus,H., Milne, N., Package, C., Russell, S., Grant, K., Lewis, R. P., Primo, J., Springer, E., Styles, M., Tilt, B. and I. Vaccaro, 2007, Community Profiles for West Coast and North Pacific Fisheries–Washington, Oregon, California, and Other U.S. States, NOAA Technical Memorandum NMFS-NWFSC-85. In general, the largest economic impacts are created via employment and, in particular, payments to labor (Northern Economics 2009).

Unfortunately, the quality and comprehensiveness of the economic impacts analysis included in the DEIS is on a par with the welfare analysis in the DEIS. That is to say, it is simply omitted. No changes in employment or economic impacts are provided for any of the alternatives for any of the locations in Alaska or Seattle that are likely to be affected. No changes in employment or investment values are provided for any of the CDQ groups in

western Alaska that have substantial ownership investments and gain employment opportunities in the pollock fishery (*e.g., see* Coastal Villages Regional Fund 2008, p.24). No changes in economic activity are estimated or presented for any of the commercial salmon fisheries that are likely to be affected by reduced salmon bycatch in the pollock fishery.

The DEIS fails to meet even the minimum standards of adequacy for economic analysis. It certainly fails the "hard look" standard required by NEPA. The next four Parts of these comments will examine additional specific issues that the DEIS has failed to examine.

XII. THE DEIS UNDERESTIMATES THE COSTS OF THE PROPOSED ACTION ON THE POLLOCK FISHERY

A. Overview Of The Pollock Fishery

Pollock accounts for more than one-third of all U.S. fisheries landings by volume. Northern Economics Inc., The Seafood Industry in Alaska's Economy, January 2009 ("Northern Economics 2009") at ES 2, 18. In 2007, the first wholesale value of the pollock harvest was $1.248 billion. DEIS at ES 2. However, this number does not reflect the multiplier effect of additional economic activity generated by the pollock fishery. The U.S. seafood industry generates an additional $600,000 in direct and indirect outputs for every $1 million of wholesale value. Northern Economics 2009 at 44. Thus, the 2007 dollar value of Alaska's pollock fishery to the nation was $2.029 billion. And that number understates current value because wholesale pollock prices increased in 2008.

B. The DEIS Grossly Underestimates The Foregone Revenue Loss And Fails To Examine Job Losses

The DEIS confines its analysis of the impacts on the pollock fishery of bycatch reduction plans by estimating foregone revenue based on the wholesale price of pollock. The DEIS' computations grossly underestimate the revenue loss to the pollock fishery caused by Alternatives 2-4.

First, the DEIS' estimate of foregone wholesale revenue understates the loss by 49%-69% because the DEIS uses prices that no longer reflect the marketplace. The Urner Barry Price Report, a widely respected and relied upon data source, shows that pollock fillet block prices have increased 49% since 2006 and 69% since 2005. This increase is confirmed by the rise in prices for exported product. The two largest European destinations for pollock fillets are Germany and the Netherlands. Between 2005 and 2008, the price of Alaska pollock fillets exported to the Netherlands FOB Alaska increased from $0.99 to $1.53 per pound (63%). In Germany, the price FOB Alaska increased in the same years from $1.05 to 1.65 per pound (64%). These export prices understate the price of pollock fillet blocks because there are piece block and lower price items included. In other words, the DEIS computation of foregone wholesale revenue is significantly underestimated because the DEIS fails to use the best and most current data. Even using outdated prices that underestimate foregone revenue by 49%-69%, the DEIS states that the proposed bycatch reduction measures could cost up to $500,000,000. DEIS at 656-687.

The second reason the DEIS grossly underestimates the actual foregone revenue caused by adopting Alternatives 2-4 is that the DEIS does not include all the items that must be accounted for in calculating revenue loss to the nation. The DEIS completely ignores the multiplier effects of economic activity. The DEIS defines the term "foregone lost revenue" as the "revenue that the fleet, or sectors within it, would be allowed to earn...." DEIS at 656. This definition alone documents the incomplete and inadequate analysis in the DEIS. The DEIS fails to recognize, and therefore excludes, the economic multipliers associated with this revenue loss. Applying these multipliers, the loss to the nation approaches $1 billion using the DEIS' outdated wholesale revenue calculations. Using current wholesale prices, the loss to the nation is well over $1 billion.

Compounding this error is the fact that the DEIS makes no effort to examine the job losses that will occur because of lost revenues. It is elementary economics that when employers have less product to harvest, process, and sell (*i.e.,* foregone revenue) they need fewer workers. Foregone revenue is not some abstract figure. It is a figure that means lost jobs. The DEIS, so concerned about increasing the subsistence harvest by one or two fish per household, ignores the fact that the price of that gain is that thousands of men and women will lose their jobs in the pollock industry and in the related and dependent support, service, and distribution sectors. And many of these people will be in economically stressed CDQ communities. The insensitivity of the DEIS to this aspect of Alternatives 2-4 is appalling.

Having chosen to ignore the human impact of "foregone gross revenue," the DEIS also ignores the cascading impact of higher unemployment in terms of lower income tax revenues, reduced governmental services, increased unemployment compensation claims, and associated social costs.

After admitting the DEIS will result in foregone catch, the DEIS fails to examine the economic impact of lost harvest on the economics of catcher vessels, catcher processors, and onshore processors. For example, many processing facilities were constructed based on economic assumptions associated with a certain product throughout. Reductions in the pollock harvest forced by salmon bycatch restrictions could fundamentally alter the basic economic viability of many parts of the pollock fishery – and that too will be reflected in lower wages and lost jobs.

The DEIS also fails to recognize, let alone analyze, the inflationary and consumer impact of "foregone revenue." Revenue is foregone because there is less product to sell. Basic supply and demand principles suggest the consumer is the victim in that the consumer will now pay higher prices.

The DEIS then ignores the fact that the U.S. exports close to $1 billion of Bering Sea pollock products annually to countries around the world. "Foregone revenue" comes from less product, and fewer exports means an increased U.S. trade deficit. The DEIS does not analyze this issue.

The Supreme Court has said an EIS is inadequate if it fails to take a hard look at the relevant issues. This DEIS fails to even mention basic and critical issues. And when it does mention an issue, the DEIS either does not analyze the issue or uses old data that severely underestimates impacts. The DEIS cannot be considered a legally sufficient document. The

DEIS cannot be considered adequate to inform decision makers of the consequences of a decision until it identifies and examines those consequences.

C. The DEIS Fails To Analyze The Revenue And Job Loss Impacts Of Market Disruptions

Not only does the DEIS fail to analyze the job losses associated with "foregone revenue," but the DEIS also fails to analyze the job loss and revenue implications of the market disruption that will occur because of additional bycatch restrictions. The DEIS ignores the fact that "foregone revenue" comes from foregone product – and foregone product means end use purchasers will need to secure alternative sources of supply. Foregone product of the magnitude envisioned by Alternatives 2-4 will cause end use purchasers to turn away from the Alaska market as a source of supply, multiplying the economic impacts and hardships caused by Alternatives 2-4. Again, the DEIS does not even recognize the issue, much less analyze it.

The two principal market destinations for Alaska pollock fillets are Europe and the United States. Both markets feature two principal customers: (1) large volume customers that bread or batter the product for retail sale; and (2) large fast food restaurant chains, primarily in the United States. These large purchasers typically spend millions of dollars on advertising and other marketing programs. Often these marketing programs are planned 12-18 months in advance. Buyers must be confident in their sources of supply. Their business model and success depend on a steady and assured supply of raw product.

Alaska pollock has become the product of choice for these end users, in large part because of its reliability of supply. The Alaska pollock fishery is viewed as being subject to careful management and oversight such that there is a high degree of confidence that the TAC, once set, will be harvested and available to end use purchasers. This perceived reliability has supported higher pollock prices and resulted in long-term purchase contracts.

Implementing additional Chinook salmon bycatch limits will disrupt the pollock market, forcing end users to seek other sources of supply. The DEIS is replete with calculations of the dates on which the pollock fishery would have closed had Alternatives 2-4 been in effect in prior years – and the amount of the pollock TAC that would not have been harvested. The real world impact of such a management system is that purchasers will not know how much of the TAC will be harvested and available to them, and purchasers will not know when their supply will be suddenly cut off. For large end use purchasers, this uncertainty destroys the reliability of the Alaska pollock market. It is this reliability that has been the foundation of higher prices for Alaska pollock and for long-term supply contracts.

End use purchasers will have little choice but to adjust their product purchasing strategy to protect against likely disruptions in supply. This will provide a new marketing edge for Russian pollock suppliers, who are now seeking a Marine Stewardship Council certification. Suppliers of aquaculture products such as tilapia and pangasius will also tout their products as alternatives to Alaska pollock. Each of these suppliers will be able to offer one thing that end use purchasers must have, a reliable source of supply. While large end use purchasers of pollock fillets have come to accept some level of supply uncertainty because the pollock TAC changes annually, bycatch generated closures introduce a new level of uncertainty. Large volume end use purchasers will now be faced with the prospect that their supply contracts will

not be fulfilled because of fishery closures and that they will have little or no notice of when these closures will occur. Those facts will drive many end use purchasers to seek more assured sources of supply.

The net result for Alaska, its workers, and the nation, is that Alaska's fish products will not be as desirable as they are today. Simple supply and demand economics means prices for Alaska's fish will fall. The well settled business principle that end users need assured supplies to support production lines and marketing programs means less demand and fewer purchase orders. Lower prices and less demand means fewer jobs. It also means lower revenue for those who remain in the fishery. Finally, it means lower revenue for CDQ communities and for other communities that depend on fish taxes. And absolutely none of these issues are considered in the DEIS.

XIII. THE DEIS UNDERESTIMATES THE COSTS OF THE PROPOSED ACTION BY NOT PROPERLY EVALUATING THE COSTS AND OTHER IMPACTS OF EFFORT TRANSFER

The DEIS compounds the analytical deficiencies discussed above by blithely asserting the pollock fleet will find a way to make up for some or all of the lost catch by shifting to different fishing grounds. The discussion in the DEIS of whether such an effort transfer is possible and, if so, the economic effects of any such effort transfer is inadequate for the informed decision making required by NEPA. However, before proceeding further, it is important to stop and recognize that the assertion in the DEIS that the pollock will likely shift to other fishing grounds is a recognition that the effects of Alternatives 2-4 are so onerous that the industry will have no choice but to seek alternative fishing grounds.

A. The Pollock Fleet Cannot Mitigate Losses By Transferring To Another Fishery

The DEIS suggests that pollock fishing vessels, catcher processors and/or motherships can mitigate losses imposed by salmon bycatch caps by shifting to other groundfish fisheries. DEIS at 692. The DEIS is wrong. The opportunities for pollock vessels to participate in non-pollock fisheries have been severely limited by (1) the "sideboard" restrictions imposed on pollock fishing vessels and processors by Section 211 of the American Fisheries Act ("AFA"), 16 U.S.C. § 1851, Note, (2) restrictions imposed by the license limitation provisions of the BSAI Groundfish Fishery Management Plan, (3) the provisions of Amendments 80 and 85 that allocate opportunities to participate in non-pollock groundfish fisheries to vessels that do not also fish for pollock, and (4) Steller sea lion mitigation measures that establish seasonal restrictions on the fishery.

The sideboard provisions were inserted into the AFA in response to concerns by non-pollock fishermen and processors dependent on non-pollock groundfish fisheries (*e.g.*, fisheries for cod, atka mackerel, sablefish, and various flatfish fisheries). It was argued that without limits, termed "sideboards," on the ability of pollock vessels to participate in other fisheries the system that Congress was planning to provide to the pollock fleet and processing plants (*e.g.*, the opportunity for pollock vessels and plants to obtain a specific amount of pollock quota by joining a harvesting co-operative) would give AFA vessels and plants an operational advantage over non-pollock vessels. The concern was that a rationalized pollock industry could stage their

pollock fishing and processing activities at such times and places so as to allow them to "poach" or "cherry pick" from other fisheries. It was argued this would be unfair because other participants in those non-pollock fisheries would be precluded by the AFA from fishing for and/or processing pollock. As a result, the AFA contains specific restrictions on the ability of AFA vessels and plants to fish for or process non-pollock species. Generally speaking, the "sideboards" limited an AFA vessel (and processing plant) to its historical levels of activity in non-pollock groundfish and crab fisheries. 16 U.S.C. § 1851, Note.

In addition to these restrictions in the AFA, the NPFMC has imposed other restrictions limiting the participation of pollock vessels and processors in non-pollock groundfish fisheries. For example, Amendment 80 to the BSAI Groundfish Fishery Management Plan generally allocates most of the BSAI TACs for non-pollock groundfish species (other than restricted amounts of cod and yellow fin sole) to vessels that do not fish for pollock. Amendment 85 allocates significant portions of the BSAI cod fishery to fixed gear fishermen and other non-pollock fishing vessels. Other regulations that restrict or prohibit AFA catcher vessels from entering other Bering Sea fisheries include six day stand-down time periods for vessels that transfer between the Gulf of Alaska and the Bering Sea, daily harvest amounts in the Gulf of Alaska, and exclusive seasonal area registrations that force AFA vessels to choose to fish in either the Gulf of Alaska or the Bering Sea on a seasonal basis.

The net effect of these "sideboards" and other restrictions is that pollock vessels and processors cannot make up lost pollock harvest by transferring to new groundfish fisheries.

B. The DEIS Does Not Examine The Costs And Energy Impacts Of Transferring To New Pollock Fishing Grounds

The DEIS assumes pollock fishermen will move to new pollock fishing grounds if Alternative 2, 3, or 4 is adopted. DEIS at 165. Since the pollock fleet is already fishing the most productive and economic areas, it goes without saying that Alternatives 2-4 will impose additional costs on the fleet, but the DEIS does not analyze these costs. Nor does it examine the impacts of increased energy consumption.

In the "A" season, catcher vessels will likely travel an additional 100 miles to find fish because the alternative fishing grounds they will now be forced to use are that distant. In the "B" season, the trip will be about 400 miles. This means an additional 10 hours of travel time each way, each trip during the "A" season and 30-40 hours each way, each trip during the "B" season. A typical Bering Sea trawl catcher vessel consumes one gallon of fuel per each horsepower per day, or an average of about 40 gallons per hour when steaming to and from the fishing grounds based on engine horsepower ranges of between 850 hp to 5000 hp. This means that during the "A" season, for each trip, a catcher vessel can expect to consume an additional 800 gallons of fuel. In the "B" season that number jumps to 2,400-3,200 gallons. There are approximately 90 catcher vessels currently participating in the pollock fleet, of which 70 are delivering their catch to shoreside processors and 20 are delivering to at-sea mothership processors. If each of the 70 vessels delivering to shoreside processors made just one trip to these more distant fishing grounds in the "A" season and just one trip in the "B" season, it would increase the consumption of diesel fuel by up to 4,000 gallons per vessel, or 280,000 gallons for the inshore fleet. Obviously, these vessels will make more than one trip. On average, the 70 inshore vessels will make eight trips during the "A" season and twelve trips during the "B"

season. The total increase in fuel consumption due to the increased travel time would be as much as 3,136,000 gallons. At the current Dutch Harbor price of $2.60 per gallon, this equates to an additional annual cost of $8,153,6000. The DEIS fails to consider the enormously increased energy usage that will flow from Alternatives 2-4 at a time when energy conservation is a national priority, and these additional energy costs do not include all the additional operational and repair costs associated with longer trips.

The DEIS also fails to consider the loss in value of the raw fish due to decreases in fish quality caused by the extended travel time that would be required to deliver the fish to the processor. Generally, a catcher vessel seeks to deliver its fish within 48 hours of its first tow on the fishing grounds. If this delivery time is extended beyond 48 hours, the value of the fish is reduced because of the quality or grade of final product the processor can produce. This is particularly true in the "A" season when roe quality decreases with the additional time fish are held on the vessel.

These economic costs, never examined by the DEIS, represent only one part of the overall costs of being forced to travel long distances to fish. The economic costs pale in comparison to the possible human costs. The Bering Sea is a dangerous place at any time of the year. In the winter "A" season, it is particularly forbidding. Forcing fishermen to travel farther in freezing temperatures and icing conditions increases the risk of injury and loss of life, issues the DEIS does not examine except to say this might be an issue. Human safety is indeed an issue, codified in National Standard 10 of the MSA, 16 U.S.C. § 1851(a)(10).

Finally, the DEIS does not consider the potential problem of increased interactions with other species, such as non-pollock groundfish, squid, sharks, seabirds, etc., that may be encountered on these more distant fishing grounds.

The DEIS assumes the pollock fleet will move to new pollock fishing grounds and then fails to examine the economic and other costs that will flow from that result. The DEIS does not provide the basis for making an informed decision regarding these issues because the DEIS has no analysis of these issues.

XIV. THE DEIS UNDERESTIMATES THE IMPACT OF THE PROPOSED ACTION ON CDQ COMMUNITIES

The DEIS almost totally ignores the adverse impact on CDQ communities of additional Chinook salmon bycatch actions. The DEIS characterizes CDQ communities as special needs communities, and rightly so. Many of these communities are in rural areas where job opportunities are poor or non-existent. The poverty level in those communities is unacceptably high. These communities and their residents are economically disadvantaged in almost every way. The DEIS admits that in many of these communities "unemployment is chronically high ... and the potential for economic diversification [beyond fisheries] ... is very limited." DEIS at 705. For many residents of CDQ communities, the opportunities from the CDQ program are an alternative to subsistence. Adoption of restrictions on the pollock fishery of the magnitude under consideration threaten that alternative. Rather than helping subsistence fishermen, Alternatives 2-4 may create subsistence fishermen. In something of an understatement, the DEIS concedes that "[a]nything that tends to diminish economic activity [in these communities] ... can do

disproportionate harm...." *Id.* at 706. Nevertheless, the DEIS conducts no analysis of, and fails to account for, these acknowledged harms that will flow from restrictions on the pollock fishery.

Sixty-five communities along the Bering Sea are eligible to participate in the CDQ program. Northern Economics 2009 at 62. The total net income generated from pollock fishery payments to CDQ communities from 1992 through 2005 (the most recent year for which data are available) was approximately $362 million. *Id.* In those same years, an additional $92 million in revenue was generated from CDQ program payments. *Id.* The majority of this revenue is from pollock.

Significantly, employment opportunities have been one of the most tangible benefits of the CDQ program. The CDQ program has created in excess of $123 million in wages for residents of CDQ communities since 1993. In 2005, the CDQ program resulted in the direct employment of approximately 2000 people in these communities. Northern Economics 2009 at 66. The DEIS emphasizes the importance of subsistence harvests, but the DEIS ignores the fact that the CDQ program provides an alternative to subsistence dependency for many people in CDQ communities, an alternative threatened by the proposed restrictions on the pollock fishery.

The DEIS also ignores the substantial support that pollock CDQ income provides to salmon-related projects in western Alaska communities. For example, the Norton Sound Economic Development Council ("NSEDC") has provided money for a variety of salmon-related projects, including (1) a joint management arrangement with the State of Alaska where NSEDC provides significant in-season management support for the fishery, (2) capital and operational expenditures for the construction and manning of several observation towers and for sonar equipment used to count salmon as they make their way up the river each season, (3) the operation of buying stations to provide markets for in-river salmon fishermen, including seasonal buying stations in Golovin and Shaktoolik for salmon and in Savoonga for halibut, (4) the construction of two processing plants, one in Unalakleet and one in Nome, to process salmon, crab and halibut, (5) loans for the purchase of vessels and gear, (6) habitat restoration projects to improve salmon spawning areas, (7) the operation of a "mist incubation, eyed egg implantation program" that places fertile eggs into spawning area stream beds, (8) the conduct of a lake fertilization program to rehabilitate red salmon habitat, and (9) $100,000 annually to each of 15 communities to build and maintain infrastructure projects. Between 80%-90% of the money for these projects is derived from NSEDC's investments in and royalties from the pollock fishery. NSEDC Report, available at http://www.nsedc.com.

The Coastal Villages Region Fund, a CDQ association of 20 communities in the Kuskokwim Bay area, also derives significant benefits from its partnership with and participation in the pollock industry. Major investments in salmon fishery support infrastructure, including processing plants, fishery support centers, and fishing vessels result from the CDQ program which provides approximately 85% of the funding for these programs. In 2007 alone, 98 community residents received $544,000 in education scholarships, construction of a new salmon plant was begun, over $183,000 was dedicated to salmon research projects, new fisheries support centers were constructed, job training programs were provided to community residents, and a halibut processing plant was replaced, to name but a few of the benefits of the CDQ program to these rural communities. Coastal Villages Region Fund, 2007 Annual Report.

The DEIS is rightfully concerned about the needs of subsistence fishermen. However, the DEIS substantially overstates the benefits these fishermen will derive from restricting the pollock fishery and virtually ignores the hardships and job losses that will befall economically disadvantaged rural CDQ communities. This failure of analysis renders the DEIS inadequate to fulfill NEPA's requirement that an EIS take a hard look at the consequences of a proposed action.

Before leaving the issue of the importance of the pollock fishery to CDQ communities, it is important to address the claim in the DEIS that Alaskan ownership in the Bering Sea pollock harvesting sector is less than 1%. DEIS at 498. The DEIS is wrong. Overall, CDQ groups own between 30%-40% of the at-sea processing fleet that operates in the Bering Sea pollock fishery. Another way to state the involvement of CDQ communities with the pollock fleet is that CDQ groups have some level of ownership interest in approximately 80% of the catcher processor vessels and motherships participating in the pollock fishery. In some cases, the ownership interest is substantially greater. For example, CDQ communities own almost 50% of American Seafoods and 37.5% of Glacier Fish Company, two of the largest catcher/processor companies in the pollock fishery.

XV. THE DEIS UNDERSTATES THE IMPACT OF THE PROPOSED ACTION ON LOCAL GOVERNMENTS

Alaska levies two taxes on the state's fishing industry, a Fisheries Business Tax applied to shoreside processors and a Fisheries Resource Landings Tax applied to vessels. DEIS at 501. Fifty percent of these state taxes are shared with local governments which can also impose municipal taxes on the fishing industry.

The dependence of different communities on fish taxes to provide essential services to community residents will vary but, for many communities, it is very significant. Although the DEIS admits that these fishery dependent communities "rely heavily upon tax revenues associated with fishing activities" (DEIS at 705-706), the DEIS makes no effort to quantify or evaluate the impacts notwithstanding the fact that data is available. For example, in the City of Unalaska, the fishing industry accounts for over 90% of all jobs and, in FY 2006, the city's share of the two state fishery taxes plus the city's raw fish tax totaled $11,371,533, or 43% of the city's general revenues. Northern Economics 2009 at 55. In Akutan, over 70% of the community's tax revenue is pollock related. In King Cove that number is 20% and in Sand Point it is 50%.

A salmon bycatch cap that could close the Bering Sea pollock fishery will have significant economic impacts on Alaskan communities, particularly villages in rural areas that have no way to offset revenue losses from the closure of such a significant fish as pollock. The impact of a drop in fish harvests is amply demonstrated by what happened to the City of St. Paul in the Pribilof Islands when Bering Sea snow crab landings fell. In 1999, the operating revenue for St. Paul was $11,672 per capita. When the snow crab fishery collapsed in 2000, St. Paul's operating revenue fell almost 50% to $6,491 per capita. Northern Economics 2009 at 55. The impact of that revenue loss on the City and its residents was enormous and some of the effects are felt in the community even today.

Salmon bycatch limits that prematurely close the pollock fishery or otherwise reduce landings and associated tax revenues will be felt throughout Alaska, but particularly in rural

areas that depend on the pollock industry. Between 2000 and 2007, the two state fisheries taxes applied to the pollock fishery generated an average of $9,875,000 in annual revenue to the State from landings in the Aleutians/Pribilof region alone. DEIS at 502, Table 10-4. Although the DEIS admits that implementation of Alternative 2 could have resulted in lost tax revenue to the State of up to $5.8 million in 2007, and that implementation of Alternative 4 could have resulted in lost tax revenue to the State of up to $3.5 million in 2007 (*Id.* at 708, Table 10-114; 709, Table 10-115), the DEIS makes no effort to examine the impacts on local governments and their residents of revenue reductions of this magnitude. Local governments provide a wide array of services including schools and pubic health programs. All of those programs could be at risk from limitations on the pollock harvest. And none of these consequences are considered in the DEIS.

XVI. CONCLUSION

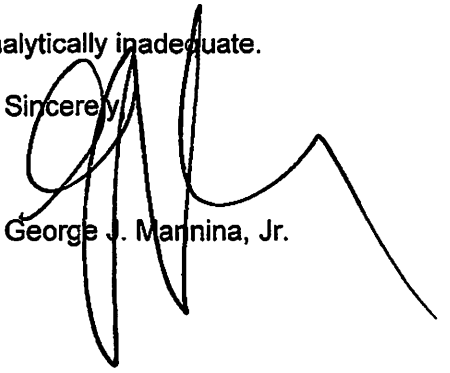
This DEIS is fundamentally flawed. As discussed in the preceding Parts, the DEIS fails to provide decision makers with the facts and analyses necessary to make an informed decision. The DEIS analyzes only a small number of the issues that must be considered so that decision makers will have the information they need. Those issues that are reviewed are analyzed in an incomplete or inaccurate way.

Perhaps the most telling statement in the DEIS is the admission that the bycatch of Chinook salmon in the pollock fishery "may" be affecting stocks of western Alaska Chinook and associated subsistence, commercial and sport fisheries. DEIS at 625. In a 762 page document, the DEIS can only conclude there "may" be an effect. Had the DEIS done a complete analysis, it would have found that the adverse effects it assumes "may" exist are illusory or of no measurable significance.

In stark contrast, the DEIS admits that the proposed restrictions on the pollock fishery will have clear and identifiable adverse impacts that reach up to $500,000,000 in lost revenue. However, had the DEIS done a complete and accurate analysis, it would have found that these adverse economic impacts were significantly and measurably understated in the DEIS. The actual impact to the nation is well over $1 billion. Had the DEIS done a complete analysis as required by NEPA, it would have found that these numbers mask the impact of job losses. Had the DEIS done a complete and accurate analysis, it would also have found that the proposed restrictions on the pollock fleet will impose severe hardships on economically disadvantaged CDQ communities, many residents of which find CDQ related jobs as an alternative to subsistence.

The DEIS is legally, factually, and analytically inadequate.

Sincerely,



George J. Mannina, Jr.

APPENDIX 1

NRC
NATURAL RESOURCES CONSULTANTS, INC.

4039 21ST AVENUE WEST, SUITE 404
SEATTLE, WASHINGTON 98199, U.S.A.
TELEPHONE: (206) 285-3480
FAX: (206) 283-8263
EMAIL: GRuggerone@nrccorp.com

Effects of Chinook Salmon Bycatch in the Bering Sea Pollock Fishery on Salmon Harvest, Escapement, and Abundance in Western Alaska

Prepared for:

At-Sea Processors Association
Pacific Seafood Processors Association
United Catcher Boats

Prepared by:

Gregory T. Ruggerone, Ph.D.

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Summary

Chinook and other salmon are captured incidentally by the pollock fishery in the Bering Sea, leading to concerns in western Alaska villages that this offshore fishery is significantly affecting harvests and runs of Chinook salmon. In response, the North Pacific Fishery Management Council (NPFMC 2008) prepared a draft environmental impact statement (DEIS) to evaluate, in part, effects of the existing (status quo) pollock fishery and several alternative management scenarios on Chinook salmon returning to Alaska. However, NPFMC did not directly compare numbers of Chinook salmon captured in the recent pollock fishery on the harvests, spawning escapements, and runs of Chinook salmon returning to western Alaska. Therefore, the pollock industry asked Natural Resources Consultants (NRC) to examine effects of Chinook salmon bycatch in the Bering Sea pollock fishery on terminal area harvests, escapements, and total abundances of Chinook salmon in western Alaska. This analysis relied upon Chinook salmon stock composition and adult equivalent (AEQ) mortality data provided in the DEIS. More recent estimates of salmon abundance and escapement in western Alaska were provided by the Alaska Department of Fish and Game (ADFG).

The percentage of annual western Alaska Chinook salmon runs captured in the pollock fishery (based AEQ mortality estimates) was relatively constant from 1994 through 2004, averaging 2.0 ± 0.4% (SD) per year. The percentage of the run taken by the pollock fishery increased from 2.7% in 2005 to a maximum of 6.3% in 2007. AEQ mortality of western Alaska Chinook salmon was positively correlated with abundance of Chinook salmon returning to western Alaska during 1994-2004, but bycatch in 2005-2007 was high relative to abundance of western Alaska Chinook salmon. Although the AEQ mortality represents a large number of Chinook salmon each year (range: 9,697 to 45,682 western Alaska salmon), it is a relatively small percentage of the abundance of adult Chinook salmon returning to western Alaska (avg. 818,000; range: 393,000 to 1,100,000 fish). This observation is important because it implies that the pollock fishery was not responsible for the wide swings in Chinook salmon abundance returning to western Alaska during the past 15 or more years.

The effect of the pollock fishery on Chinook salmon runs and harvests in each region of western Alaska was estimated. Prior to 2005, the percentage of the Chinook salmon run to the Yukon, Kuskokwim, Bristol Bay, and Norton Sound watersheds was less than approximately 5.3% (avg. 2.3% per stock). During this period, the foregone harvest and spawning escapement was less than 5% (avg. 2.3% per stock). These values assumed harvest rates would have remained unchanged if the salmon had not been captured in the pollock fishery because the percentage of the run taken in the pollock fishery was relatively small. During 2005 to 2007, bycatch of Chinook salmon increased relative to terminal area harvests and runs. In 2007, the year of highest bycatch, the percentage of the Chinook salmon runs taken in the pollock fishery was approximately 8% in the Yukon, 3.8% in the Kuskokwim area, 9% in Bristol Bay, and 6.3% in Norton Sound. Foregone harvests and escapements in 2007 were approximately 8% in the Yukon, 4% in the Kuskokwim area, 10% in Bristol Bay, and 7% in Norton Sound. Genetic and abundance data indicated that <1% of the Canada-bound run of Chinook salmon was captured in the pollock fishery, 1994-2007, indicating this genetically-distinct stock might have a unique distribution at sea such that it is not readily captured in the pollock fishery. Thus, reduced bycatch would have relatively little effect on achievement of escapement objectives in Canada.

Although Chinook salmon captured in the pollock fishery would have contributed to spawning escapements and harvests in western Alaska, these analyses indicate that the percentage increase in harvest or escapement would have been small in most years.

Introduction

Chinook and other salmon are captured incidentally by the pollock fishery in the Bering Sea. Many of the captured Chinook salmon would have returned to western Alaska where they would contributed to subsistence, commercial or sport harvests, or to the spawning population. Chinook salmon abundance in western Alaska has been low, especially since the 1997/1998 El Nino event that had a significant effect on the southeastern Bering Sea (Kruse 1998).

The North Pacific Fishery Management Council (NPFMC 2008) prepared a draft environmental impact statement (DEIS) in order to evaluate, in part, effects of the existing (status quo) pollock fishery and several alternative management scenarios on Chinook salmon returning to Alaska. However, NPFMC (2008) did not directly compare numbers of Chinook salmon captured in the existing pollock fishery on harvests, spawning escapements, and runs of Chinook salmon returning to western Alaska.

The pollock fishing industry (At-Sea Processors Association, Pacific Seafood Processors Association, United Catcher Boats) contacted Natural Resources Consultants (NRC) in late December and asked NRC to perform technical analysis to help the industry develop comments on the NPFMC DEIS by February 23, 2008. Specifically, NRC was asked to examine effects of Chinook salmon bycatch in the Bering Sea pollock fishery on terminal area harvests and total abundances of Chinook salmon in western Alaska. Objectives of this investigation were to:

1) Estimate the percentage of the total adult catch or run (catch and spawning escapement) of western Alaska Chinook salmon represented by the adult equivalent (AEQ) mortality of western Alaska Chinook salmon in the Bering Sea pollock fishery.

2) Estimate the percentage of Chinook salmon returning to each region of western Alaska (Yukon, Kuskokwim, Bristol Bay, Norton Sound) represented by the adult equivalent mortality of these fish in the Bering Sea pollock fishery.

3) Examine effects of Chinook salmon bycatch on subsistence and commercial harvests in western Alaska.

4) Examine effects of Chinook salmon bycatch on attainment of Chinook salmon spawning escapement goals in western Alaska.

Methods

Stock Composition Chinook salmon stock composition in the bycatch was obtained from NPFMC (2008), who relied upon genetic data collected during 2005-2007. The genetic data allowed identification and enumeration in the pollock bycatch of Chinook salmon that would have returned to coastal areas of western Alaska (lower Kuskokwim, lower Yukon, Bristol Bay, Norton Sound), the middle Yukon River (Alaska), and the upper Yukon River (Canada; Table 1). Stocks of Chinook salmon that would have returned to the north Alaska Peninsula, central Alaska, southeast Alaska, the Pacific Northwest, and Russia were also identified in the pollock harvests, but analyses presented here focus on bycatch of Chinook salmon that would have returned to the Arctic-Yukon-Kuskokwim (AYK) and Bristol Bay regions, e.g., western Alaska excluding the north Alaska Peninsula. NPFMC (2008) provided details regarding the sampling of Chinook salmon for genetic analyses and the way in which catch-weighted estimates of stock composition were developed.

Identification of stocks within western Alaska region was based on the scale pattern analysis findings of Myers et al. (2004) that were utilized by NPFMC (2008). For bycatch sampling during 1997-1999, the estimated stock composition of Chinook salmon returning to western Alaska averaged approximately 40% Yukon, 34% Bristol Bay, and 26% Kuskokwim Chinook salmon. Scale analysis did not differentiate Norton Sound Chinook from other stocks. For this analysis, AEQ mortality of Norton Sound Chinook salmon was based on the annual abundance of Norton Sound Chinook salmon compared with total abundance of western Alaska Chinook salmon. Thus, the analyses below assume that the AEQ bycatch of western Alaska Chinook salmon was comprised of 40% Yukon, 34% Bristol Bay, and 26% Kuskokwim Chinook salmon less a small fraction of the total that would have returned to Norton Sound (Table 2).

As in the DEIS, this analysis assumes that genetic data collected during 2005-2007 and scale pattern data collected during 1997-1999 provide reasonable estimates of Chinook salmon stock composition in the pollock fishery from 1994 to 2008. Actual stock composition in the bycatch would vary with annual abundances of stocks contributing to the bycatch and annual or seasonal shifts in stock distribution in the ocean. Genetic-based stock composition of the Chinook salmon bycatch since 1994 is shown in Table 1. Stock composition of the fraction that would have returned to specific watersheds in western Alaska is shown in Table 2.

It is worthwhile to note that genetic material present on Chinook salmon scale samples collected from the pollock fishery could be used to estimate annual stock composition of Chinook salmon in the pollock fishery during previous years. Furthermore, it may be possible to use genetic data to identify two or possibly three stocks within western Alaska if one was willing to accept lower classification accuracy of these stocks (e.g., ~80%; J. Seeb, University of Washington, pers. comm.). Presently, genetic stock groupings are based on classification accuracy that exceed 90%. Collection of genetic baseline data is continuing and resolution of stocks within the Pacific Northwest stock complex is likely to improve in the near future.

Adult Equivalent Mortality AEQ mortality of Chinook salmon is the number of fish that would have returned to the natal river had they not been captured in the pollock fishery. This value is less than the total bycatch estimate because some of the Chinook salmon captured in the pollock

fishery would have died naturally before returning to freshwater. Natural mortality of Chinook salmon during each year at sea is rarely quantified and there are no direct measurements of this mortality for Chinook salmon in the Bering Sea. The AEQ mortality values used in this investigation were obtained from NPFMC (2008), who described a modeling approach to estimate AEQ mortality of Chinook salmon. Stock-specific AEQ mortality values were based on genetic and scale stock identification data and age composition, as described above and in the DEIS. AEQ mortality values do not include Chinook salmon that were captured in the Russian pollock fishery in the Bering Sea.

AEQ mortality values for the adult salmon return in 2008 were not provided by NPFMC (2008). The number of Chinook salmon that would have returned to the natal rivers in 2008 had they not been captured in the pollock fishery is an important value because bycatch was exceptionally high in 2007, but exceptionally low in 2008. Bycatch during 2007 and during the 2008 A-season would have contributed to the adult return of salmon to western Alaska in 2008. Therefore, 2008 AEQ mortality values were estimated from multi-variate regressions of AEQ mortality on total bycatch (all stocks) in the A-season (y) and total bycatch during the previous year (y-1):

$$\text{Western AK } AEQ_y = 3{,}273 + 0.343\ (\text{A-season bycatch}_y) + 0.211\ (\text{total bycatch}_{y-1})$$

$$\text{Total } AEQ_y = 5392 + 0.495\ (\text{A-season bycatch}_y) + 0.431\ (\text{total bycatch}_{y-1})$$

The amount of variability explained by the independent variables (years 1994-2007) exceeded 96% (each variable partial $P < 0.001$, $n = 14$). The models predicted that 33,236 additional Chinook salmon would have returned to western Alaska in 2008 if they had not been captured in the pollock fishery. An estimated 65,540 additional Chinook salmon would have returned to all regions combined in 2008 (i.e., Pacific Northwest, Gulf of Alaska, and other regions).

Chinook Bycatch Relative to Terminal Area Harvests and Runs

Stock-specific AEQ mortality values were compared with terminal area harvests and runs in order to approximate the effect of Chinook bycatch on fish returning to western Alaska. AEQ mortality, total catch, and total abundance estimates were used to calculate the percentage of total catch (inriver and AEQ mortality) and total run (inriver and AEQ mortality) represented by the AEQ mortality estimates for western Alaska (total) and each region of western Alaska. The total harvest rate (% of total run harvested by all fisheries including the pollock fishery) was calculated.

Details about the statistics used for each region are described below. The run size values in each area represent recent estimates of total Chinook salmon abundance. These values exceed the minimum abundance estimates presented by Myers et al. (2004), who did not attempt to expand monitored escapement counts to all Chinook salmon rivers. In a few years, spawning escapement estimates were not available, therefore harvest rate was predicted from the regression of harvest rate on Log_e Catch. Values calculated in this manner were italicized in the tables. Values during recent years are preliminary.

Foregone harvests and escapements of Chinook salmon caused by the pollock fishery were estimated. These estimates assumed that the harvest rate (percentage of total run taken by salmon fishermen) would not have changed from the observed harvest rate. This assumption appears to be reasonable because, as discussed below, the percentage of total abundance taken by the pollock fishery was typically low, indicting that it was unlikely that fisheries management and inriver fishing effort would have significantly changed if these foregone fish had returned to western Alaska.

Yukon Catch and escapement data for Alaska and Canada were obtained from Hayes et al. (2006), JTC (2008), and ADFG (2008). Two estimates of total abundance of Chinook salmon in the Yukon watershed were utilized. The "sonar-based" estimates were obtained from Table 5-9 in NPFMC (2008). Sonar-based run size included harvests and escapement in the mainstem and tributaries downstream from the Pilot Station sonar, including relatively small harvests in adjacent coastal villages (JTC 2008).

The second estimates of total Yukon Chinook salmon were based on radio-telemetry mark-recapture (MR) estimates during 2000, 2002, 2003, and 2004 (Spencer et al. 2002, 2005, 2006, 2007). Abundance was calculated in 2001, but the 2001 estimate appeared to be biased high in response to a different sampling approach that year (T. Spencer, ADFG, pers. comm.). A linear regression relationship between the MR and sonar-based total abundance estimates was used to extend the MR-based estimates back to 1994 (Fig. 1).

Nearly 50% of the Chinook salmon entering the Yukon River are destined to habitats in Canada. Recent sampling indicated that the Canadian mark-recapture estimates were biased low. The Joint Technical Committee (JTC 2008) recommended adoption of the Eagle sonar counts, which began in 2005 (Hayes et al. 2006), as the more accurate count of Chinook salmon entering Canada. During 2002-2004, Chinook salmon passing into Canada were estimated with mark-recapture of Chinook salmon using radio tags and these estimates also indicated greater abundance of Chinook salmon entering into Canada (Hayes et al. 2006). The new passage estimates, based on Eagle sonar and MR, were correlated with the original Canadian estimates ($r = 0.62$). Therefore, for this investigation, the revised passage estimates were regressed on the earlier Canadian passage estimates in order to estimate total passage into Canada prior to 2002 (Fig. 2).

Harvests of Canada-bound Chinook salmon in Alaska and Canada were calculated by re-arranging the brood table for Canada-bound salmon by year of return rather than by brood year (Table A8 of JTC 2008). Harvest of Chinook salmon returning to Alaska streams was calculated as the difference between total harvest (utilization) in the Yukon River (and coastal villages) and the harvest of Canadian-bound fish. Total spawning escapement in the entire Yukon River was calculated from the difference in total abundance (based on sonar or radio-tag approaches) minus total catch reported by JTC (2008) and ADFG (2008). Escapement of Chinook salmon in Alaska streams was calculated as the difference between total escapement in the Yukon drainage and the estimated spawning escapement in Canada (mainstem border passage minus harvest).

The revised spawning escapement estimates for Canada were utilized with the MR-based estimates of total Yukon Chinook salmon abundance, whereas the original spawning escapement

estimates for Canada were utilized with the Pilot Station sonar estimates. It is noteworthy that the combined use of Pilot Station abundance estimates and the revised Canadian spawner estimates would have led to unreasonably low escapements in Alaska streams in some years (e.g., 2000, 2001), indicating that the Pilot Station sonar estimates of total abundance were too low or that the revised Canada passage estimates were too high in some years. The Pilot Station sonar estimates appeared too low in 2000 because the calculated harvest rate was exceptionally high (81%) on Alaska-bound Chinook salmon (see Table 5).

Kuskokwim Preliminary estimates of total abundance and escapement of Chinook salmon returning to the Kuskokwim River were obtained from D. Molyneaux (ADFG, pers. comm.), who has a research project with B. Bue to reconstruct total Chinook salmon abundance in the Kuskokwim River since 1981. A report on these new estimates should be available by spring 2009. Earlier values from this effort were presented by NPFMC (2008) but those values were approximately 20% less than the current estimates. The study by Molyneaux and Bue indicates that Kuskokwim River Chinook salmon abundance was greater than previously assumed. The Kuskokwim area statistics presented here include Molyneaux's Kuskokwim River estimates and values from District 4 and District 5, e.g., Brannian and Molyneaux 2006, Molyneaux (pers. comm.). Together, these data represent Chinook salmon runs to the Kuskokwim Area.

Bristol Bay Catch, escapement, and abundance of Chinook salmon returning to the Nushagak and Togiak districts of Bristol Bay were obtained from NPFMC (2008). These values did not include the somewhat small harvests and escapements of Bristol Bay Chinook salmon in Naknek, Kvichak, Ugashik, and Egegik areas. Total escapement of Chinook salmon into these watersheds are not always monitored. These data could be added to the calculations at a later date.

Norton Sound Total abundance of Chinook salmon returning to the Unalakleet River, the major Chinook salmon stock in Norton Sound, were obtained from Menard and Kent (2008). These values include their estimate for the unmonitored portion of the Unalakleet River. Escapement to five other rivers and catch in Norton Sound districts (outside the Unalakleet District) were included in the totals (Menard and Kent 2008).

Results and Discussion

Western Alaska (all stocks)

The percentage of annual western Alaska Chinook salmon runs captured in the pollock fishery (based on AEQ mortality estimates) was relatively constant from 1994 through 2004, averaging 2.0 ± 0.4% (SD) per year (Fig. 3, Table 3). The percentage of the run taken by the pollock fishery increased from 2.7% in 2005 to a maximum of 6.3% in 2007. Except for 2005-2007, the percentage of the Chinook run taken in the pollock fishery was relatively constant regardless of run size of Chinook salmon in western Alaska.

AEQ mortality of western Alaska Chinook salmon was positively correlated with abundance of Chinook salmon returning to western Alaska during 1994-2004 (Fig. 4). Approximately 55% of the variability in bycatch was explained by abundance of western Alaska Chinook salmon. Thus,

except for 2005-2007, greater bycatch was associated with greater Chinook salmon run size. This type of a relationship is analogous to a Type I predator response to prey (Hollings 1959), and it is less controlling of the Chinook population compared with depensatory mortality in which percentage mortality increases at lower abundances of Chinook salmon. Identification of factors contributing the higher than expected bycatch in 2005-2007 is important to the ability to minimize bycatch.

Although the AEQ mortality represents a large number of Chinook salmon each year (range: 9,697 to 45,682 western Alaska salmon), it is a relatively small percentage of the abundance of adult Chinook salmon returning to western Alaska (avg. 818,000; range: 393,000 to 1,100,000 fish). This observation is important because it implies that the pollock fishery is not responsible for the wide swings in Chinook salmon abundance returning to western Alaska during the past 15 or more years. For example, the total abundance of Chinook salmon returning to western Alaska in 2000 was the lowest run since 1994 (393,000 salmon) and the AEQ mortality of western Alaska Chinook salmon was also the lowest (9,697 salmon). Total abundance of Chinook salmon returning to western Alaska was low in 2008, but subsistence harvests and spawning escapements of Chinook salmon have yet to be reported in all western Alaska areas.

The percentage of total harvests of western Alaska Chinook salmon taken in the pollock fishery increased over time from approximately 3.7% during 1994-1998 to 5.6% during 1999-2004, and to as much as 14.3% in 2007 (Fig. 3, Table 3). The percentage of total harvests taken in the pollock fishery increased over time because greater restrictions (primarily commercial fisheries) have been placed on the terminal area fisheries since the late 1990s when Chinook abundance declined.

The influence of the pollock fishery on subsistence harvests and escapement goals in each region of western Alaska is discussed below. It is worthwhile to note that the accuracy of stock-specific bycatch estimates declines as one attempts to examine smaller components of the Chinook salmon runs in western Alaska because these estimates require an additional level of estimation. Nevertheless, it is worthwhile to examine the effect of bycatch on specific stocks in order to evaluate whether bycatch effects might be relatively great for some stocks or less for others.

Genetic stock identification data were not available prior to 2005, therefore a worse case scenario was examined in which 100% of the bycatch was assumed to have originated in western Alaska. During 1994-2004, total AEQ bycatch represented 3.5 ± 0.6% (SD) of the total abundance of Chinook salmon returning to western Alaska. During 2005-2007, a period when bycatch increased, total AEQ bycatch represented 7.1 ± 3.0% (SD) of the total abundance of Chinook salmon returning to western Alaska. Thus, bycatch levels were not sufficiently high to cause the observed wide swings in Chinook salmon abundance during the past 15 years even if one incorrectly assumes all Chinook salmon captured in the pollock fishery were destined for western Alaska.

Yukon River (all stocks)

The percentage of Yukon Chinook salmon runs captured in the pollock fishery was relatively constant from 1994 through 2004, averaging 2.2 ± 0.5% when abundance was based on the

mark-recapture approach (Fig. 5, Table 4), or 3.1 ± 0.9% when abundance was based on Pilot Station sonar (Fig. 6, Table 5). The percentage of the run taken in the pollock fishery increased from 3.6-5.0% in 2005 (depending on abundance methodology) to a maximum of 6.6-9.3% in 2007. The percentage of the 2008 Chinook run taken in the pollock fishery was approximately 5.6-8.2%, owing to the relatively large bycatch during the 2007 pollock fishery. Bycatch in the 2008 pollock fishery was exceptionally low (20,273 Chinook from all stocks; http://www.fakr.noaa.gov/sustainablefisheries/bycatch/default.htm).

The percentage of total harvests of Yukon Chinook salmon taken in the pollock fishery increased over time from approximately 4.0% during 1994-1999 to 6.6% during 2000-2004, and to as much as 29% in 2008 (Fig. 5, Table 4). During 2008, direct commercial fishing on Chinook salmon was not allowed and subsistence fishing was restricted, leading to relatively low inriver harvests. Therefore, the percentage of the total harvest taken by the pollock fishery was relatively high in 2008.

Total abundance of Chinook salmon returning to the Yukon River during 1994-2008 ranged from a minimum run of 114,000 (MR estimate) or 68,000 salmon (sonar estimate) in 2000 to a maximum run of 380,000 (MR estimate) or 333,000 salmon (sonar estimate) in 2003 (Tables 4 and 5). The estimated AEQ mortality of total Yukon Chinook salmon during these years was approximately 3,792 fish in 2000 and 8,196 fish in 2003. The AEQ mortality estimates are smaller than the error associated with abundance estimates provided by sonar versus radio tag mark-recapture studies. In other words, although the AEQ mortality estimates are actual fish that would have returned to the Yukon River, their presence would not have changed the total abundance estimates to the extent that harvest managers would have altered decisions during the course of the fishing season.

Subsistence harvests in the Yukon watershed (Alaska and Canada) averaged approximately 58,274 Chinook salmon or 54% of the total Chinook salmon harvest from 1994 to 2007 (Table 6). Commercial harvests varied considerably from year to year depending on total abundance of Chinook salmon.

If Chinook salmon had not been captured in the pollock fishery, it is reasonable to assume that these additional fish would have been harvested at the same rate as fish that actually returned to the river each year. Based on this assumption[1], total harvests of Chinook salmon in the Yukon River (all fisheries) would have increased by approximately 3% (3,762 fish per year), on average, or up to 7,710 fish in 2007 (Table 6). Likewise, spawning escapement would have increased 3% (4,405 fish per year), on average, or up to 8% in 2007. Attainment of escapement goals is discussed below.

[1] For these calculations, harvest rate was based on the mean rate calculated from the two estimates of Chinook salmon abundance, i.e., sonar and mark-recapture.

Yukon River (Alaska stocks)

During 1994-2008, Yukon Chinook salmon returning to spawning areas in Alaska represented approximately 59 ± 8% of the total run based on the MR approach, or 54 ± 8% of the total run based on Pilot Station Sonar and the original Canadian passage estimates. However, the Alaska stocks represented 97% of the total Yukon AEQ mortality in the pollock fishery, based largely on genetic sampling during 2005-2007. The genetic data indicate that the Alaska component of the Yukon run is captured at a much higher rate than the Canadian component of the run, suggesting that the upper Yukon stock may have a unique distribution in the ocean.

The percentage of Yukon Chinook salmon runs (Alaska stocks) captured in the pollock fishery was relatively constant from 1994 through 2004, averaging 3.8-5.7% depending on the abundance methodology (Figs. 5 and 6, Table 4 and 5). The percentage of the run taken in the pollock fishery increased from 5.9-7.8% in 2005 to a maximum of 10.7-17.1% in 2007 (depending on abundance methodology).

The percentage of harvests of Yukon Chinook salmon (Alaska stocks) taken in the pollock fishery increased over time from approximately 8.8% during 1994-1999 to 13.3% during 2000-2004, and to as much as 50% in 2007 and 2008. No directed commercial fishing was allowed in 2008 (4,641 fish taken incidentally in other salmon fisheries) and subsistence fishing was restricted (ADFG 2008) (Fig. 5, Table 4). The 2008 value is preliminary and it assumes the 2008 subsistence harvest was 50% of the recent three-year average.

Subsistence harvests in the Alaskan Yukon have been relatively stable, averaging 51,200 ± 5,800 fish from 1994-2007 (Hayes et al. 2006, JTC 2008). An estimated 1,479 households participated in subsistence harvests of salmon during 2005 (Busher et al. 2007). From 1993-2002, a reported 2,986 household subsistence permits were issued and 1,333 permits were returned to ADFG (Fall et al. 2003). Subsistence harvests have only been restricted in 2000 and 2008 when run size was unusually low. In 2001, the Alaska Board of fisheries identified the "amount necessary for subsistence" (ANS) in the Yukon River as 45,500 to 66,704 Chinook salmon (Hayes et al. 2006). Based on this range, subsistence needs were met in all years since the late 1980s except for 2000, 2002, and 2008. The reason for low subsistence harvests in 2002 (43,742 fish) is unknown (Hayes et al. 2006).

The ability of subsistence fishermen to capture Chinook salmon is dependent, in part, on the abundance of Chinook salmon in the river. The above analyses show that bycatch in the pollock fishery did not cause the wide fluctuations in Chinook salmon returning to the Yukon River. In most years, approximately 2-3% of the run to the Yukon (Alaska stocks) was taken by the pollock fishery, and the maximum amount was approximately 11-17% in 2007. Changes in the ability of subsistence fishermen to capture Chinook salmon likely reflect the relative magnitude (% of run) in which Chinook abundance was altered. Therefore, in most years, the average increase in effort needed to achieve the desired numbers of Chinook salmon for subsistence is likely small (e.g., < 5%). In 2007, the pollock fishery captured approximately 11-17% of the Alaska run, therefore the increase in effort would have been more than in most previous years. However, this potential increase would have been offset to some extent by the interception of Canada-bound Chinook salmon that is minimally influenced by bycatch in the pollock fishery

(see below). Commercial harvests in the Yukon River would also be a key factor affecting effort by subsistence fishermen to meet their goals because subsistence effort likely increases in years when commercial fishing removes a significant number or proportion of Chinook salmon. However, many commercial fishermen are also subsistence fishermen. Commercial harvests of Chinook salmon in the Yukon River exceeded that of subsistence fishermen until the late 1990s when abundance declined. During 2002-2004, there were 574 active commercial salmon permits per year (all species) in the Alaska portion of the Yukon River (Hayes et al. 2008).

ADFG and the Board of Fisheries has classified Yukon Chinook salmon as a Stock of Yield Concern because it is not producing the harvests that it did during 1989-1997 (see Appendix Figure B2 of JTC (2008)). The decline in harvests (and run size) corresponded with the 1997/98 El Nino event that had a significant influence on the southeastern Bering Sea (Kruse 1998, Hunt et al. 2002). Based on the analyses presented above, it is evident that bycatch in the pollock fishery was not a key factor causing the substantial Chinook decline beginning in 1998.

Alaska Chinook Escapement Goals Escapement goals of Chinook salmon for the seven rivers in Alaska with established goals were achieved during 2002, 2003, 2004, 2005, 2006, and 2007, except for the Nulato River in 2005 when only 553 spawners were counted (goal: 940-1900 fish) (Hayes et al. 2006, JTC 2008). In 2008, high water levels hampered surveys in most tributaries such that counts in all but two tributaries cannot be directly compared with previous escapements or with spawner goals (ADFG 2008). Of the two stocks with reasonable survey conditions in 2008, the Nulato River was 2% below the lower goal and the Gisasa River was 16% above the lower goal. Escapement counts in the other tributaries were below the lower goal, but these counts were low because survey conditions were poor according to ADFG (2008). ADFG (2008) suggested that the lower end of the escapement goals of the Chena and Salcha rivers, the largest producers of Chinook in the Alaska portion of the Yukon, were met in 2008 even though the total run size was small and high water hampered survey conditions.

If Chinook salmon had not been captured in the pollock fishery, it is likely that they would have been harvested at the same rate as fish that actually entered the Yukon watershed. Based on this assumption, overall spawning escapements would have increased 3%, on average, or up to 8% in 2007 if they had not been captured in the pollock fishery (Table 6).

Yukon River (Canada stocks)

Approximately 41% to 46% of all Chinook salmon entering the Yukon River are destined for Canadian streams, on average (Tables 4 and 5). Many Canada-bound fish are harvested in Alaska and the JTC (2008) has estimated Canada-bound Chinook salmon harvested in Alaska in addition to salmon harvested in Canada.

Genetic analyses have shown that Chinook salmon returning to the Canadian mainstem and tributaries of the Yukon River are genetically distinct from other stocks in the lower river and in western Alaska. The AEQ mortality of Chinook salmon that would have returned to the Canada averaged approximately 288 fish per year and reached a maximum of 645 fish in 2005 (Table 2). The percentage of the Canada-bound Chinook salmon taken in the pollock fishery was less than 1% each year, based on the two abundance methods described above. AEQ mortality of

Chinook salmon as a portion of total catch of Canada-bound Chinook salmon was 2% or less (Tables 4 and 5).

Based on the 2005-2007 genetic data, Canada-bound Chinook salmon are less abundant in the bycatch than expected based on their relatively abundance. These initial genetic data suggest these fish may have a unique distribution in the ocean.

Canada Chinook Escapement Goal The escapement goal for Chinook salmon returning to Canada via the Yukon mainstem is currently under review by the JTC because recent evidence suggests more salmon have been passing into Canada than previously estimated. Previously, the interim escapement objective was 33,000-43,000 Chinook salmon (Fig. B15 of JTC 2008). However, the escapement target for "stabilization and rebuilding" during 1996-2006 (2002: 25,000 fish) was 28,000 Chinook salmon. The spawning objective in 2008, based on Eagle sonar counts, was 45,000 fish. The spawning objectives for the Canadian Yukon have not been consistently met during recent years.

Based on the genetic data, relatively few Canada-bound Chinook salmon were captured in the pollock fishery. These data suggest that bycatch of Canada-bound Chinook salmon in the pollock fishery has had a relatively small effect on spawning escapements in Canada. For example, the percentage of spawning escapement represented by total AEQ mortality of upper Yukon Chinook salmon was 0.6% to 1.1%, on average, depending on the method of estimating escapement (Tables 4 and 5). The maximum value occurred in 2007 (1.7% to 3.5%).

Kuskokwim Area

Total abundance of Chinook salmon returning to the Kuskokwim River during 1994-2007 ranged from a minimum run of 192,000 in 2000 to a maximum run of 493,000 in 1994 (Fig. 7, Table 7). The estimated AEQ mortality of Kuskokwim Chinook salmon during these years was approximately 2,465 fish in 2000 and 5,697 fish in 1994. The percentage of Kuskokwim Chinook salmon runs captured in the pollock fishery was relatively constant from 1994 through 2004, averaging 1.2 ± 0.3% (Fig. 7, Table 7). The percentage of the run taken in the pollock fishery increased from 1.6% in 2005 to a maximum of 3.8% in 2007.

The percentage of total harvests of Kuskokwim Chinook salmon taken in the pollock fishery increased over time from approximately 3.2% during 1994-2001 to 5.2% during 2002-2005, and to as much as 9.9% in 2006 and 2007 (Fig. 7, Table 7).

Subsistence harvests in the Kuskokwim area averaged approximately 79,845 Chinook salmon or 73% of the total harvest from 1994 to 2007 (Table 6). Approximately 4,339 households occur in 38 communities within the Kuskokwim area but not all of these households rely upon salmon for subsistence (Fall et al. 2003, Whitmore et al. 2008). In 2002, at least 1,696 households (39% of total) were identified as harvesting salmon for subsistence. In recent years, commercial harvests of Kuskokwim River Chinook salmon typically occur as incidental harvests in other directed salmon fisheries. Kuskokwim Chinook salmon were classified as a Stock of Yield Concern but this classification was removed in 2007. Approximately 496 commercial salmon permits were

utilized per year (2000 to 2003) to capture all species of salmon in the Kuskokwim area (Whitmore et al. 2008).

If Chinook salmon had not been captured in the pollock fishery, it is reasonable to assume that these additional fish would have been harvested at the same rate as fish that actually returned to the river each year. Based on this assumption, total harvests of Chinook salmon in the Kuskokwim area (all fisheries) would have increased by approximately 2% (1,646 fish per year), on average, or up to 3,916 fish in 2007 (Table 6). Thus, it is possible that each household, on average, might have harvested one additional Chinook salmon per year (assuming 1,696 households) if the fish had not been captured in the pollock fishery. In 2007, each household may have captured 2.3 additional Chinook salmon, on average, if the fish had not been captured in the pollock fishery.

Kuskokwim Area Chinook Escapement Goals The Kuskokwim area has spawning escapement goals for Chinook salmon returning to 14 drainages. Escapement goals have been met in each of these drainages during at least 80% of the past six or more years examined by Molyneaux and Brannian (2006). In 2008, spawning escapement goals were achieved in 8 of 11 monitored tributaries (Linderman and Clark 2008). Goals were not met in three tributaries, in part, because the run appeared to be adequate in the lower river (nearly all inseason subsistence reports were "very good" or "normal") and normal fishing operations were allowed.

If the pollock fishery had not captured Kuskokwim area Chinook salmon, then spawning escapement may have increased approximately 2% (3,663 fish per year), on average, during 1994 to 2007, or up to 4% in 2007, assuming harvest rates remained unchanged (Table 6).

Bristol Bay (Westside stocks)

The percentage of Bristol Bay Chinook salmon runs captured in the pollock fishery was relatively constant from 1994 through 2005, averaging 3.1 ± 0.8% (Fig. 8, Table 8). The percentage of the run taken in the pollock fishery increased from 4.4% in 2006 to a maximum of 9% in 2007.

The percentage of total harvests of Bristol Bay Chinook salmon taken in the pollock fishery increased over time from approximately 6.6% during 1994-2005 to 15.9% in 2007, and to as much as 35% in 2008 when harvests were curtailed in response to a moderately small run (Fig. 8, Table 8).

Subsistence harvests represent approximately 18% of the total harvests of Chinook salmon (Table 6). Approximately 556 subsistence permits were issued to people living in the westside of Bristol Bay (Nushagak and Togiak) where more than 90% of Chinook salmon were harvested in 2002 (Fall et al. 2003). A total of 1,093 subsistence permits were issued for all of Bristol Bay. Commercial fishing took 72% of the total Chinook salmon harvest, on average, whereas other fisheries (mostly sport) took 10% of the total Chinook harvest in the westside districts. Approximately 2,474 commercial salmon permits per year (drift and set gillnet) were utilized in Bristol Bay to harvest all species of salmon (mostly sockeye salmon) during 1996 to 2005.

Assuming the harvest rate remained unchanged, the foregone harvest of Chinook salmon caused by the pollock fishery was approximately 3,349 fish per year, or approximately 4% of the observed catch (all fisheries). Foregone catch peaked at 8,066 fish in 2007 (10% of total).

Bristol Bay Chinook Escapement Goals Escapement goals for Togiak and Nushagak Chinook salmon have been achieved in each of the last 10 years or more (Baker et al. 2006). Escapement goals for the smaller Chinook runs on the eastside were met in 80% of the past 10 years (Naknek, Alagnak) or 50% of the past 10 years (Egegik, the smallest monitored Chinook stock). If the pollock fishery had not captured Bristol Bay Chinook salmon, then spawning escapement in westside districts may have increased approximately 4% (3,593 fish per year), on average, during 1994 to 2007, or up to 10% in 2007, assuming harvest rates remained unchanged.

Norton Sound District

Norton Sound supports small runs of Chinook salmon compared with the Yukon, Kuskokwim, and Bristol Bay. Stock-specific estimates of Norton Sound Chinook salmon captured in the pollock fishery have not been made. The analysis here assumed that bycatch of Norton Sound Chinook salmon was equivalent to their abundance relative to other western Alaska stocks.

Chinook runs to Norton Sound averaged approximately 12,600 fish per year since 1994 (Table 9). The percentage of Norton Sound Chinook salmon runs captured in the pollock fishery was relatively constant from 1996 through 2004, averaging 2.1 ± 0.3% (Fig. 9, Table 9). The percentage of the run taken in the pollock fishery increased from 3.9% in 2006 to a maximum of 6.3% in 2007. The run of Chinook salmon to Norton Sound in 2008 was considered to be the smallest run on record (Menard and Scott 2008). Preliminary analyses suggest approximately 5.7% of the run was taken in the pollock fishery.

Subsistence harvests represent approximately 74% of the total harvests of Chinook salmon since 1994, but nearly all harvests in recent years are for subsistence (Table 6). In 2002, there were approximately 935 households in the Norton Sound District (Fall et al. 2003). Chinook salmon harvests in the Shaktoolik and Unalakleet subdistricts have been classified as a Stock of Yield Concern since 2004 because they have not been producing sufficient harvests. Approximately 34 commercial salmon fishing permits per year were utilized in Norton Sound District during 2001 to 2005 (all species of salmon; Banducci et al. 2007). Assuming the harvest rate remained unchanged, the foregone harvest of Chinook salmon caused by the pollock fishery was approximately 182 fish per year, or approximately 3% of the observed catch. Foregone catch peaked at approximately 549 fish in 2007 (7% of total).

Norton Sound Chinook Escapement Goals Escapement goals have been developed and evaluated for North River (tributary to Unalakleet River) and Kwiniuk River. The escapement goal in the North River was achieved from 2001-2003 and 2007, but it was not met in 2004-2006 and in 2008. The escapement goal in the Kwiniuk River was met during 2002-2005 but it has not been met during 2006-2008. Poor weather has reduced the quality of aerial escapement surveys on the Shaktoolik River, therefore the counts could not be compared with the escapement goal in recent years.

If the pollock fishery had not captured Norton Sound Chinook salmon, then the spawning escapement may have increased by approximately 3% (135 fish per year), on average, during 1994 to 2007, or up to 7% in 2007, assuming harvest rates remained unchanged. Addition of these fish to the escapement fish would have brought the total escapement count closer to the lower end of the escapement goal ranges.

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Table 1. Estimated AEQ mortality of Chinook salmon in the pollock fishery by year of return to natal watersheds. The upper Yukon stock represents salmon in Canada, whereas the middle Yukon stock was included in the Alaska portion of the Yukon total. The average percent contribution of each stock to the total AEQ bycatch is shown. See methods for estimating values in 2008. Source: Table 3-14 of NPFMC (2008).

Year of return	BC, WA, OR, and CA	Coastal W. AK	Cook Inlet	Middle Yukon	N. Alaska Peninsula	Other	Russia	Upper Yukon	Transboundary SEAK	Total
1994	5,198	21,518	242	201	4,898	714	147	194	198	33,310
1995	5,635	14,084	415	104	3,302	532	112	96	279	24,559
1996	6,974	17,025	520	154	3,939	632	142	137	364	29,886
1997	11,376	16,895	1,276	413	3,364	715	277	343	783	35,442
1998	10,967	14,218	1,110	103	3,382	696	165	87	711	31,439
1999	6,429	15,099	573	297	3,193	561	188	245	387	26,973
2000	2,815	9,383	219	167	2,106	330	99	147	152	15,418
2001	3,694	10,473	349	260	2,141	375	149	221	238	17,899
2002	6,236	14,516	509	106	3,467	609	117	96	341	25,997
2003	5,743	20,065	398	356	4,424	679	207	311	292	32,475
2004	10,164	21,904	1,018	466	4,592	859	305	393	685	40,386
2005	11,169	25,462	1,203	767	5,107	923	439	645	772	46,487
2006	12,719	36,337	892	363	8,355	1,348	290	339	633	61,275
2007	18,079	44,380	1,597	694	9,743	1,688	485	608	1,069	78,344
2008		*33,236*		*524*				*454*		*65,540*
Avg. %	23%	56%	2%	1%	12%	2%	1%	1%	1%	

Table 2. Approximate AEQ mortality of Chinook salmon in the pollock fishery by year of return to each western Alaska watershed. The values are based on those presented in Table 1. The average percent contribution of each stock to the total AEQ bycatch is shown for years 1996-2007. See methods for description of the values for Norton Sound and for all 2008 values. The approach utilized scale stock identification data presented in NPFMC (2008).

Year of return	Yukon (AK)	Yukon (Canada)	Kuskokwim	Bristol Bay	Norton Sound	Total Western AK
1994	8,571	194	5,697	7,451		21,913
1995	5,618	96	3,714	4,857		14,284
1996	6,649	137	4,411	5,768	350	17,316
1997	6,473	343	4,430	5,794	611	17,651
1998	5,518	87	3,643	4,764	396	14,408
1999	5,867	245	3,973	5,195	361	15,641
2000	3,645	147	2,465	3,223	216	9,697
2001	4,086	221	2,799	3,661	188	10,954
2002	5,684	96	3,757	4,913	268	14,718
2003	7,885	311	5,327	6,966	243	20,732
2004	8,634	393	5,867	7,673	197	22,763
2005	10,028	645	6,937	9,072	192	26,874
2006	14,378	339	9,566	12,510	246	37,039
2007	17,446	608	11,734	15,346	549	45,682
2008	13,114	454	8,819	11,533	295	34,215
Avg. %	38%	1%	26%	33%	1.7%	

Table 3. Western Alaska Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery. Harvest rate includes AEQ mortality.

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
1994	478,993	624,340	1,103,333	21,913	4.4%	1.9%	45%
1995	502,911	539,362	1,042,273	14,284	2.8%	1.4%	49%
1996	383,150	448,535	831,685	17,316	4.3%	2.0%	47%
1997	441,049	566,768	1,007,817	17,651	3.8%	1.7%	45%
1998	405,300	424,710	830,010	14,408	3.4%	1.7%	50%
1999	289,186	332,859	622,045	15,641	5.1%	2.5%	48%
2000	188,727	204,721	393,448	9,697	4.9%	2.4%	49%
2001	222,211	398,061	620,272	10,954	4.7%	1.7%	37%
2002	226,276	411,875	638,151	14,718	6.1%	2.3%	37%
2003	277,474	555,953	833,427	20,732	7.0%	2.4%	35%
2004	382,002	630,381	1,012,383	22,763	5.6%	2.2%	39%
2005	304,521	647,358	951,879	26,874	8.1%	2.7%	34%
2006	325,538	578,485	904,024	37,039	10.2%	3.9%	39%
2007	274,786	399,044	673,831	45,682	14.3%	6.3%	45%
2008				34,215			

Table 4. Yukon River Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery. Total abundance statistics were based on the radio telemetry mark-recapture study (see methods).

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
Total Yukon Chinook salmon							
1994	192,852	*183,222*	*376,074*	8,765	*4.3%*	*2.3%*	*52%*
1995	200,632	157,308	357,940	5,714	2.8%	1.6%	57%
1996	160,539	*178,151*	*338,690*	6,786	*4.1%*	*2.0%*	*48%*
1997	192,292	179,352	371,644	6,816	3.4%	1.8%	53%
1998	105,697	117,578	223,275	5,605	5.0%	2.4%	49%
1999	137,895	163,474	301,369	6,112	4.2%	2.0%	47%
2000	50,749	62,959	113,708	3,792	7.0%	3.2%	46%
2001	66,759	127,293	194,052	4,307	6.1%	2.2%	36%
2002	78,267	165,017	243,284	5,780	6.9%	2.3%	34%
2003	110,619	269,336	379,955	8,196	6.9%	2.1%	31%
2004	125,608	188,188	313,796	9,027	6.7%	2.8%	42%
2005	97,726	187,875	285,601	10,673	9.8%	3.6%	37%
2006	105,139	207,601	312,740	14,717	12.3%	4.5%	37%
2007	92,600	164,071	256,671	18,054	16.3%	6.6%	40%
2008	*33,189*	*193,643*	*226,832*	*13,568*	29.0%	5.6%	19%
Alaska origin Chinook salmon							
1994	76,396	*134,555*	*210,951*	8,571	*10.1%*	*3.9%*	*39%*
1995	81,512	100,752	182,264	5,618	6.4%	3.0%	46%
1996	52,095	*127,170*	*179,265*	6,649	*11.3%*	*3.6%*	*32%*
1997	84,413	117,152	201,565	6,473	7.1%	3.1%	44%
1998	52,911	83,132	136,043	5,518	9.4%	3.9%	41%
1999	64,633	134,181	198,814	5,867	8.3%	2.9%	34%
2000	23,776	35,222	58,998	3,645	13.3%	5.8%	44%
2001	33,666	61,097	94,763	4,086	10.8%	4.1%	38%
2002	39,140	129,240	168,380	5,684	12.7%	3.3%	26%
2003	41,235	183,285	224,520	7,885	16.1%	3.4%	21%
2004	54,334	135,338	189,672	8,634	13.7%	4.4%	32%
2005	42,101	117,325	159,426	10,028	19.2%	5.9%	31%
2006	48,283	142,359	190,642	14,378	22.9%	7.0%	31%
2007	17,458	127,683	145,141	17,446	50.0%	10.7%	21%
2008	*11,043*	*160,307*	*171,350*	*13,114*	54.3%	7.1%	13%
Canadian origin Chinook salmon							
1994	116,456	48,667	165,123	194	*0.2%*	*0.1%*	*71%*
1995	119,120	56,557	175,677	96	0.1%	0.1%	68%
1996	108,444	50,982	159,426	137	*0.1%*	*0.1%*	*68%*
1997	107,879	62,200	170,079	343	0.3%	0.2%	64%
1998	52,786	34,446	87,232	87	0.2%	0.1%	61%
1999	73,262	29,293	102,555	245	0.3%	0.2%	72%
2000	26,973	27,737	54,710	147	0.5%	0.3%	49%
2001	33,093	66,196	99,289	221	0.7%	0.2%	33%
2002	39,127	35,777	74,904	96	0.2%	0.1%	52%
2003	69,384	86,051	155,435	311	0.4%	0.2%	45%
2004	71,274	52,851	124,125	393	0.5%	0.3%	58%
2005	55,625	70,550	126,175	645	1.1%	0.5%	44%
2006	56,856	65,242	122,098	339	0.6%	0.3%	47%
2007	75,142	36,388	111,530	608	0.8%	0.5%	68%
2008	*22,146*	33,336	55,482	454	2.0%	0.8%	40%

Table 5. Yukon River Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery. Total abundance statistics were based on the Pilot Station sonar counts (See NPFMC 2008).

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
Total Yukon							
1994	192,852	*117,262*	*310,114*	8765	*4.3%*	*2.7%*	*63%*
1995	200,632	92,758	293,390	5714	2.8%	1.9%	69%
1996	160,539	*109,721*	*270,260*	6786	*4.1%*	*2.4%*	*60%*
1997	192,292	125,013	317,305	6816	3.4%	2.1%	61%
1998	105,697	42,422	148,119	5605	5.0%	3.6%	72%
1999	137,895	83,361	221,256	6112	4.2%	2.7%	63%
2000	50,749	17,623	68,372	3792	7.0%	5.3%	76%
2001	66,759	58,751	125,510	4307	6.1%	3.3%	55%
2002	78,267	86,912	165,179	5780	6.9%	3.4%	49%
2003	110,619	222,307	332,926	8196	6.9%	2.4%	35%
2004	125,608	109,367	234,975	9027	6.7%	3.7%	55%
2005	97,726	107,049	204,775	10673	9.8%	5.0%	50%
2006	105,139	128,809	233,948	14717	12.3%	5.9%	48%
2007	92,600	84,387	176,987	18054	16.3%	9.3%	57%
2008	33,189	*117,811*	*151,000*	*13568*	29.0%	8.2%	28%
Alaska origin Chinook salmon							
1994	76,396	*91,352*	*167,748*	8571	*10.1%*	*4.9%*	*48%*
1995	81,512	60,496	142,008	5618	6.4%	3.8%	59%
1996	52,095	*81,311*	*133,406*	6649	*11.3%*	*4.7%*	*42%*
1997	84,413	87,329	171,742	6473	7.1%	3.6%	51%
1998	52,911	25,671	78,582	5518	9.4%	6.6%	69%
1999	64,633	71,999	136,632	5867	8.3%	4.1%	49%
2000	23,776	6,279	30,055	3645	13.3%	10.8%	81%
2001	33,666	16,313	49,979	4086	10.8%	7.6%	70%
2002	39,140	46,767	85,907	5684	12.7%	6.2%	49%
2003	41,235	174,821	216,056	7885	16.1%	3.5%	22%
2004	54,334	72,202	126,536	8634	13.7%	6.4%	47%
2005	42,101	75,781	117,882	10028	19.2%	7.8%	41%
2006	48,283	100,819	149,102	14378	22.9%	8.8%	38%
2007	17,458	67,061	84,519	17446	50.0%	17.1%	34%
2008	11,043	*85,311*	*96,354*	*13114*	54.3%	12.0%	22%
Canadian origin Chinook salmon							
1994	116,456	25,910	142,366	194	0.2%	0.1%	82%
1995	119,120	32,262	151,382	96	0.1%	0.1%	79%
1996	108,444	28,410	136,854	137	0.1%	0.1%	79%
1997	107,879	37,684	145,563	343	0.3%	0.2%	74%
1998	52,786	16,751	69,537	87	0.2%	0.1%	76%
1999	73,262	11,362	84,624	245	0.3%	0.3%	87%
2000	26,973	11,344	38,317	147	0.5%	0.4%	71%
2001	33,093	42,438	75,531	221	0.7%	0.3%	44%
2002	39,127	40,145	79,272	96	0.2%	0.1%	49%
2003	69,384	47,486	116,870	311	0.4%	0.3%	59%
2004	71,274	37,165	108,439	393	0.5%	0.4%	66%
2005	55,625	31,268	86,893	645	1.1%	0.7%	64%
2006	56,856	27,990	84,846	339	0.6%	0.4%	67%
2007	75,142	17,326	92,468	608	0.8%	0.7%	81%
2008	*22,146*	32,500	54,646	*454*	2.0%	0.8%	41%

Table 6. Chinook salmon harvests (subsistence, commercial, other) in each region of western Alaska, harvest rate, AEQ mortality in the Bering Sea pollock fishery, and the estimated foregone harvest and spawning escapement associated with the AEQ mortality of Chinook salmon. Foregone values assume harvest rates remain unchanged with additional fish. Values during recent years are considered preliminary.

	Harvests				Inriver	AEQ	Foregone	Foregone	Foregone
Year	Subsistence	Commercial	Other	Total	Harvest Rate	Mortality	Catch	Escapement	(%)
	Yukon River								
1994	62,399	125,165	5,288	192,852	56%	8,765	4,927	3,838	3%
1995	59,358	133,874	7,400	200,632	62%	5,714	3,520	2,194	2%
1996	54,188	99,835	6,516	160,539	53%	6,786	3,578	3,208	2%
1997	66,816	118,152	7,324	192,292	56%	6,816	3,805	3,011	2%
1998	58,910	44,008	2,779	105,697	57%	5,605	3,190	2,415	3%
1999	62,223	72,435	3,237	137,895	53%	6,112	3,225	2,887	2%
2000	40,522	8,518	1,709	50,749	56%	3,792	2,114	1,678	4%
2001	63,605	1,351	1,803	66,759	42%	4,307	1,799	2,507	3%
2002	51,068	24,836	2,363	78,267	38%	5,780	2,215	3,565	3%
2003	63,253	43,110	4,256	110,619	31%	8,196	2,544	5,652	2%
2004	62,488	59,936	3,184	125,608	46%	9,027	4,132	4,894	3%
2005	60,179	36,095	1,452	97,726	40%	10,673	4,254	6,419	4%
2006	54,664	48,161	2,314	105,139	38%	14,717	5,661	9,057	5%
2007	56,158	33,634	2,808	92,600	43%	18,054	7,710	10,344	8%
2008						13,568			
	Kuskokwim Area								
1994	97,895	27,345	3,251	128,491	26%	5,697	1,482	4,215	1%
1995	99,733	72,352	2,017	174,102	36%	3,714	1,324	2,389	1%
1996	81,663	22,959	1,892	106,514	30%	4,411	1,329	3,082	1%
1997	85,459	47,990	1,723	135,172	30%	4,430	1,349	3,082	1%
1998	86,023	44,192	2,234	132,449	38%	3,643	1,375	2,268	1%
1999	77,232	25,019	764	103,015	43%	3,973	1,702	2,270	2%
2000	68,600	26,115	488	95,203	50%	2,465	1,222	1,243	1%
2001	77,386	14,384	661	92,431	31%	2,799	879	1,920	1%
2002	70,139	12,531	1,036	83,706	31%	3,757	1,164	2,593	1%
2003	72,335	16,014	1,491	89,840	29%	5,327	1,557	3,770	2%
2004	84,745	30,330	1,548	116,623	25%	5,867	1,447	4,420	1%
2005	74,296	30,515	1,180	105,991	25%	6,937	1,719	5,218	2%
2006	69,286	25,758	796	95,840	27%	9,566	2,577	6,989	3%
2007	73,034	23,160	1,981	98,175	33%	11,734	3,916	7,817	4%
2008						8,819			
	Bristol Bay (westside stocks)								
1994	16,394	129,962	11,294	157,650	61%	7,451	4,516	2,935	3%
1995	14,149	91,923	5,533	111,605	54%	4,857	2,643	2,213	2%
1996	16,412	80,613	6,181	103,206	66%	5,768	3,794	1,974	4%
1997	15,985	70,226	4,706	90,917	49%	5,794	2,856	2,937	3%
1998	13,040	131,196	6,604	150,840	56%	4,764	2,656	2,108	2%
1999	11,301	22,812	4,881	38,994	37%	5,195	1,912	3,283	5%
2000	10,586	19,913	6,487	36,986	36%	3,223	1,174	2,050	3%
2001	13,372	21,505	22,084	56,961	37%	3,661	1,342	2,319	2%
2002	11,984	42,274	3,769	58,027	38%	4,913	1,875	3,039	3%
2003	19,894	45,846	6,296	72,036	45%	6,966	3,140	3,826	4%
2004	16,704	105,844	12,268	134,816	53%	7,673	4,037	3,636	3%
2005	14,057	72,913	10,162	97,132	36%	9,072	3,237	5,834	3%
2006	11,601	101,106	8,537	121,244	45%	12,510	5,641	6,868	5%
2007	14,848	59,105	7,393	*81,346*	53%	15,346	8,066	7,280	10%
2008				*21,720*	15%	11,533	1,781	9,752	8%
	Norton Sound								
1994									
1995	7,274	8,860	438	16,572					
1996	7,245	4,984	662	12,891	77%	350	268	82	2%
1997	8,989	12,573	1,106	22,668	65%	611	397	214	2%
1998	8,295	7,429	590	16,314	71%	396	283	113	2%
1999	6,144	2,508	630	9,282	65%	361	233	128	3%
2000	4,148	752	889	5,789	66%	216	143	74	2%
2001	5,576	213	271	6,060	57%	188	107	81	2%
2002	5,469	5	802	6,276	54%	268	145	123	2%
2003	4,728	12	239	4,979	51%	243	124	119	2%
2004	4,420	0	535	4,955	57%	197	111	86	2%
2005	3,305	151	216	3,672	54%	192	104	89	3%
2006	2,876	12	427	3,315	55%	246	136	110	4%
2007	2,646	19		*2,665*	*33%*	549	181	368	7%
2008				*2,162*	*44%*	295	131	164	6%

Table 7. Kuskokwim area (Kuskokwim, Goodnews, Kanetok) Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery.

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
1994	128,491	365,392	493,883	5,697	4.2%	1.1%	27%
1995	174,102	314,087	488,189	3,714	2.1%	0.8%	36%
1996	106,514	246,966	353,480	4,411	4.0%	1.2%	31%
1997	135,172	308,884	444,056	4,430	3.2%	1.0%	31%
1998	132,449	218,488	350,937	3,643	2.7%	1.0%	38%
1999	103,015	137,399	240,414	3,973	3.7%	1.6%	44%
2000	95,203	96,871	192,074	2,465	2.5%	1.3%	50%
2001	92,431	202,015	294,446	2,799	2.9%	0.9%	32%
2002	83,706	186,515	270,221	3,757	4.3%	1.4%	32%
2003	89,840	217,595	307,435	5,327	5.6%	1.7%	30%
2004	116,623	356,359	472,982	5,867	4.8%	1.2%	26%
2005	105,991	321,702	427,693	6,937	6.1%	1.6%	26%
2006	95,840	259,963	355,804	9,566	9.1%	2.6%	29%
2007	98,175	195,963	294,139	11,734	10.7%	3.8%	36%
2008				8,819			

Table 8. Bristol Bay (Nushagak & Togiak districts) Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery. Values exclude Naknek, Kvichak, Ugashik, and Egegik Chinook salmon.

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
1994	157,650	102,455	260,105	7,451	4.5%	2.8%	62%
1995	111,605	93,456	205,061	4,857	4.2%	2.3%	55%
1996	103,206	53,703	156,909	5,768	5.3%	3.5%	67%
1997	90,917	93,495	184,412	5,794	6.0%	3.0%	51%
1998	150,840	119,703	270,543	4,764	3.1%	1.7%	57%
1999	38,994	66,966	105,960	5,195	11.8%	4.7%	40%
2000	36,986	64,571	101,557	3,223	8.0%	3.1%	38%
2001	56,961	98,457	155,418	3,661	6.0%	2.3%	38%
2002	58,027	94,055	152,082	4,913	7.8%	3.1%	40%
2003	72,036	87,761	159,797	6,966	8.8%	4.2%	47%
2004	134,816	121,432	256,248	7,673	5.4%	2.9%	54%
2005	97,132	175,049	272,181	9,072	8.5%	3.2%	38%
2006	121,244	147,620	268,864	12,510	9.4%	4.4%	48%
2007	81,346	73,421	154,767	15,346	15.9%	9.0%	57%
2008	21,720	118,896	140,616	11,533	34.7%	7.6%	22%

Table 9. Norton Sound Chinook salmon statistics that incorporate AEQ mortality estimates from the Bering Sea pollock fishery. Values in 2008 do not include total subsistence catch.

Year	Terminal Catch	Escapement	Terminal Run	AEQ Mortality	AEQ Mortality % of total catch	AEQ Mortality % of total run	Harvest Rate
1994							
1995	16,572						
1996	12,891	3,931	16,822	350	2.6%	2.0%	77%
1997	22,668	12,207	34,875	611	2.6%	1.7%	66%
1998	16,314	6,519	22,833	396	2.4%	1.7%	72%
1999	9,282	5,077	14,359	361	3.7%	2.5%	66%
2000	5,789	2,988	8,777	216	3.6%	2.4%	67%
2001	6,060	4,567	10,627	188	3.0%	1.7%	58%
2002	6,276	5,340	11,616	268	4.1%	2.3%	55%
2003	4,979	4,776	9,755	243	4.6%	2.4%	52%
2004	4,955	3,812	8,767	197	3.8%	2.2%	57%
2005	3,672	3,145	6,817	192	5.0%	2.7%	55%
2006	3,315	2,697	6,012	246	6.9%	3.9%	57%
2007	2,665	5,431	8,096	549	17.1%	6.3%	33%
2008	*2,162*	*2,712*	*4,874*	*295*	*12.0%*	*5.7%*	*44%*

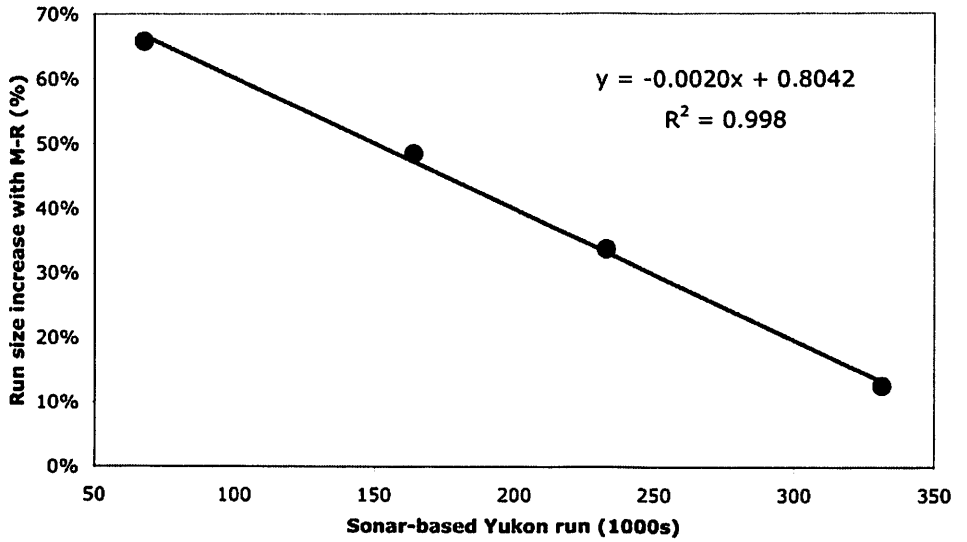


Fig. 1. The relationship between percentage increase in Yukon Chinook run size based on the mark-recapture approach (MR) versus the Pilot Station sonar approach (Y-axis) and run size based on sonar (X-axis). This relationship was used to estimate total run size of Yukon Chinook salmon based on the MR approach during years when only sonar-based values were available.

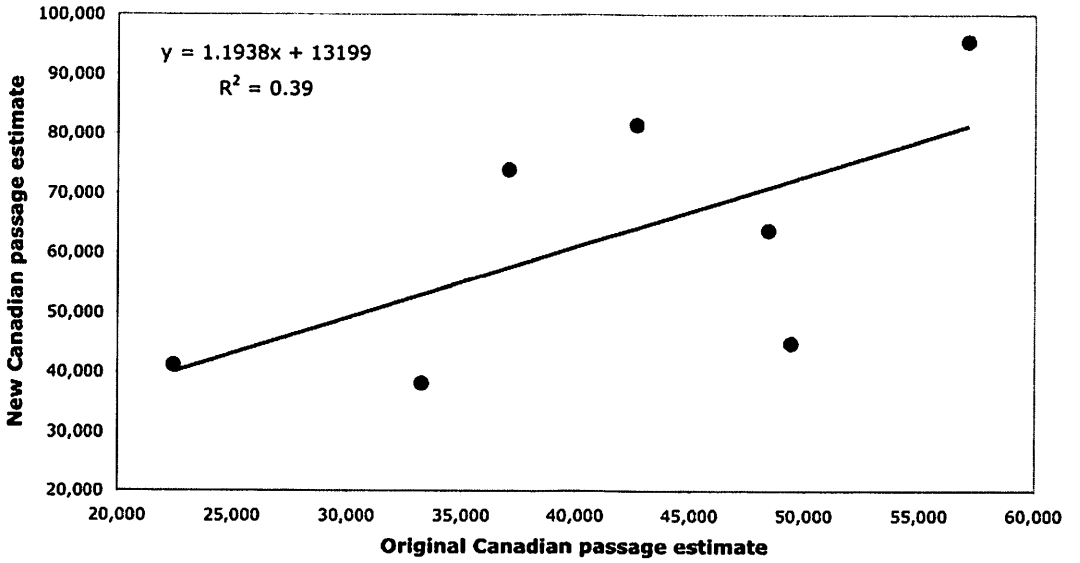


Fig. 2. Relationship between recent estimates of Chinook salmon passage into Canada based on Eagle sonar or radio telemetry tags (Hayes et al. 2006, ADFG 2008) and passage estimates based on the earlier mark-recapture methodology (JTC 2008). This regression was used to extend the Eagle sonar estimates back in time.

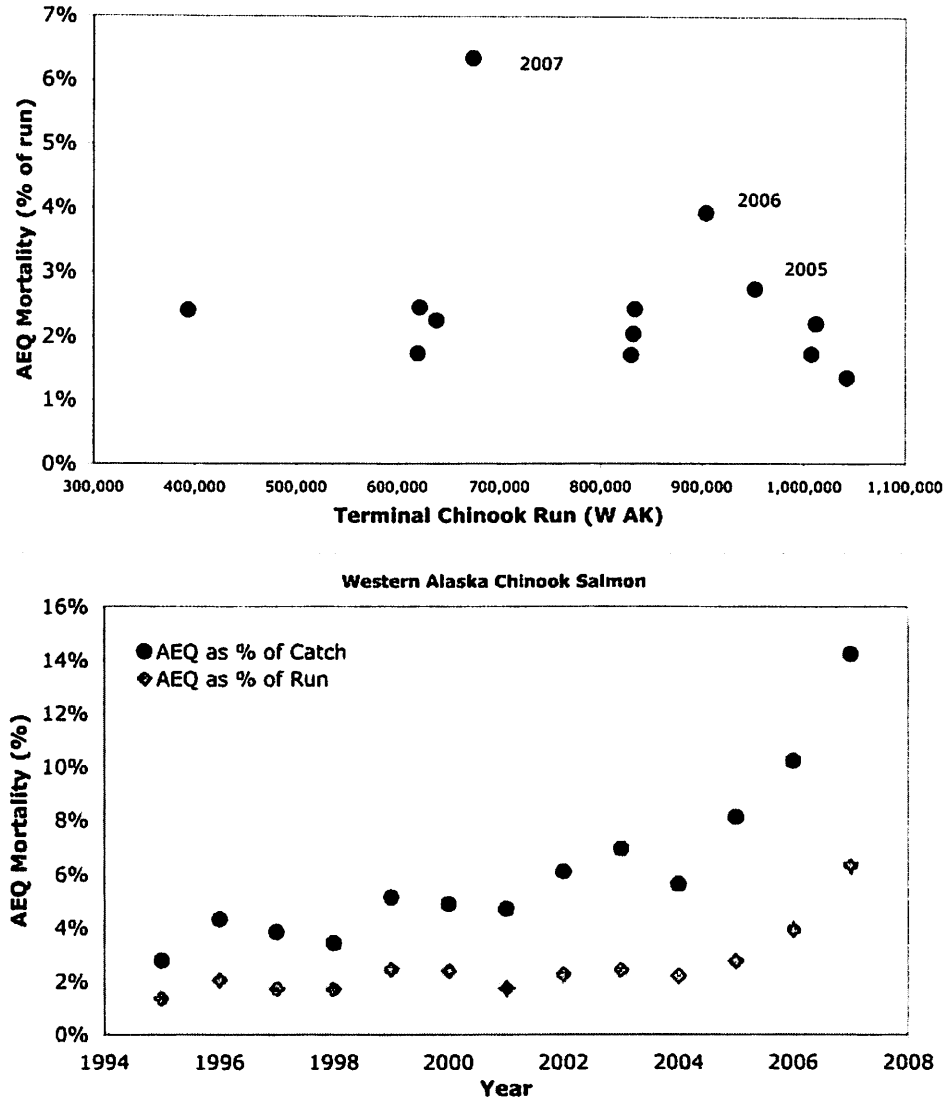


Fig. 3. Adult equivalent mortality of western Alaska Chinook salmon in the pollock fishery in relation to the abundance (catch and escapement) of Chinook salmon returning to western Alaska (upper graph) and in relation to year of return (lower graph). AEQ mortality values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.

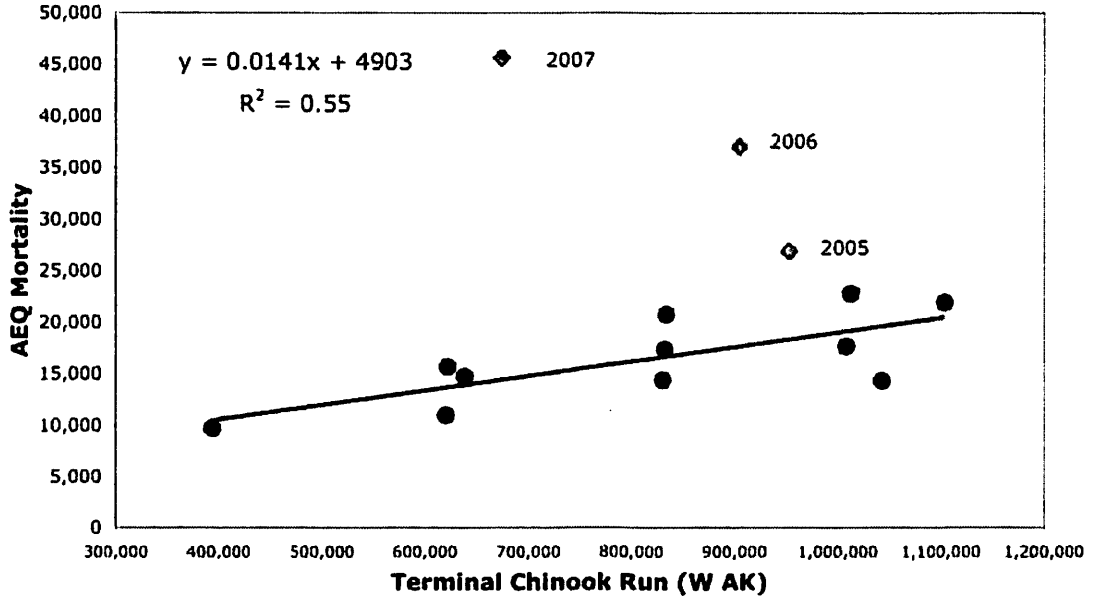


Fig. 4. Relationship between AEQ mortality of western Alaska Chinook salmon and the total abundance of Chinook salmon that would have returned to western Alaska. Linear regression is based on return years 1994-2004. Years 2005-2007 are shown as outlier years when compared with previous years.

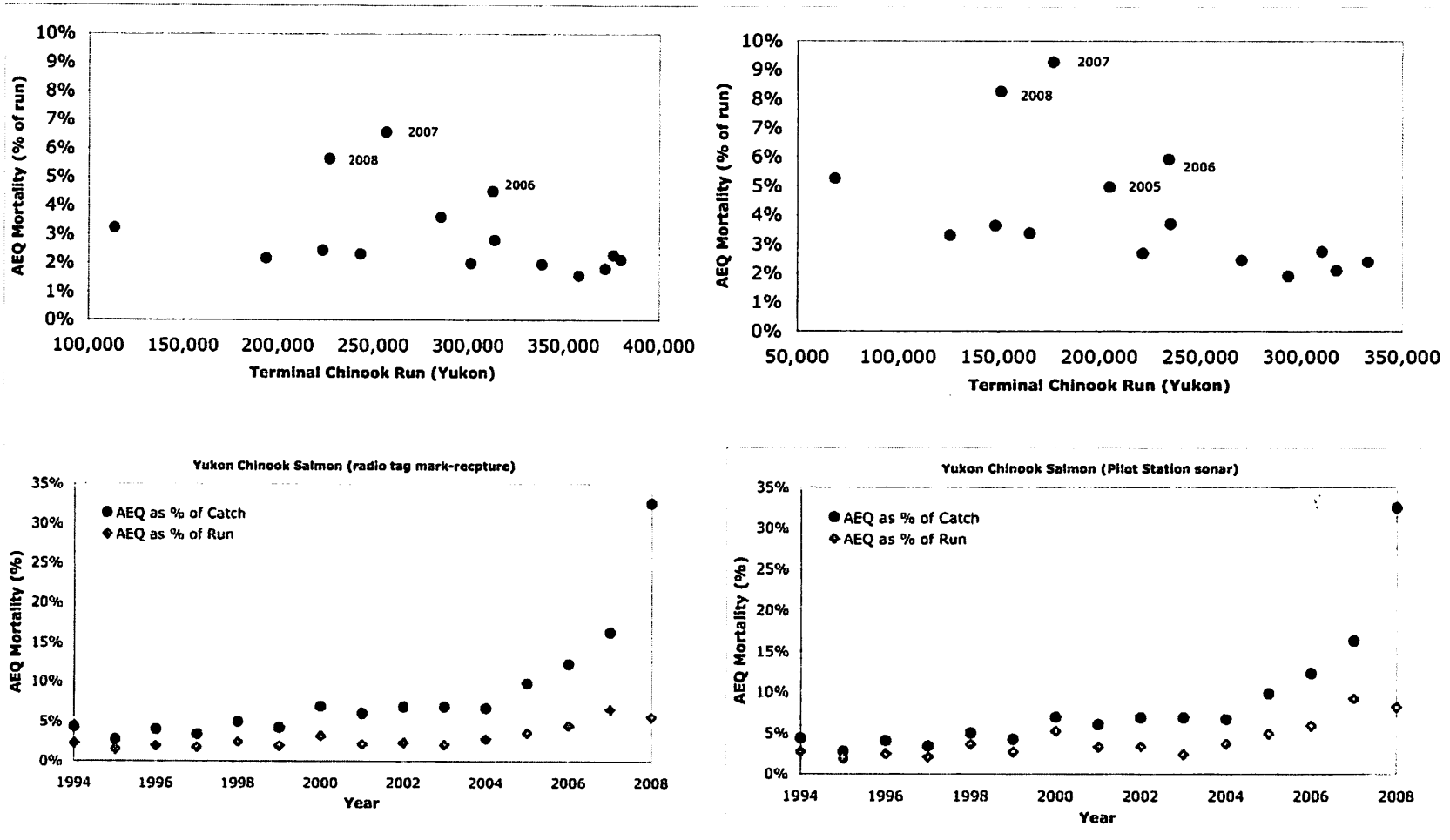


Fig. 5. Adult equivalent mortality of Yukon Chinook salmon in the pollock fishery in relation to the abundance (catch and escapement) of Chinook salmon returning to the Yukon River (upper graphs) and in relation to year of return (lower graphs). Graphs on the left are based on radio tag mark-recapture estimates of total abundance, whereas graphs on the right are based on Pilot Station sonar counts. AEQ values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.

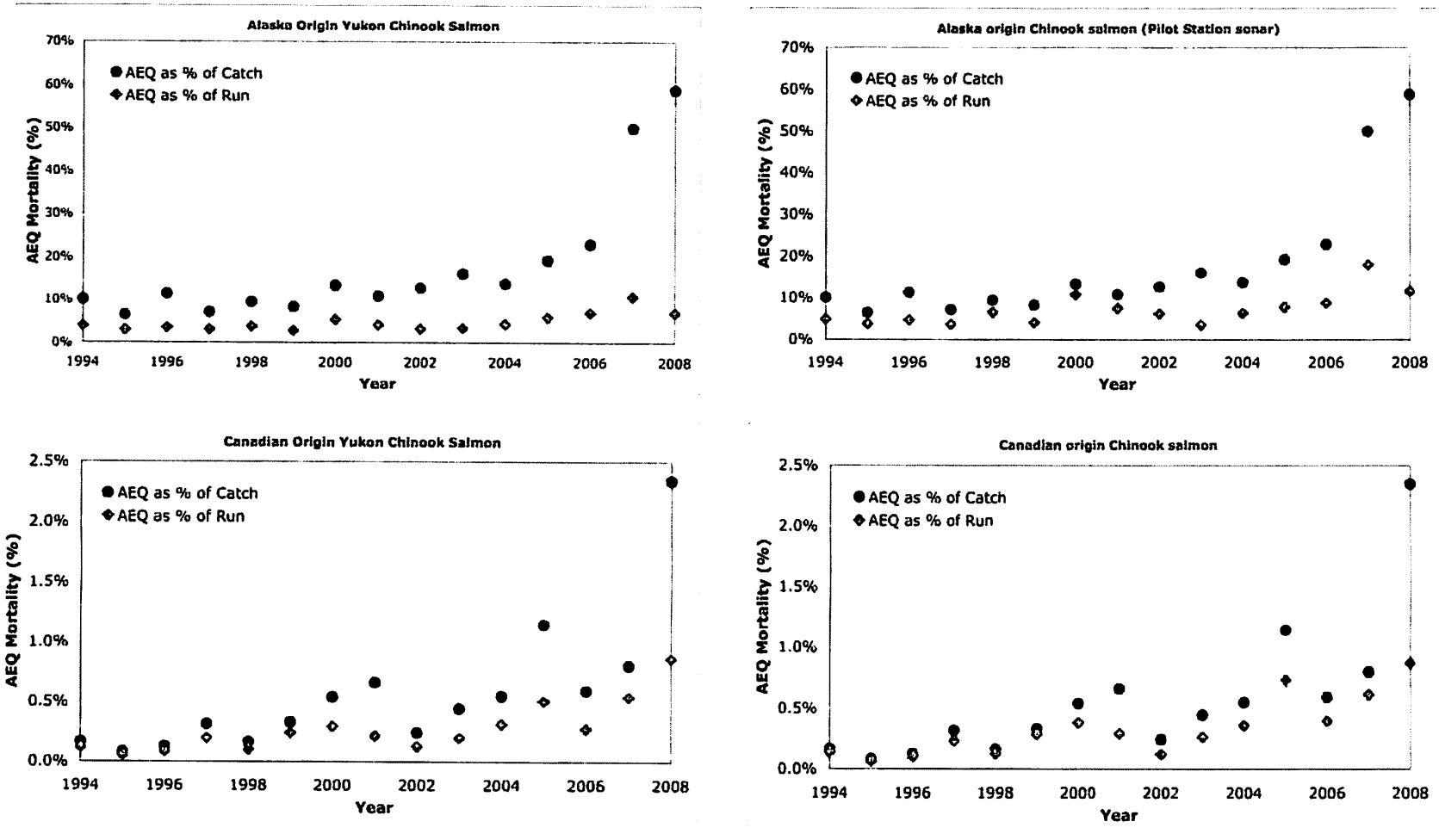
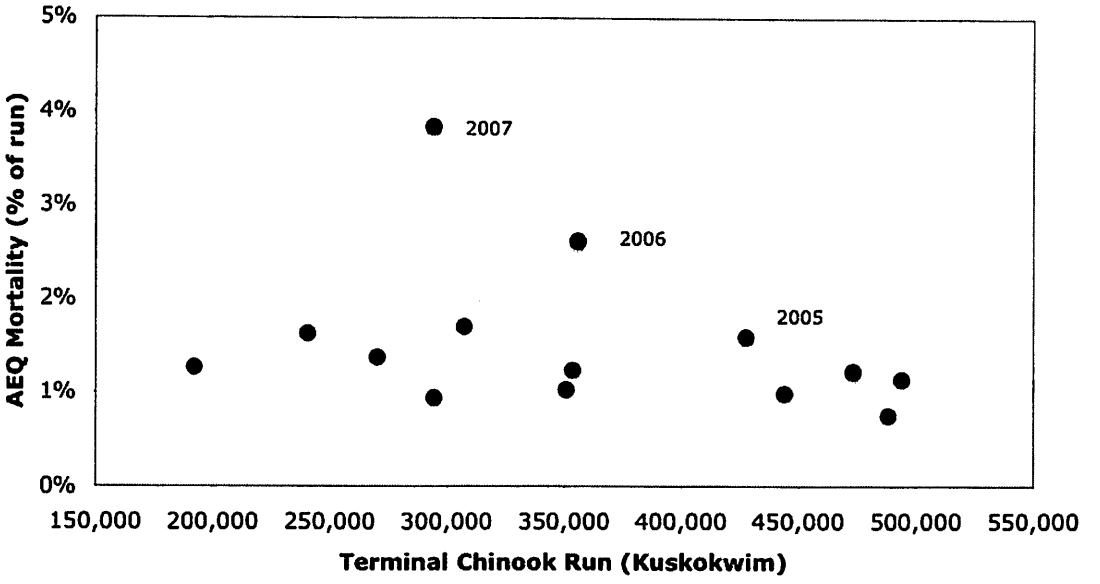


Fig. 6. Adult equivalent mortality of Yukon Chinook salmon originating from Alaska (upper graphs) and Canada streams (lower graphs). Graphs on the left are based on radio tag mark-recapture estimates of total abundance and revised estimates of passage into Canada, whereas graphs on the right are based on Pilot Station sonar counts and original estimates of passage into Canada. AEQ values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.



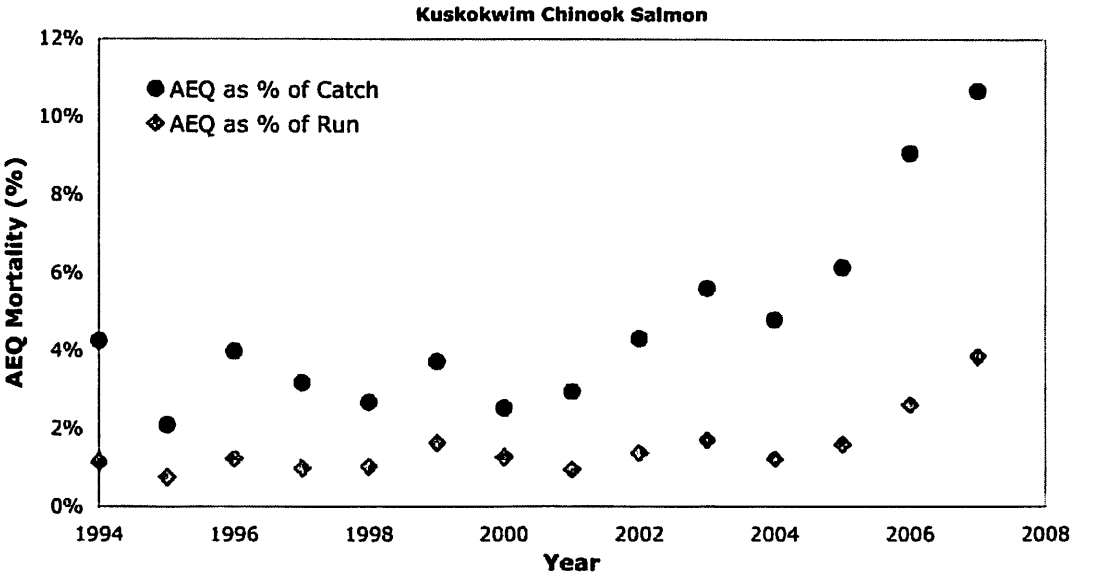


Fig. 7. Adult equivalent mortality of Kuskokwim area Chinook salmon in the pollock fishery in relation to the abundance (catch and escapement) of Chinook salmon returning to the Kuskokwim area (upper graph) and in relation to year of return (lower graph). AEQ values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.

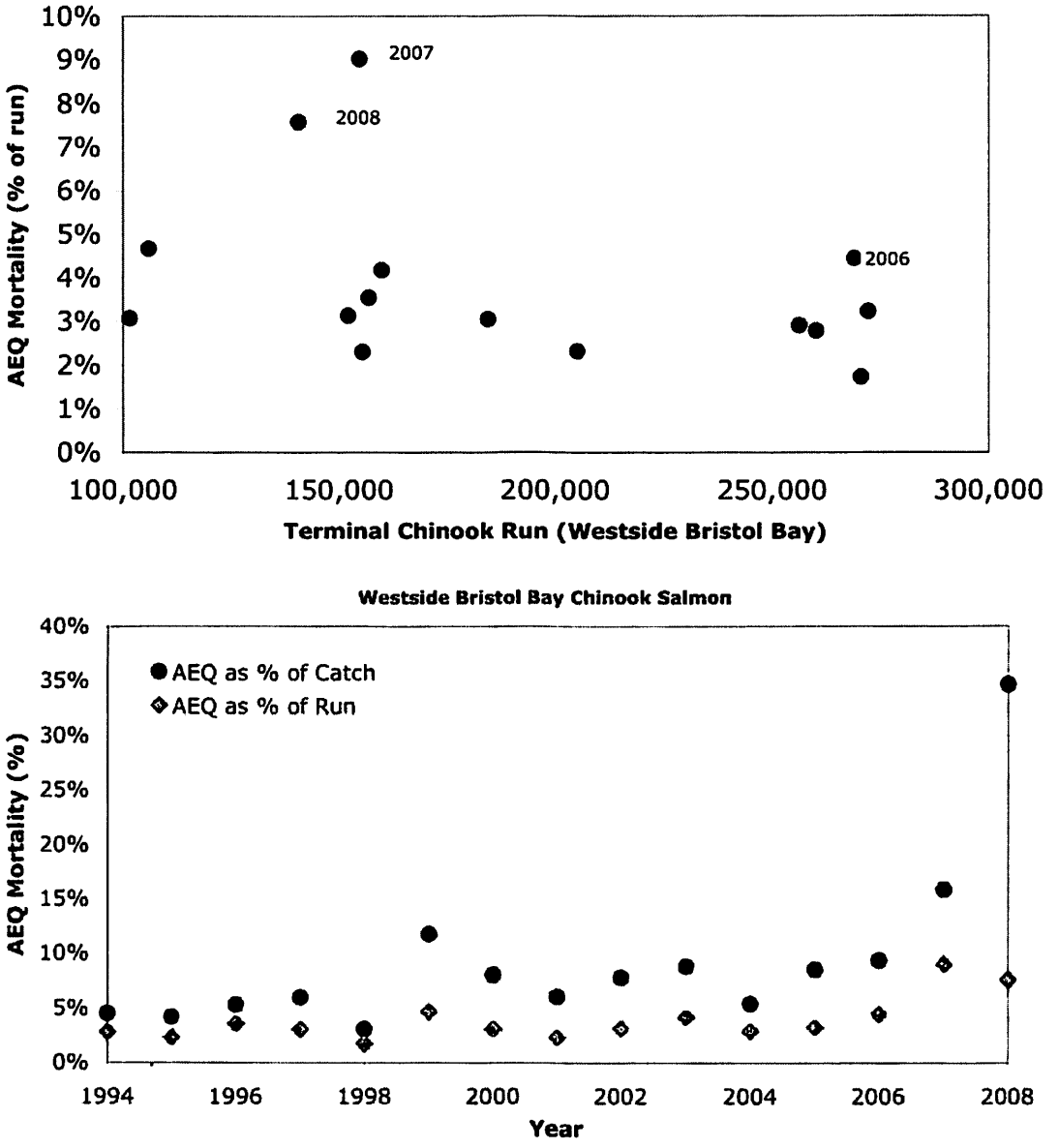


Fig. 8. Adult equivalent mortality of Bristol Bay Chinook salmon in the pollock fishery in relation to the abundance (catch and escapement) of Chinook salmon returning to Bristol Bay (upper graph) and in relation to year of return (lower graph). AEQ values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.

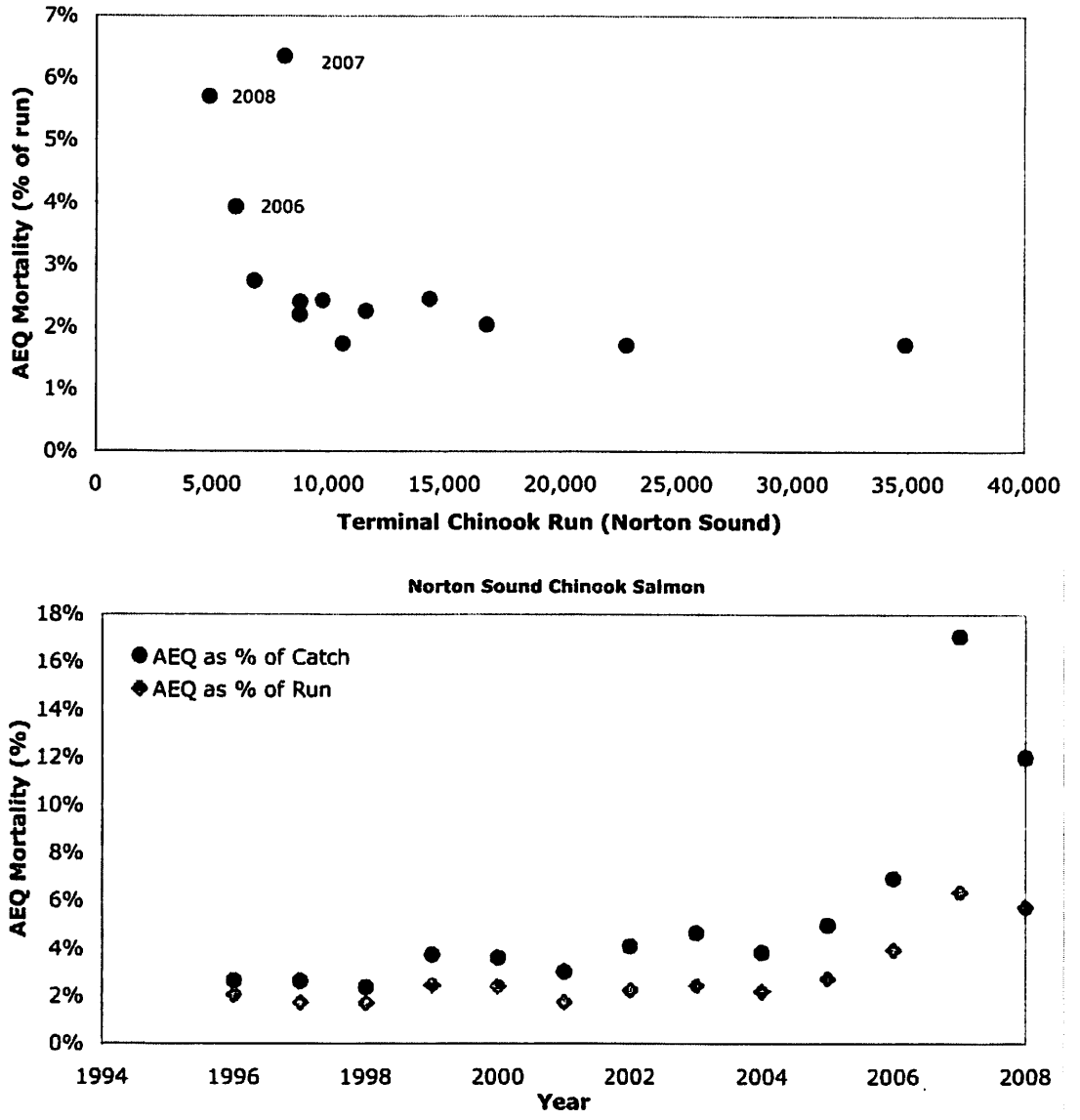


Fig. 9. Adult equivalent mortality of Norton Sound Chinook salmon in the pollock fishery in relation to the abundance (catch and escapement) of Chinook salmon returning to Norton Sound Bay (upper graph) and in relation to year of return (lower graph). AEQ values are the percentage of total catch or total run that would have returned to the rivers had they not been captured in the pollock fishery.

C40

From roland@briggsway.com
Sent Monday, February 23, 2009 12:31 pm
To salmonbycatcheis@noaa.gov
Cc stan.lee16@yahoo.com
Subject Salmon Bycatch EIS

From- Roland Briggs, Fishermen with Bristol Bay permits
I am commenting as a fisherman who has over 30 years of fishing experience in the Bristol Bay area both in drift and set net on various rivers.

My comments are to the following - Alternative 4 - the 'preferred one'.
My overwhelming concern is on the methods use to set the 'cap' limits for the Chinook by-catch fishery.
IF I understand your methodology correctly the 'cap's are set on "historical by-catch numbers". Since 2002 these numbers have increased dramatically and to use ANY data from 2002 to the present is to reward the abuse of the limits allowed.

There seems to be no scientific data to support the use of by-catch data to sustain a fishery versus the use of projected returns.

Successful fisheries have shown that the use of a projected run and THEN setting an allowable intercept for a catch is more sound.

By using a by-catch data, especially one that is based on a fishery that is already showing signs of a catastrophic collapse, is to reward behavior that has already gone to far.

I can see, by setting up caps on historic data, where it will sound good but is a way for us to never reach these caps and thus seeing in very short order a total wipe out of the western AK Chinook runs.

Given that Chinook are typically on a 4+ year return cycle it appears we are already seeing the returns from 2004 and before when the by-catch amounts were starting to rise dramatically, from 2003-2007 over 250%.

Alternative 4 SOUNDS good but the devil is in the details and this method seems to be unsound science. As was so well said by Stalin- "it doesn't matter who votes but who is doing the counting".

This entire way of calculating the allowable by catch sounds much less noble than a fox watching the hen house and goes directly against any policy of a sustainable Western Alaska economy.

The ground fishery quota are already set on a percent of biomass with much success. The salmon fisheries are successfully set on the percent of the strength of the run.

To changed this proven methodology to one based on historic catches are to doom the Western Alaska Chinook fisheries and with it many fishermen and communities.

The Chinook by catch limits should be based on the strength of the projected Chinook return to Western Alaska.
I have seen a direct decrease in Chinook return to the Ugashik and Cinder River systems over the past 5 years. This early fisheries is vital to local fisherman who depend on early money as there are on processor imposed limits during the main Sockeye run. These early Chinook salmon are shipped out fresh so the fisherman see a high per lb. return on their effort.

Roland Briggs
Ugashik Alaska