


MEMORANDUM

TO: Council, SSC and AP Members
FROM: Chris Oliver 
Executive Director
DATE: September 26, 2006
SUBJECT: Prohibited Species Bycatch

ESTIMATED TIME 2 HOURS

ACTION REQUIRED

- (a) Initial Review of VIP repeal analysis.
- (b) Update and direction on BSAI Salmon bycatch.

BACKGROUND

- (a) Initial Review of VIP repeal

An EA/RIR/IRFA has been prepared which assesses the potential environmental and social impacts of removing regulations designed to reduce the rate at which Pacific halibut and red king crab are incidentally caught in trawl fisheries in the GOA and BSAI management areas. The regulations promulgated for the Vessel Incentive Program (VIP) were designed to increase the amount of harvested groundfish total allowable catch in the BSAI and GOA groundfish trawl fisheries by reducing prohibited species catch rates. However, the program has not performed as intended by the Council because of costs associated with enforcement, and the relatively small number of vessels impacted by the regulation. The alternatives are considered in the analysis. These alternatives are:

- 1) Status quo. No regulatory action taken to change or abolish the VIP.
- 2) Notice of schedule. Reduce the frequency in which VIP rates are published to annual (option 1) or permanently established through a single rulemaking event (option 2).
- 3) VIP Program Elimination. Remove the regulatory authority for the VIP from the GOA and BSAI FMPs and Federal regulations (option 1) or leave the FMPs unchanged but remove the VIP from Federal regulations (option 2).

The executive summary of the analysis is attached as Item D-2(a) and the full analysis was mailed to you on September 19th. NMFS staff will be available to present the analysis. This analysis is scheduled for initial review at this meeting.

(b) Update on BSAI Salmon bycatch in 2006 and Amendment Package B

In October 2005, the Council took final action on Amendment 84, which would exempt vessels participating in a voluntary rolling hot spot (VRHS) system from regulatory salmon savings area closures. Regulations to promulgate this exemption are delayed due to concerns regarding the potential promulgation of regulations that include key operational components of the salmon bycatch reduction Inter-Cooperative Agreement (ICA). As a short-term measure to evaluate the operational flexibility needed to efficiently reduce salmon bycatch under these key components, an exempted fishing permit (EFP) was issued effective August 3, 2006. This permit is attached as Item D-2(b)(1).

In conjunction with action under Amendment 84, the Council revised the existing draft suite of alternatives for the next phase of the salmon bycatch analysis (currently referred to as Amendment 84B). This amendment package is intended to follow up on remaining measures that were not analyzed under Amendment 84. The current problem statement and draft suite of alternatives for this amendment package are attached as Item D(2)(b)(2). In April 2006, the Council indicated its intent to further discuss amendment package B-1 and provide direction for the analysis of the alternatives at this meeting. An SSC workshop was convened during the April 2006 Council meeting to review the current status of knowledge with respect to stock origin of AYK salmon species and bycatch in the North Pacific trawl fisheries. This workshop was also designed to provide guidance to the Council on the development of alternatives for bycatch reduction. A discussion paper on salmon bycatch is attached as Item D(1)(b)(3). This paper reviews the progress on implementation of Amendment 84, the EFP which exempts vessels in the 2006 B-season, the alternatives considered under Amendment 84B, resultant guidance from the SSC workshop and provides an update on the Chinook and chum salmon bycatch to date in 2006 season.

Executive Summary

The actions evaluated in this document

This analysis assesses the potential environmental and social impacts of removing regulations designed to reduce the rate at which Pacific halibut and red king crab are incidentally caught in trawl fisheries operating in the Gulf of Alaska (GOA) and Bering Sea/Aleutian Island (BSAI) management area (Figure 1). These regulations describe the Vessel Incentive Program (VIP) which is promulgated at 50 CFR 679.21(f).

The VIP was designed to increase the amount of harvested groundfish total allowable catch (TAC) in the BSAI and GOA groundfish trawl fisheries by reducing prohibited species catch (PSC) rates. However, the program has not performed as intended by the North Pacific Fishery Management Council (Council) because of costs associated with enforcement, and the relatively small number of vessels impacted by the regulation.

The Council is considering three alternatives, with two of these alternatives having two options. The three alternatives are: (1) no regulatory action to change or abolish the VIP; (2) reduce the frequency in which VIP bycatch rate standards are published; and (3) remove the regulatory authority for the VIP from GOA and BSAI FMPS, and/or Federal regulation. A detailed description of each alternative is as follows:

Alternative 1: No action

Under the no action alternative, there would be no regulatory action to change or abolish the VIP program. NMFS would publish VIP bycatch rate standards bi-annually through notice and comment rulemaking. Because bycatch rate standards have not been published in the Federal Register since 2003, the VIP has not been enforced in recent years, and no cases have been prosecuted since the late 1990s. Therefore, the No Action alternative would publish VIP bycatch rate standards biannually, and increase enforcement effort to effectively enforce the program.

Alternative 2: Notice of schedule

Under this alternative, the schedule for which VIP bycatch rate standards are published would be changed from a bi-annual process for establishing VIP bycatch rate standards to either an annual (Option 1) process or permanently established in regulation through a single rulemaking event (Option 2). Both options would provide sufficient resources to allow NOAA OLE and NOAA GC to pursue VIP violations.

Alternative 3: VIP Program Elimination Alternative

This alternative would eliminate the VIP from the GOA and BSAI FMPs and Federal regulation (Option 1), or removing the VIP from Federal regulations (Option 2), without changing the GOA or BSAI FMPs.

Purpose and Need

This action is being considered because in June 2003, the Council "initiated and amendment to repeal the VIP, given concerns about the effectiveness of the program and potential for additional administrative burden due to increased legal standards." In addition, the VIP has had enforcement problems for many years: relatively few violations have been prosecuted, and in two cases defendants prolonged their cases over many years through extensive appeals. Moreover, enforcement and prosecution measures provide a limited deterrent to violators and may have encouraged fishermen to pre-sort their catches before observers can examine them.

Environmental Assessment

The three potentially affected resource components are: groundfish, prohibited species, and social-economic impacts. The effects of the alternatives on the resource components would be caused by changes in the harvest of underutilized groundfish species in the GOA and BSAI, and lengthening of the fishing season. An increase in groundfish harvest may have social and economic impacts an increase in groundfish harvest increases total revenue.

No effects are expected on the physical environment, benthic community, non-specified and forage species, marine mammals, and sea bird components of the environment. No effect is presumed for these components because current fishing practices (e.g., season and gear types) harvest limits, or regulations protecting habitat and important breeding areas would not be changed by any of the alternatives. No effects are presumed for marine mammals because existing protection measures would not be changed, nor would allowable harvest amounts for important prey species. Moreover, the intensity of trawling would remain unchanged because current regulations define the seasons in which trawl fishing is allowed, methods that may be used, areas in which trawling is allowed, and restrict the maximum amount of trawling to TAC levels. None of the alternatives would change TAC amounts, methods, seasons, or areas closed to trawling.

An increase in groundfish harvest would be restricted by the annual TACs, ABCs, and OFLs as specified in the Harvest Specification DEIS, and current regulations describing the location, timing, and methods of harvest. These harvest measures are designed to provide for the sustainability of groundfish stocks. Moreover, the options considered in this analysis would not change the annual harvest specifications and would likely not result a large change in the amount of groundfish harvested. As a result, the alternatives and options presented in this analysis are reasonably expected to not jeopardize the capacity of groundfish stocks to maintain benchmark population levels. Thus, the alternatives and associated options considered in this analysis would have an insignificant effect on groundfish stocks in the GOA and BSAI.

Data limitations and exogenous factors (i.e., other PSC reduction measures and changes in industry behavior) prevent quantitative evaluation of the VIP's ability to reduce halibut PSC rates. The VIP impact on PSC rates is likely minimal and would not result in a large increase in target species TAC utilization. Thus, none of the alternatives would change harvest amounts or the time period in which harvest would occur as specified in the Harvest Specification DEIS. Alternatives 1 and 2, would allow an annual (Option 1) or inseason adjustment (Alternative 1 or Alternative 2, Option 2) to PSC rates. Rate standard adjustments may change the rate at which PSC is caught, but would likely not change the overall amount of PSC. Alternative 3 would eliminate the VIP; however, under Option 2, a future vessel incentive-like program would require a FMP amendment. Regardless, none of the options would change the PSC limit for Pacific halibut, or the seasons and methods currently promulgated. For this reason, none of the alternatives are expected decrease the total CEY of the Pacific halibut stock, or change the

time period in which halibut are caught. The impact of the alternatives on halibut PSC is expected to be insignificant.

None of the alternatives would change red king crab harvest amounts or the time period in which harvest would occur as specified in the Harvest Specification EA, or reduce the capacity of red king crab stocks to maintain benchmark population levels. Alternative 1 and 2, would allow an annual (Option 1) or in-season adjustment (Alternative 1 or Alternative 2, Option 2) to PSC rates. Rate standard adjustments may change the rate at which PSC is caught, but would not change the overall amount of PSC. Alternative 3 would eliminate the VIP; however, under Option 2, a future vessel incentive-like program would require a FMP amendment. Regardless, none of the options would change the PSC limit for red king crab, or the seasons and methods currently promulgated. Thus, all of the Alternatives are expected to have an insignificant impact on red king stocks in the BSAI.

The three proposed alternatives may have socioeconomic impacts on the commercial non-pelagic and pelagic trawl fisheries (Table 4.11). Alternatives 1 and 2 may affect the trawl fisheries in three ways: (1) provide an incentive for vessel operators to distort observer data through pre-sorting and placing pressure on observers; (2) if the VIP successfully reduced PSC rates, it may increase the TAC utilized in the GOA shallow-water and deep-water flatfish fishery, GOA rex sole fishery, GOA flathead sole fishery, and BSAI Pacific cod fishery and flatfish fisheries; and (3) increase enforcement effort for trawl vessels. The two options associated with Alternatives 2 and 3 are not expected to result in dramatically different socioeconomic impacts. CEQ regulations do not require a significance evaluation of social and economic impacts.

The cumulative effects of all VIP alternatives will be similar to those described in the Harvest Specification DEIS, under target species, prohibited species, and socioeconomic effects. Foreseeable future actions include further development of underutilized groundfish fisheries and efforts by the industry, Council, and NOAA Fisheries to reduce PSC. Efforts to reduce PSC may include incentive programs, industry supported initiatives (e.g., cooperatives), gear modifications (e.g., halibut excluders), and seasonal and spatial adjustments to fisheries. The biological impacts are limited by the current groundfish management and PSC management strategies currently in place.

Re-invigoration of the VIP under Alternatives 1 and 2 would require increased enforcement and administration of the program. The VIP was promulgated to increase the utilization of target species with PSC limiting the amount of TAC utilized. An increase in harvested TAC may increase revenue to vessel operators constrained by PSC. However, the level to which the VIP could successfully reduce PSC rates is largely unknown. It is likely these gains would be small given that enforcement of the VIP could only be focused on vessels larger than 125 feet. Thus, significance of potential impacts is limited and the cumulative effects of this action are not significant.

A re-invigorated TAC would require enforcement and administrative resources be used to implement the program. These agency resources would either come from new funding sources or would be redirected from current and future management functions. A reduction in these management functions may reduce the ability of management programs to perform as designed. However, given the small scope of the VIP compared with overall management responsibilities, and that it is unknown if new funds would be appropriated to support the program, the potential cumulative impact of Alternative 1 and 2 would likely not be significant.

Regulatory Impact Review

Alternative 1, the "no action" alternative requires full implementation of the VIP program. In this sense, the "no action" alternative is not a "status quo" alternative. Under the status quo, the fishery has not

been effectively enforced since 2003. The full implementation of the VIP program will require a renewed commitment of resources by the NMFS Alaska Region (including the Sustainable Fisheries Division, and the Observer Program), NOAA Fisheries Office of Law Enforcement, and NOAA General Council. Based on an estimate of the resources necessary to effectively enforce the program, this could cost these agencies more than \$550,000. In the absence of additional budget appropriations from Congress, these sums would have to be taken from other enforcement, NOAA GC, Sustainable Fisheries, and Observer Program activities. Defendants and the Court system would also incur additional expenses associated with court action.

The impacts of a renewed VIP will, in part, depend on the credibility of the enforcement and prosecution effort. If violators can expect to receive an appropriate and timely fine, they should have an incentive to modify their behavior. The potential benefit is more fishing time in their groundfish target fishery, larger catches, and increased revenue. However, because of the previously mentioned statistical limitations, these benefits may not necessarily be realized by vessels held responsible for VIP bycatch rate standards violations. Vessels without 100 percent observer coverage do not have a VIP related incentive to reduce PSC rates because of limited observer coverage. The lack of enforcement on smaller vessels does not discourage the rapid catch of PSC by vessels without 100 percent coverage. These smaller vessels may "race" to catch target groundfish species before the fishery PSC limit is attained by all fishery participants, resulting in early closure of the fishery. In 2005, approximately 60 percent of the vessels operating in the BSAI and 88 percent in the GOA had less than 100 percent observer coverage.

A quantitative estimate of the VIPs ability to reduce PSC rates is further complicated by data limitations and non-VIP PSC reduction measures occurring in the GOA and BSAI fisheries. Because of these issues, it is not possible to estimate if an increase in TAC utilization would be achieved through the VIP for groundfish fisheries constrained by PSC limits. These fisheries include the shallow-water and deep-water flatfish fisheries in the GOA, BSAI Pacific cod fishery, and the BSAI flatfish fisheries. If successfully enforced, the VIP may recover some of the value lost in target groundfish fisheries to PSC limits; however, as previously discussed, the proportion (if any) of the unharvested TAC that may be recovered is unknown.

An invigorated VIP program may decrease the quality of data collected by the Observer Program. If renewed enforcement of the VIP creates additional incentives for fishing operations to pre-sort catch and distort observer data, the usefulness of observer information would be reduced. The actual estimate of PSC rates may be further compromised by sources of error being introduced through misreporting. Moreover, to the extent that fishing operations were encouraged to presort catch, and to the extent that observers information is distorted, the activity could affect the reliability of other information provided by the observers. This information includes catch information for groundfish fisheries and enforcement information.

Alternative 2 is similar to Alternative 1, except that regulations would only be published once a year under one option, and would be incorporated into regulations for intermittent update as necessary under another option. NMFS Sustainable Fisheries Division would face reduced costs under this alternative, however, the other considerations listed for Alternative 1 would be relevant here.

Under Alternative 3, the VIP program would be eliminated, either in regulations and in the FMP, or just in regulations. In terms of their impact on the fisheries, either of these options corresponds to the status quo situation in 2006, with ineffective enforcement of the VMS program. The FMP authority for a program does not mandate the specific VIP program currently in place. Regulations could be amended to end it, while the FMP would continue to provide authority for reinstatement. If the FMP is not amended, it may be easier to eventually introduce another, perhaps more enforceable program. If the FMP is amended, it may marginally reduce the complexity of the FMPs.

Initial Regulatory Flexibility Analysis

In 2004, a total of 77 trawl catcher vessels and 3 trawl catcher/processor vessels caught or caught and processed less than \$4.0 million ex-vessel value or product value of groundfish and other species using trawl gear in the GOA (Terry Haitt personal communication). Between 2002 and 2004, the total number of trawl vessels generating \$4.0 million dollars or less in revenue has ranged from a low of 80 in 2004, to a high of 110 in 2002. Total revenue generated by these vessels was approximately \$910,000 in 2004, which was an increase from \$300,000 in 2003 and \$370,000 in 2002. Thus, the proposed alternatives may impact 80 to 110 small entities in the GOA. There has been a general decline in the number of vessels that qualify as a small entity in the GOA, so the most recent 2004 estimate of 80 vessels will be used for the analysis.

The BSAI management area has a larger number of trawl vessels considered small entities than the GOA. In 2004, 102 catcher vessels and 3 catcher/processor vessels caught or caught and processed less than \$4.0 million ex-vessel value or product value of groundfish and other species using trawl gear in the BSAI. Between 2002 and 2004, the total number of vessels categorized as small entities has ranged from a low of 105 in 2004 to a high of 117 in 2003. Between 2002 and 2003, the total revenue generated from these vessels has ranged from a high of \$1.76 million in 2004 to a low of 1.37 million in 2003. Thus, the proposed alternatives may apply to, on average, 113 trawl vessels that are considered small entities.

Alternatives 1 and 2 would involve a renewed commitment to the VIP program. If this is successful, it will lead to reduced bycatch rates and the harvest of larger proportions of TACs in certain trawl fisheries. As a practical matter, 100% observer coverage is required to make a case against a trawler operator for exceeding the VIP. These levels of observer coverage are only available on trawlers over 125 feet LOA. Enforcement efforts would be directed against this class of trawlers. Smaller trawlers would not be subject to enforcement efforts. Small entities as defined by the SBA could occur among both categories of trawlers.

This regulation does not impose new recordkeeping and reporting on the regulated small entities.


This analysis did not reveal any Federal rules that duplicate, overlap or conflict with the proposed action.

BERING SEA AND ALEUTIAN ISLANDS MANAGEMENT AREA (BSAI)
GROUNDFISH FISHERY
EXEMPTED FISHING PERMIT
AUTHORITY: 50 CFR 600.745(b) AND 50 CFR 679.6

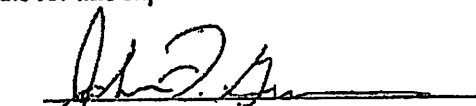
PERMIT #06-04

The Administrator, Alaska Region, National Marine Fisheries Service (NMFS), acting on behalf of the Secretary of Commerce, hereby permits vessel(s) acting under the direction of the permit holders, AFA Catcher Vessel Intercooperative and Pollock Conservation Cooperative, to conduct experimental fishing within closures of the Chinook and chum salmon savings areas to evaluate the effectiveness of a salmon bycatch reduction intercooperative agreement (ICA) as a mechanism for identifying areas of elevated salmon bycatch during the course of the Bering Sea pollock season and reducing pollock fishing activity within those areas to avoid salmon bycatch. Activities conducted under this permit may occur between August 3, 2006, and November 1, 2006.

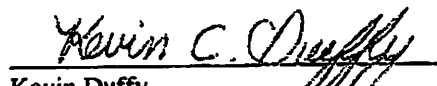
The United States exercises fishery management authority in the Bering Sea and Aleutian Islands Management Area under the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 *et seq.* (Magnuson-Stevens Act). The permit holders and the owners and operators of all authorized vessels must comply with the provisions of this Exempted Fishing Permit (EFP) and the provisions of the Magnuson-Stevens Act and 50 CFR parts 600 and 679, except as provided in the attached terms and conditions incorporated herein. This permit is valid from August 3, 2006, through November 1, 2006, when signed by the permit holders, the Regional Administrator, and an authorized representative for each participating vessel, unless terminated earlier by provisions of this EFP or by regulatory action pursuant to 50 CFR part 679, or revocations, suspension, or modification pursuant to 15 CFR part 904. Vessel owners or charterers that are members of pollock harvesting cooperatives that have executed the ICA will be considered to have agreed that their vessels will conduct their operations in accordance with the ICA and all provisions described in the application materials for this experiment.


Robert D. Mecum
Acting Administrator,
Alaska Region, NMFS

8/2/06
Date Signed


John Gruver,
AFA Catcher Vessel Intercooperative

Aug. 2, 2006
Date Signed


Kevin Duffy
Pollock Conservation Cooperative

August 2, 2006
Date Signed

BERING SEA AND ALEUTIAN ISLANDS MANAGEMENT AREA
GROUNDFISH FISHERY
EXEMPTED FISHING PERMIT #06-04
TERMS AND CONDITIONS

AUTHORITY: 50 CFR 600.745(b) AND 50 CFR 679.6

TESTING THE FEASIBILITY OF SALMON BYCATCH REDUCTION INTERCOOPERATIVE
AGREEMENT IN THE POLLOCK FISHERY

A. Permit Holders

AFA Catcher Vessel Intercooperative
4005 20th Ave. West
Suite 116
Seattle, Washington 98199
(206) 282-2599

Pollock Conservation Cooperative
4039 21st Ave. West
Suite 400
Seattle, Washington 9819
(206) 285-5139

B. Permitted Vessels

All American Fisheries Act (AFA) vessels operating under the salmon bycatch reduction intercooperative agreement (ICA) are authorized to participate in this Exempted Fishing Permit (EFP) experiment. A list of these vessels is included as Appendix A to this permit. The ICA is attached to this permit as Appendix B.

A copy of this EFP must be on board the permitted vessels during the course of the experimental fishery and as long as any groundfish retained under this permit are on board the vessels.

C. Timing of the Experiment

Experimental fishing under the terms of this permit is authorized for the periods between August 3, 2006, and November 1, 2006.

D. Reporting Requirements

The permit holders are required to provide the report described in Section K, below, to the North Pacific Fishery Management Council (Council), and to provide a summary report concerning activity conducted under the permit described in Section L, below. As part of the report described below in Section L, the permit holder is required to provide copies to Council and NMFS Alaska Region of all salmon hotspot closure notices described in the attached ICA (Appendix B).

E. Exempted Activities

Vessel operators operating under this EFP are exempt from regulations closing the Bering Sea Chinook and chum salmon savings areas to pollock fishing. Regulations governing these closures are found at 50 CFR 679.7(d)(9) and (10), 679.21(e)(7)(vii) and (viii), and 679.22(a)(10).

This EFP will be conducted within the Bering Sea directed and community development quota (CDQ) pollock fisheries described at 50 CFR 679 and in the environmental assessment/regulatory impact review/final regulatory flexibility analysis prepared for the 2006-2007 BSAI and GOA Harvest Specifications for 2006-2007. No additional fish or prohibited species catch are allocated under this EFP.

F. Area of the Experiment

Experimental fishing under the terms of this permit is authorized in the Bering Sea subarea, inclusive of the Chinook and chum salmon savings areas.

H. Vessel Selection

Vessels authorized to participate in this permit are listed in Appendix A.

I. Requirements for Participating Vessels

This permit does not exempt vessel owners, charterers or operators of vessels identified in Appendix A from complying with all applicable fishing regulations not specifically listed in paragraph E. above, including recordkeeping and reporting, catch monitoring or observer requirements. In addition:

1. Owners, charterers, and operators of the vessels identified in Appendix A must agree to cause their vessels to conduct fishing operations according to the salmon bycatch reduction ICA attached as Appendix B, and to all provisions described in the application materials for this experiment. Vessel owners or charterers that are members of pollock harvesting cooperatives that have executed the ICA will be considered to have agreed that their vessels will conduct their operations in accordance with the ICA and all provisions described in the application materials for this experiment.
2. The permit holders must notify NMFS and the vessel if there are any reports or indications that such vessel is not meeting the requirements for participation in the experiment. The permit holders also will commence an action to terminate participation in the experiment of any vessel that is violating the experimental protocols agreed upon in the fishing plan.

J. Administration of the Experiment

The permit holders will provide at least one project manager, which may be a permit holder. The project manager(s) will be responsible for ensuring unanticipated occurrences and problems are resolved in a manner that does not jeopardize the conduct or validity of the experiment. The project manager(s) also will be responsible for contacting NMFS and the permit holder if unanticipated problems arise that require adjustments in the conduct of the test so that such adjustments can be developed.

The permit holders, through the interaction of their project manager(s), are responsible for making sure each vessel in the experiment is operated in compliance with the ICA and the permit conditions, and that in the event that a determination is made pursuant to the ICA that a vessel is no longer qualified to operate under the exemption, the permit holders will notify the vessel owner or charterer and NMFS that the vessel is no longer a participant under the EFP, and the vessel will be removed from the attached list of approved vessels.

All parties operating under the EFP will coordinate their activities on a cooperative basis as described and required in the ICA (attached). The ten AFA pollock cooperatives are responsible for overseeing their member vessels' role in supplying Sea State, Inc. (Sea State) with bycatch information as well as access to their VMS data as described in the ICA for pollock harvested in the AFA pollock fishery as well as the CDQ pollock fishery. Additionally, each cooperative is responsible for distributing all Sea State reports to their member vessels in a timely manner.

K. Analysis of Results

The permit holder will conduct an analysis of the data. A draft report will be prepared for presentation at the December 2006 Council meeting that describes the following:

1. Number of salmon taken by species during the experiment.
2. Estimated number of salmon avoided as demonstrated by the movement of fishing effort away from salmon hot-spots.
3. A list of each vessel's number of appearances on the weekly dirty 20 lists for both salmon species.
4. Copies of the weekly (or semi-weekly) reports and fleet-wide notices made pursuant to the ICA issued by Sea State will be made available to the NPFMC and the NMFS Alaska Region offices.

The following report will be presented at the February 2007, Council meeting:

1. A compliance/enforcement report that will include the results of an external audit designed to evaluate the accuracy of the approach used by Sea State to monitor compliance with the agreement, and a report on the effectiveness of enforcement measures stipulated under the ICA in cases of non-compliance. Examination of a randomly selected subset of vessel/days representing 10% of the catch during the

experiment will be used as the basis of the audit.

L. Dissemination of Study Results

The permit holders will prepare a succinct final report explaining the results and basic statistical confidence in those results. The purpose of this report is to provide to the Council and public an assessment of the feasibility of operating under a salmon bycatch reduction ICA. This information may be used by the Council in evaluating future salmon bycatch measures.

This industry report will be disseminated free of charge to the public upon request and presented to the Council upon request of the Council.

M. Sanctions

Failure of the permit holders and/or the permitted vessel owners or operators to comply with the terms and conditions of this permit and all applicable provisions of 50 CFR parts 600 and 679, the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), or any other regulations promulgated thereunder, or any other applicable law, shall be grounds for revocation, suspension, or modification of this permit as well as civil or criminal penalties under the Magnuson-Stevens Act.

N. Waiver

The permit holders on their own behalf, and on behalf of all persons conducting activities authorized by the permit under his direction, waive any and all claims against the United States, and its agents and employees, for any liability whatsoever for personal injury, death, sickness or damage to property directly or indirectly due to activities under this permit.

JAnderson: 7/20/06, 7/21/06

SAuer:7/27/06

g:\fmgroup\efp\vhers efp\salmon ica 2006 revised 7-27.efp.doc

Problem Statement and Suite of Alternatives for Amendment Package 84B

Problem Statement:

The Council and NMFS have initiated action to exempt AFA qualified and CDQ vessels participating in the intercooperative voluntary rolling hotspot system (VRHS) from regulatory Bering Sea salmon bycatch savings areas. Analysis and refinement of the current salmon savings areas may be necessary in the event pollock vessels either surrender or lose their exemption and return to fishing under the regulatory salmon bycatch program.

Further, alternatives to the VRHS system and/or the regulatory salmon bycatch program should be developed to assess whether they would be more effective in reducing salmon bycatch. The following amendment packages are not intended to preclude the intercooperative annual review as required under Amendment 84.

Alternatives (amendment packages, B-1 and B-2)

Amendment Package B-1

Establish new regulatory salmon savings systems taking into account the most recent available salmon bycatch data. In developing alternatives include an analysis of the need and implementation strategy for appropriate caps as bycatch control measures. This package should be completed first and implemented when ready so that salmon savings regulations are based on the best available information.

Option: Adjust the Chinook and non-Chinook regulatory closure areas periodically based on the most current bycatch data available, such as the 2-3 year rolling average of bycatch rates by species and area.

Amendment Package B-2

Develop a regulatory individual vessel salmon bycatch accountability program.

Option A: managed at the individual level

Option B: managed at the co-op level

Option C: Either Option A or Option B for each AFA pollock sector.

Suboption 1: Implement the individual vessel salmon bycatch accountability program. i)

Immediately, if it was determined to be more effective in reducing salmon bycatch than the VRHS system.

ii) After 3 years if it is determined the VRHS system has failed to achieve the desired level of bycatch reduction.

Suboption 2: Analyze the need and implementation strategy for appropriate caps as bycatch control measures.

(note Suboptions 1 and 2 apply to Options A,B and C)

Bering Sea Aleutian Islands Salmon Bycatch:

October 2006 Staff Discussion Paper

In October 2005, the Council took final action on amendment 84, electing to exempt vessels participating in a voluntary rolling hot spot (VRHS) system from regulatory salmon savings area closures. In conjunction with this action, the Council revised the existing draft suite of alternatives for the next phase of the salmon bycatch analysis (currently referred to as amendment 84B). This amendment package is intended to follow up on remaining measures that were not analyzed under amendment 84. In April 2006, the SSC convened a workshop to better inform the Council regarding the current status of available information on salmon genetics, bycatch patterns and status of AYK salmon stocks in order to assist in the development of alternatives. At that time, the Council reiterated their intention to move forward with amendment package B-1 as a priority with the timeline for the analysis allowing for the inclusion of new information as it becomes available on the genetics of stock origin for incidentally caught salmon species.

This paper reviews the following: the progress on implementation of amendment 84, the EFP which exempts vessels from regulatory closures in the 2006 B-season, the alternatives under amendment 84B, resultant guidance from the SSC workshop and provides an update on the Chinook and chum salmon bycatch to date in 2006 season.

Implementation of Amendment 84/EFP in 2006

Regulations for amendment 84 to exempt vessels listed as participants in the ICA from savings area closures have not yet gone into effect. Legal concerns with the program were raised following the Council's final action in October.

The ICA is a private, contractual agreement negotiated amongst signatories to the ICA, and designed to provide a dynamic system to reduce salmon bycatch. The current ICA is in effect for three years. However, as envisioned by the Council and members of the industry, the ICA could be altered in subsequent years to address changes in fleet operations under the ICA that would continue to reduce incidental catch of salmon.

During the drafting of the proposed rule, NOAA GC raised several legal concerns. A number of the provisions of the ICA were included in the analysis contained in the EA/RIR/IRFA prepared for this action. None of the provisions thus analyzed were contained in the language of the proposed rule. As the analysis of these provisions of the ICA constitute the record upon which the Secretary must base any approval of the proposed rule, NOAA GC expressed concern that its language does not reflect that record. NOAA GC is also concerned that without substantive requirements of some kind contained in the proposed rule, the Secretary could not be reasonably assured that the program would result in reduced salmon bycatch and thus meet the requirements of National Standard 9.

With this in mind, NMFS and NOAA GC, together with Council staff and the Council chairman, met with representatives from industry and the western Alaska salmon user groups on June 22, 2006 to discuss these legal concerns. During this discussion, industry raised their concerns about reducing their operational flexibility, and the anticipated effects this would have on their ability to reduce salmon bycatch in the future. To better understand the implications of promulgating

regulations that required certain provisions in the ICA, the group explored the possibility of implementing 2006 salmon bycatch reduction measures under an exempted fishing permit (EFP).

An EFP was subsequently submitted to test the feasibility of operating under the exemption. Provisions under the EFP were the same as those envisioned for management under the amendment 84 rule with the exception of the extension of the exemption to the chum salmon savings area closure to vessels in the trawl cod and flatfish targets. Under the proposed rule to implement amendment 84, the chum salmon savings area closure was to be redefined to apply only to the Pollock trawl vessels.

The Chum Salmon Savings Area annual closure began on August 1, 2006 through noon on August 31, 2006. The trigger limit has not yet been exceeded in 2006 and the Chum SSA has not closed since re-opening on August 31. The EFP was approved August 3, 2006 and remains in effect until November 1, 2006. The exemption under the EFP applies only to the vessels participating in the VRHS system.

Under the EFP, the ICA will provide the Council with draft performance report at the December Council 2006 Council meeting. This report will contain the following:

1. Number of salmon taken by species during the experiment
2. Estimate number of salmon avoided as demonstrated by the movement of fishing effort away from salmon hot-spots.
3. List of each vessels number of appearances on the weekly dirty 20 lists for both salmon species
4. Copies of weekly (or semi-weekly) reports and fleet-wise notices made pursuant to the ICA issued by Sea State. These will be made available to the NPFMC and NMFS Alaska Region offices.

A follow-up report to the Council will occur in February 2007 which will contain a compliance/enforcement report including the results of an external audit designed to evaluate the accuracy of the approach used by Sea State to monitor compliance with the agreement and a report on the effectiveness of enforcement measures stipulated under the ICA in cases on non-compliance. The audit will be based upon an examination of a randomly selected subset of vessel/days representing 10% of the catch during the experiment.

A final report will be prepared by the permit holders following the experiment. This report will explain the results of the experiment and the basic statistical confidence in those results. The purpose of the report is to provide the Council an assessment of the feasibility of operating under the ICA. This report will be presented to the Council upon request.

At this point in time, the industry intends to submit an application for a subsequent EFP for the 2007 calendar year. This EFP would supplement information from the 2006 B-season and provide participants with an opportunity to operate in an experimental fishery in both the "A" and "B" season. To issue an EFP prior to the 2007 fishing season, the Council would need to review the application at the December meeting. NMFS would need to receive an EFP application with enough time to allow for time to process the application and receive input from the AFSC.

2006 Chinook salmon bycatch

Bycatch of Chinook salmon in the BSAI pollock trawl fishery was again elevated in the A season for 2006. Chinook bycatch in the pollock pelagic trawl fishery as reported by NMFS Catch Accounting as of March 18th, was 59,512. For comparison with similar timing in the previous year (March 26, 2005), 25,400 Chinook had been taken in the pollock pelagic trawl fishery. NMFS closed the Chinook Salmon Savings Areas at noon on February 15, 2006 (Attachment 1). These areas remained closed until noon on April 15th. Per regulations, the areas then reopened until noon on September 1st, 2006 and then closed through December 31st, 2006.

This is the first time since its implementation that the Chinook closure has been triggered during the A season. In previous years, the Chinook closure has triggered in the B-season in 2003, 2004 and 2005. The timing of triggering the limit (26,825 for the non-CDQ fleet) determines the timing of the closure:

1. If the limit is triggered before April 15, the areas close immediately through April 15. After April 15, the areas re-open, but are again closed from September 1-December 31.
2. If the limit is reached after April 15, but before September 1, the areas would close on September 1 through the end of the year.
3. If the limit is reached after September 1, the areas close immediately through the end of the year.

Figures 1 and 2 show the locations of the regulatory savings areas (Chinook and Chum). Preliminary data for 2006 initially show a steeper rate of Chinook catch in the first couple weeks of the season as compared with 2005 (Figure 3). After that time, the rate is similar to observations from 2005, however rather than leveling off around the 3rd week in February as with last year, the rate continued on the same trajectory into mid-March. Pollock catch over this time period appears relatively similar to previous years (Figure 3). Examination of average bycatch rates at weekly intervals shows that the average bycatch for the first week of 2006 fishing was higher than in years past (Figure 4). While the average rate dropped the following week, for the remainder of the A-Season after that, the 2006 average weekly rate was higher than the rate in all other years (with the exception of 1999 in two instances).

Proposed changes to the intercooperative agreement as discussed in the EA/RIR/IRFA for amendment 84 (NPFMC 2005) became effective in 2006 and were not dependant upon implementation of regulations to promulgate amendment 84. Some of these measures included the removal of the stand-down period for A-season Chinook hot spot closures, an in-season Base Rate adjustment, and continuation of hot spot closures following a triggered regulatory closure.

The season began on January 20th, 2006 and the first hot spot closure announcement was sent to the fleet on January 30th (effective January 31st). Chinook bycatch rates appeared elevated from 2005 within the first week of 2006 fishing (Karl Haflinger, pers. comm.) An in-season Base Rate adjustment occurred on February 14th and increased the Base Rate from the value upon which the fleet had been managed against until that point (John Gruver, Karl Haflinger, pers. comm.). As of February 15th, the non-CDQ fleet was prohibited from fishing within the Chinook Salmon Savings Areas. Intercooperative closures continued to be enacted outside of the savings area closure throughout the A-season (Karl Haflinger, pers. comm.).

The Chinook bycatch in the B season has continued to escalate. As of September 16, 2006, 66,272 Chinook salmon have been taken. For comparison with 2005, as of September 24, 2005 42,788 Chinook had been taken. The total number of Chinook taken in 2005 was 67,856. It appears highly likely that the final number taken in 2006 will be much higher than 2005. The

trend in Chinook catch in the B season has remained fairly level since late June with a slight increase and subsequent leveling off in late August (Figure 3). Catch rates for Pollock in September are slightly lower than previous years. The Chinook salmon savings area was re-closed on September 1, 2006 for the remainder of the year following the triggering of the closure (prior to April 15, 2006) during the A season. The exemption EFP took effect August 3rd for both the Chum and Chinook salmon savings areas so the fleet was able to fish within the closure in the B season after this time.

Under the revised ICA management agreement for 2006, Chinook closures in the B season are "core closures" meaning that they apply to the fleet as a whole. Several core closures were enacted throughout the B season. The Base Rate for Chinook is 0.05 throughout the season. There is no base rate adjustment for Chinook during the B season.

2006 Chum salmon bycatch

Bycatch of non-Chinook salmon in 2006 is lower thus far than the previous year. As of September 16, 2006, the total estimate of non-Chinook catch was 309,248. For comparison with 2005, 603,284 non-Chinook were taken by September 24, 2005. The total amount taken in 2005 was 703,131, the highest amount of non-Chinook bycatch in the fishery to date. Of this only 17,581 had been taken within the CVOA since August 14th. The accounting period for the trigger begins August 14th and only includes non-Chinook salmon from within the CVOA. Thus the Chum salmon savings area has not yet re-triggered in 2006.

The 2006 cumulative non-Chinook catch over the B season is shown in Figure 5. Non-Chinook salmon catch increased more rapidly than in years past, following a trend similar to levels in 2004. However, the trend in non-Chinook catch appears to have leveled off since early August. Non-Chinook catch in 2005 is still anomalously high in comparison to recent years; however 2004 had very high non-Chinook catch as well. Both 2005 and 2006 show higher numbers earlier into the B season than previous years. Examination of average bycatch rates at weekly intervals shows that the average bycatch for 2006 was high compared to other years examined in the beginning of the B season and not thereafter (Figure 6). Weekly average rates for 2004 and 2005 were much higher than all other years examined (Figure 6).

The exemption EFP took effect on August 3rd, 2006. Weekly closures were enacted throughout the B-season for chum bycatch management under the ICA. The Base Rate was 0.19 at the beginning of the season and was first modified on July 20th based upon an average of the previous three weeks. Thereafter the base rate was modified weekly, using a three week running average.

Anecdotal reports from the fleet indicate that fishing opportunities both inside and outside of the savings areas were difficult in 2006, with either long tows being required west of the savings areas with high bycatch or short tows with low bycatch to the northwest (J. Gruver, pers. comm.). Pollock fishing rates inside of the savings area in the B season were not as good as in previous years.

Amendment Package 84B

Alternatives that are currently contained in the "Amendment 84B" measures were bifurcated from the Council's suite of alternatives for Amendment 84 in February 2005, in order to facilitate an expedited analysis of amendment 84. The Council then chose to split the remaining measures into different amendment packages (B-1 and B-2) and identified package B-1 as a higher priority for analysis. The problem statement is intended to be applicable to both amendment packages.

Problem Statement

The Council adopted the following revised problem statement for the analysis:

The Council and NMFS have initiated action to exempt AFA qualified and CDQ vessels participating in the intercooperative voluntary rolling hotspot system (VRHS) from regulatory Bering Sea salmon bycatch savings areas. Analysis and refinement of the current salmon savings areas may be necessary in the event pollock vessels either surrender or lose their exemption and return to fishing under the regulatory salmon bycatch program.

Further, alternatives to the VRHS system and/or the regulatory salmon bycatch program should be developed to assess whether they would be more effective in reducing salmon bycatch. The following amendment packages are not intended to preclude the intercooperative annual review as required under Amendment 84.

The problem statement is two-fold in its purpose. The first aspect to it is the need for refinement of the current salmon savings areas under the exemption (i.e., amendment 84 regulations) system. Under the exemption, there is the possibility that vessels either surrender their exemption and choose to fish outside of the VRHS system¹, or they lose their exemption by violating the terms of the agreement. In either case, these vessels are then subject to salmon savings area closures. At present they would be subject to the existing system of closures which analysis in amendment 84 suggested might be exacerbating salmon bycatch in some years (NPFMC 2005). If new closure areas were adopted while the exemption is underway and the exemption system failed (either for some or all vessels) it would be the new closures to which vessels would need to adhere. The intention is for new closure systems to be more responsive to current bycatch information than the previous regulatory closures are at present. Developing new closures is an alternative under amendment package B-1.

The second aspect of the problem statement addresses the need to evaluate the efficacy of the VRHS system. In order to evaluate the adequacy of this program adopted by the Council, the Council noted that it would evaluate operation of this system against alternative measures for bycatch reduction. These alternative measures would be new closures (with or without the exemption in place), and individual vessel bycatch accountability programs. New closures are part of amendment package B-1 while vessel bycatch accountability programs are under package B-2. Thus two opportunities would exist for the Council to evaluate the efficacy of the exemption program adopted under amendment 84: review of the analysis for package B-1, and review of the analysis for package B-2.

Alternatives

The following alternatives were refined by the Council in December 2005. These alternatives were bifurcated given that it may be more feasible (timing-wise) to analyze them as different amendment packages.

Amendment Package B-1

Establish new regulatory salmon savings systems taking into account the most recent available salmon bycatch data. In developing alternatives include an analysis of the need and

¹ The exemption is not dependant on participation by a specified number of entities in the fleet. Some cooperatives may elect to fish without an exemption and be subject to closures if triggered. Others may choose to operate within the VRHS system and retain an exemption to the regulatory closures.

implementation strategy for appropriate caps as bycatch control measures. This package should be completed first and implemented when ready so that salmon savings regulations are based on the best available information.

Option: Adjust the Chinook and non-Chinook regulatory closure areas periodically based on the most current bycatch data available, such as the 2-3 year rolling average of bycatch rates by species and area.

Amendment Package B-2

Develop a regulatory individual vessel salmon bycatch accountability program.

Option A: managed at the individual level

Option B: managed at the co-op level

Option C: Either Option A or Option B for each AFA pollock sector.

Suboption 1: Implement the individual vessel salmon bycatch accountability program.

i) Immediately, if it was determined to be more effective in reducing salmon bycatch than the VRHS system.

ii) After 3 years if it is determined the VRHS system has failed to achieve the desired level of bycatch reduction.

Suboption 2: Analyze the need and implementation strategy for appropriate caps as bycatch control measures.

(note Suboptions 1 and 2 apply to Options A, B and C)

Discussion of amendment package B-1

Amendment package B-1 would establish new regulatory salmon savings area closures based on current salmon bycatch data. Analysis of this alternative would require similar analyses to that which comprised the original amendments (21b, 35 and 58) establishing the regulatory closure areas. The analysis involved in proposing specific closure areas as well as analyzing the environmental and economic effects of moving the fleet away from these new specified closures is extensive.

The language in this alternative was specifically worded as "salmon savings systems" rather than closure areas to allow for innovative ideas in constructing new closures. There would likely be a series of alternative measures put forward to the Council which may include fixed triggered closures, biomass-based (i.e., floating) triggered closures, rotational closures or other means of constructing scientifically-appropriate salmon savings systems using the best information available. Advice from the SSC would be sought in crafting these alternatives and draft measures would be brought forward for Council review throughout the analytical process to determine the appropriate measures for inclusion in the alternatives.

The Council, in December 2005, modified the option under amendment package B-1 such that the regulatory salmon savings areas may be adjusted periodically based upon Council review. What this option provides is the flexibility to adjust the closure boundaries as analyzed and adopted under B-1 based upon information presented to the Council on both the effectiveness of those closures as well as the relative rates of bycatch of salmon species over time. Under the exemption agreement for amendment 84, the Council will receive an annual report from the Inter-Cooperative Agreement participants on the effectiveness of bycatch reduction under the VRHS system. In conjunction with this, the Council may request staff to produce an annual report on salmon bycatch trends. If the Council decides upon review of these reports that it would be

prudent to adjust the closure configuration, the Council could then decide to pursue the regulatory amendment to do so.

Amendment package B-1 would also evaluate the need and implementation strategy of an appropriate bycatch cap on chum and Chinook salmon species in BSAI trawl fisheries. Appropriate caps could be included as a trigger mechanism for a closure system, or as an alternative measure to an area closure. In April, 2005, the SSC noted that a great deal of analysis would be required to support implementation of a voluntary rolling hot spot closure system (VRHS) such as is under consideration in amendment 84. The SSC suggested that in the following amendment, analysis of additional protection measures such as a bycatch cap would be appropriate. In their minutes from the June 2005 meeting, the SSC recommended "*an expanded examination of an appropriate limit on salmon bycatch that considers such factors as region of origin and, at least for salmon of Alaskan origin, total run sizes and the allocated quantities of salmon to subsistence, commercial and sport users as well as escapement goals*" (SSC minutes, June 2005).

The SSC convened a workshop on BSAI salmon bycatch at the April 2006 meeting. Minutes from the workshop are included as attachment 2. The workshop included presentations on bycatch in the Pollock fishery, BASIS survey research, genetic identification of bycatch in BSAI trawl fisheries, stock status overview of AYK salmon species and information on incentives for salmon bycatch avoidance. The presentations were followed by moderated discussion to aid in the development of bycatch management alternatives. Some objectives of the workshop discussion were to evaluate the ability to craft biomass-based caps for salmon species; to discuss innovative ideas for salmon savings systems which are responsive to changing conditions; and to delineate appropriate milestones and standards for effective bycatch reduction.

Biomass-based caps:

Progress is being made by ADF&G in improved enumeration of salmon and by various scientists in the identification of incidentally caught salmon to stock of origin. Both of these are necessary in order to craft a meaningful abundance index which relates the regional run size of salmon species to their stock of origin when encountered as bycatch in the pollock fishery. A meaningful biomass-based salmon cap would need to incorporate a relationship correlating the stock size of a particular run and the encounter rate as bycatch in the trawl fishery. Once this relationship can be established, the cap can float as a proportion of abundance and more accurately reflect changing conditions for salmon abundance. Information that should be incorporated into a cap system would be:

- Indication of run size by stock
- Stock of origin information for bycaught salmon including trends in origin by region (shelf, slope), season and age

On-going projects are very encouraging in ascertaining these aspects. More precise information on stock size and stock of origin will be available in the future. Many current estimates of stock origin are from trawl bycatch samples from the late 1990s and recent preliminary studies indicate that bycatch patterns and stock of origin results vary by season as well as annually (and by region and age of fish). An estimate could be made based on the best available science presently, if adequate adjustments could be made as the science improves. Additional on-going projects such as surveys from the BASIS program may eventually allow for some projections to be made of future returns to Alaskan rivers.

Another option for crafting bycatch caps in the absence of precise information would be to establish some form of interim-precautionary cap. The SSC noted in their April minutes that

“setting an arbitrary cap was not a scientific issue but something that the Council would need to negotiate among the interested parties”.

If the Council wishes to move forward at this time with new bycatch limits (e.g. trigger limits for new closures), decisions must be made upon what to base the trigger number. Should biomass-based caps be crafted based upon current estimates of stock size and stock of origin with some adjustment included to allow for improved information as it becomes available? The Council in April stated its intent to consider in development of the analytical timeline allowance for the “inclusion of new information as it becomes available on the genetics of stock origin for incidentally caught salmon species”. As the timeline for inclusion of this information is as yet unknown, flexibility should be built into any new measures so that new information can be included as it becomes available. Another option is to craft an interim cap which is negotiated amongst interested parties understanding that this would not be biomass-based but could conceivably be replaced with a biomass-based cap when sufficient information exists?

Innovative ideas for salmon savings systems

New area closures are to be crafted under amendment package B-1. Previous analyses of closures for chum and Chinook salmon savings areas evaluated several different options (e.g. for amendment 35, 9 closure options were included in the analysis). Presumably any new analysis for Council review would consider multiple closure options using a range of years for bycatch analysis. The previous closures were conceptualized based upon an average of bycatch in this region over a period of three years (1990-1993 for amendment 35; 1994-1997 for amendment 58). Some form of weighting scheme could also be examined in the analysis. This might involve a comparison of closures indicated by the average of bycatch over a time period with closures indicated by use of similar data and the use of a weighting scheme developed and applied to recent years or possibly years of known anomalously high abundance or some other scheme as developed during the analysis. An option under the B-1 alternative suggests periodic adjustment to any new closure areas based upon rolling 2-3 year averages in bycatch. Periodic adjustment of closure areas would make sense if there is some indication that there are coherent shifts in salmon bycatch patterns.

Additional measures suggested by the SSC workshop included an examination of whether shifting the A and B season fishing apportionments might reduce salmon bycatch. Further examination should also be given to examining vessels with a history of low bycatch rates. This examination should include factors such as gear configuration, use of excluder devices, deployment procedures or other fishing practices which could lead to their low bycatch rates.

Milestones and standards for effective bycatch reduction

The SSC workshop was not able to devote time to discussing the milestones and standards for effective bycatch reduction. A standard for measuring bycatch reduction will be important for both evaluation of the VRHS program in place under amendment 84 as well as future bycatch reduction measures put forward by the Council.

The Council has previously discussed that the overall analysis of the effectiveness of the VRHS program will occur when the analysis of these amendment package alternatives is available for comparative purposes. The Council may wish to consider at this time the means by which this effectiveness will be evaluated. The milestones for and standards against which effective bycatch reduction will be measured should be clearly outlined.

As a starting point, an analysis could be employed which annually evaluates the potential population impact of the bycatch in BSAI trawl fisheries by estimating the relative impact on adult equivalents that would have returned to their natal river drainages. This methodology would be similar to that employed by Witherell et al. 2002. As estimates of salmon stock origin and run size strength improve, these measures of population-level impact will be improved. An index threshold could possibly be developed above which additional management measures could be proposed to further reduce bycatch.

Decisions for the Council at this meeting

If the Council decides to move forward with a timeline for analysis of amendment package B-1 at this meeting, the Council may wish to discuss the following to provide staff direction for this analysis:

Biomass-based caps:

- Move forward with crafting biomass-based caps at this point, understanding that information is imperfect and evolving? Or craft some form of negotiated/arbitrary cap? Or both?

Salmon Saving Systems:

- Begin to evaluate draft closure areas using updated bycatch information from recent years? Specify years for analysis? Development of a weighting scheme to analyze in conjunction with average years?
- Evaluation of alternative bycatch reduction measures such as shifts in A and B season apportionments? Evaluation of vessels with low bycatch rates?

Milestones and standards for effective bycatch reduction:

- Population impact analysis of salmon adult equivalency? Other means for measuring effectiveness of bycatch reduction?

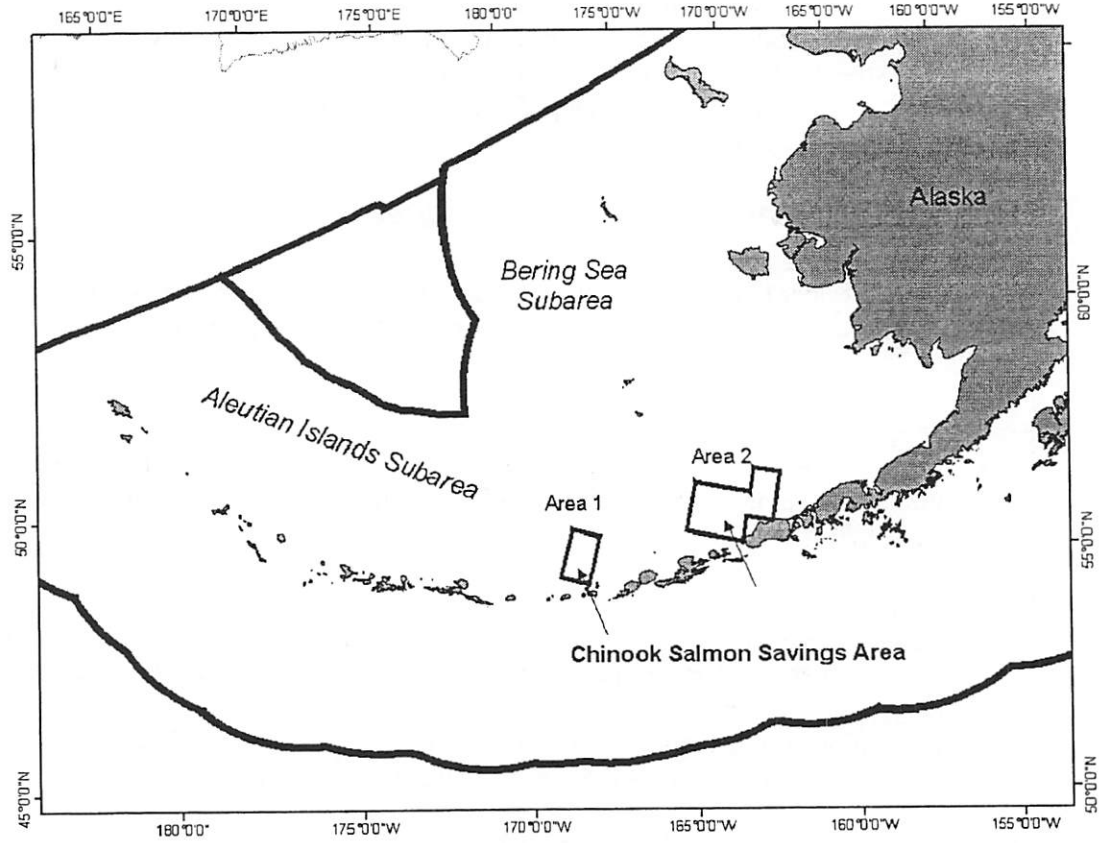


Figure 1 Chinook Salmon Savings Areas

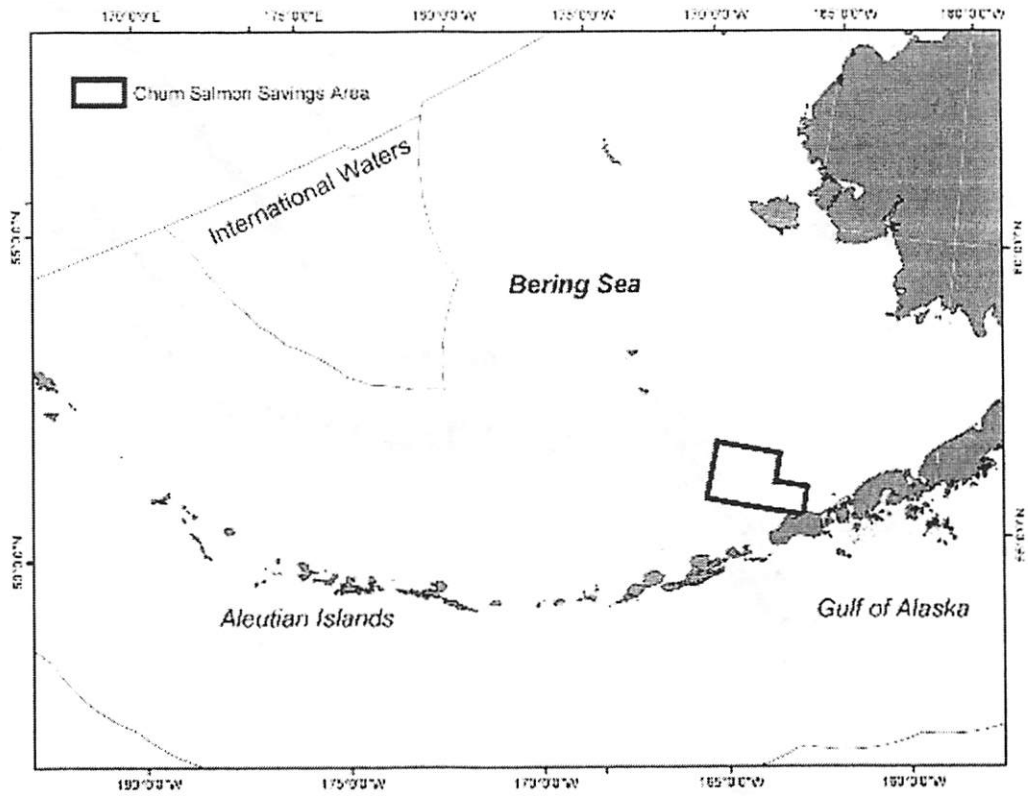


Figure 2 Chum Salmon Savings Area

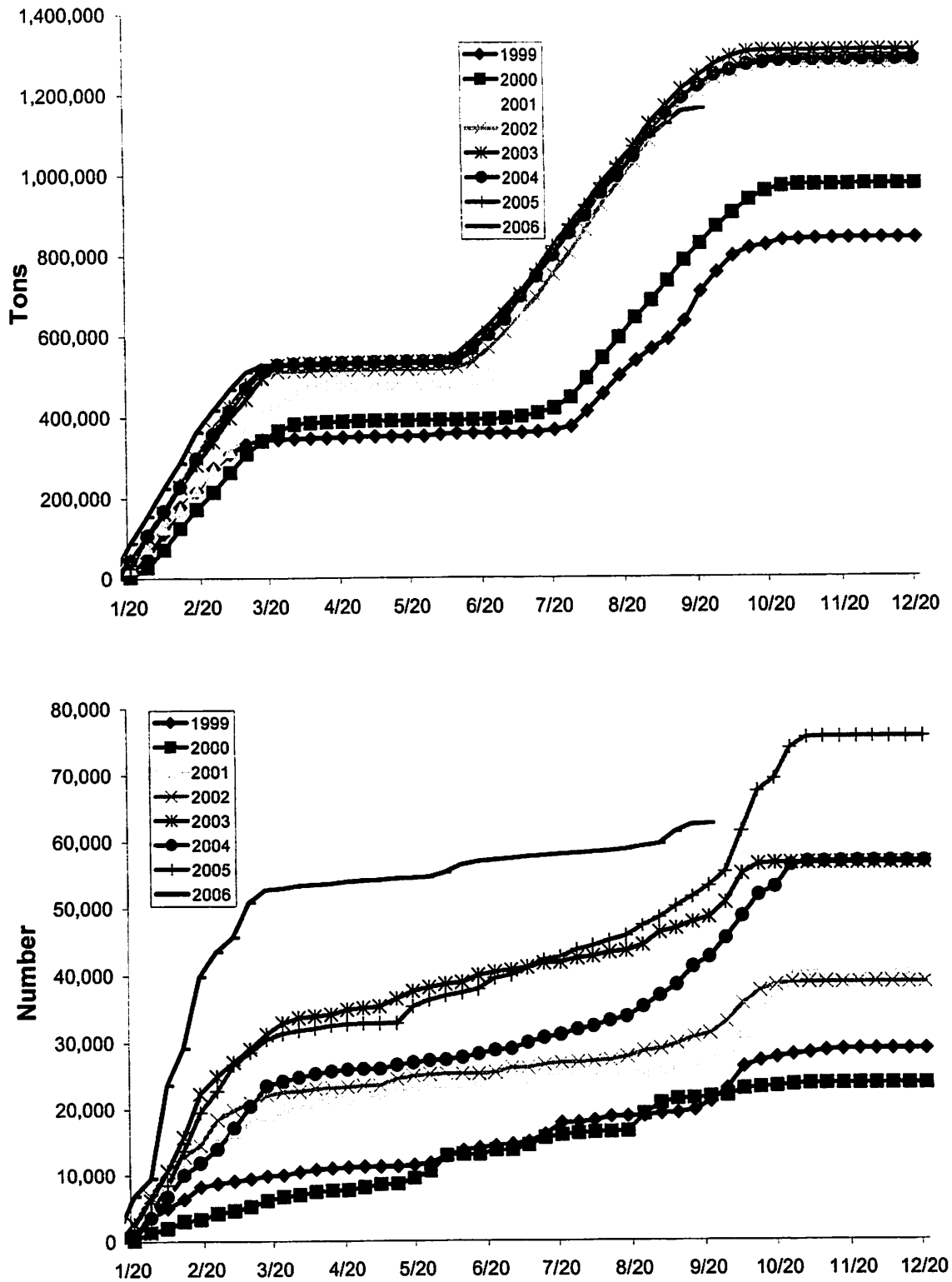


Figure 3. Cumulative pollock catch (tons; top panel) and cumulative chinook salmon catch based on observed vessels only (2000-2006, weekly intervals). Data for 2006 are preliminary and extend to September 25, 2006.

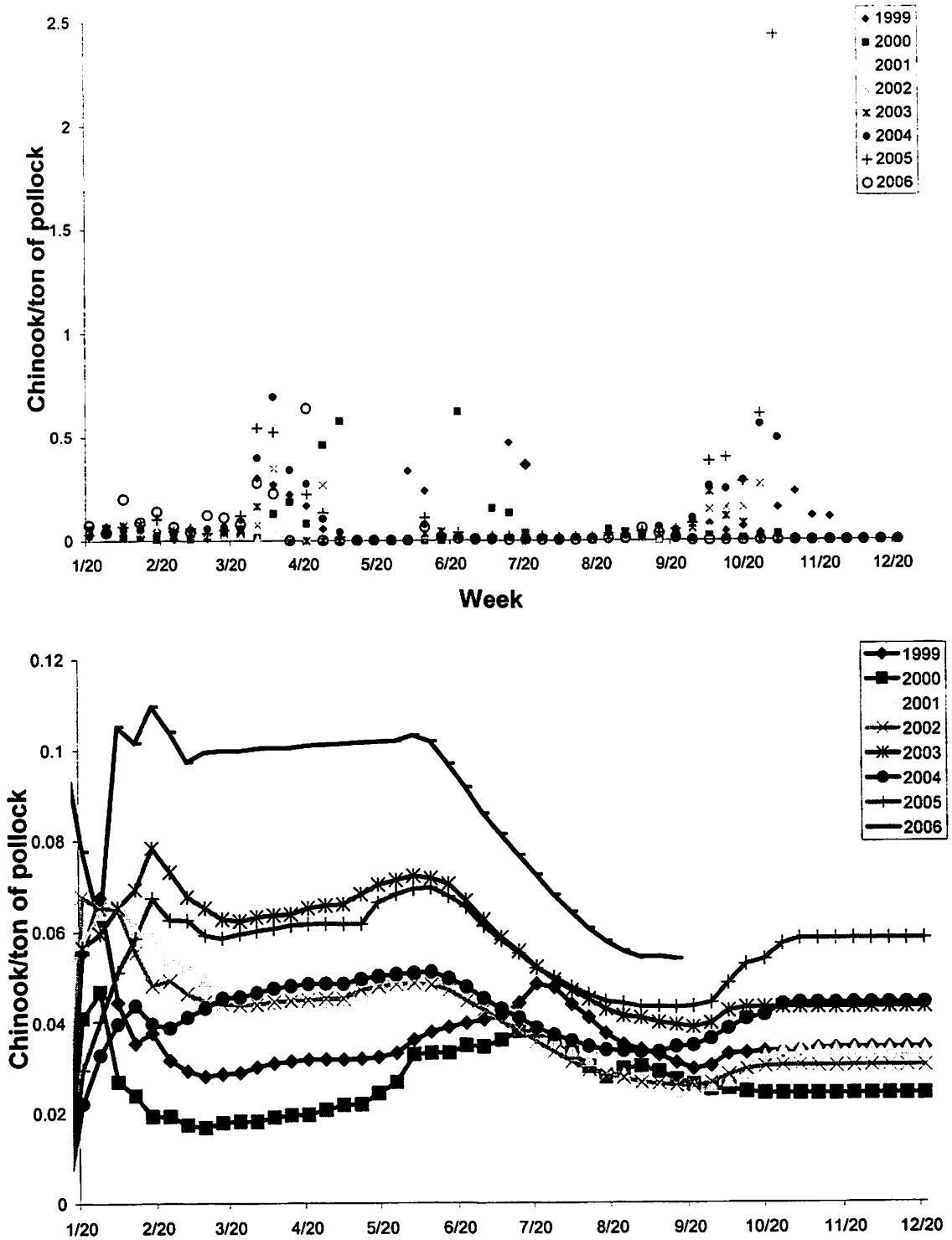


Figure 4. Chinook salmon catch rate (number per ton of pollock) based on observed vessels only (2000-2006). Top panel represents the average bycatch at weekly intervals while the bottom panel represents the cumulative number per cumulative ton of pollock. Data for 2006 are preliminary and extend to September 25, 2006.

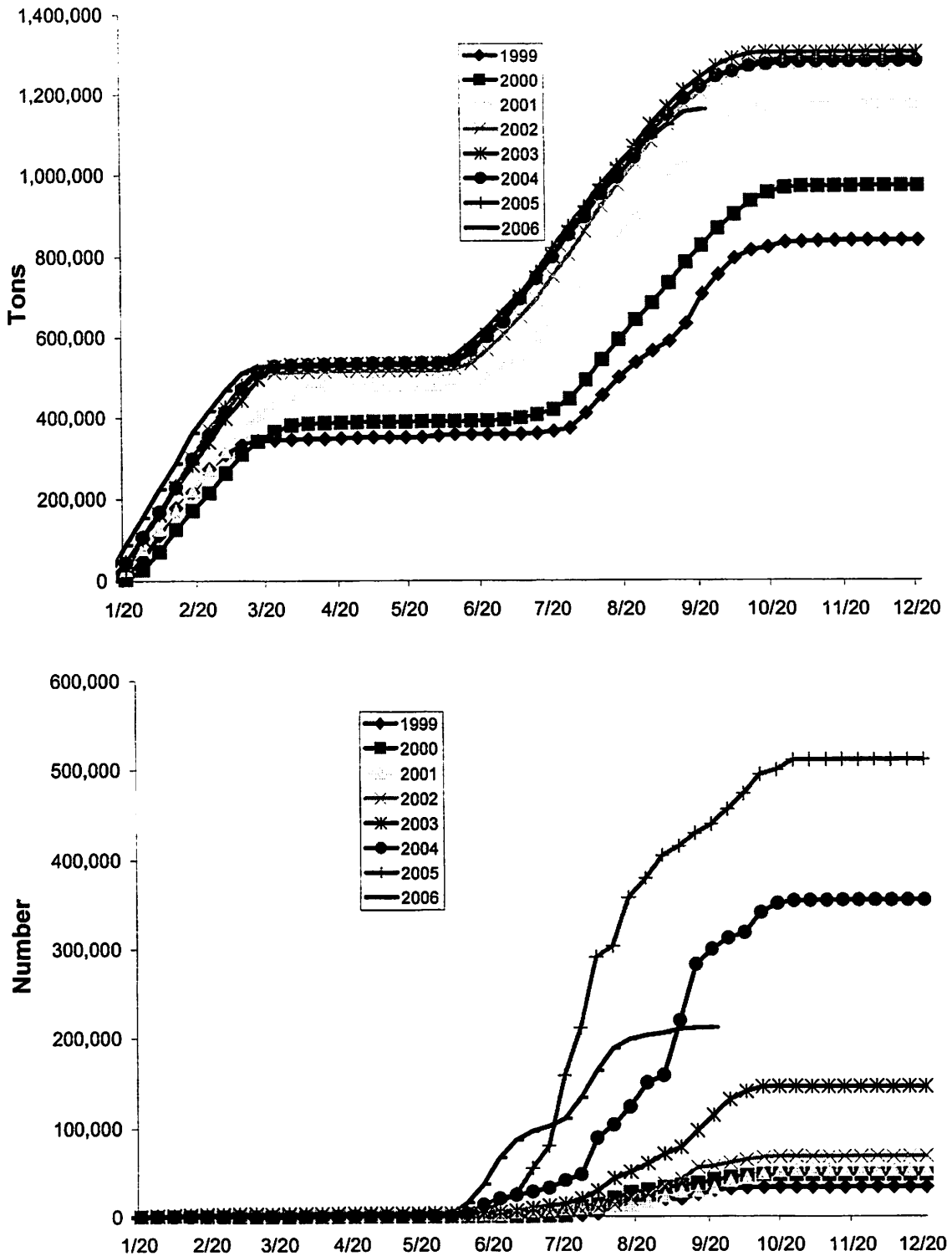


Figure 5. Cumulative pollock catch (tons; top panel) and cumulative non-chinook (chum) salmon catch based on observed vessels only (2000-2006, weekly intervals). Data for 2006 are preliminary and extend to September 25, 2006.

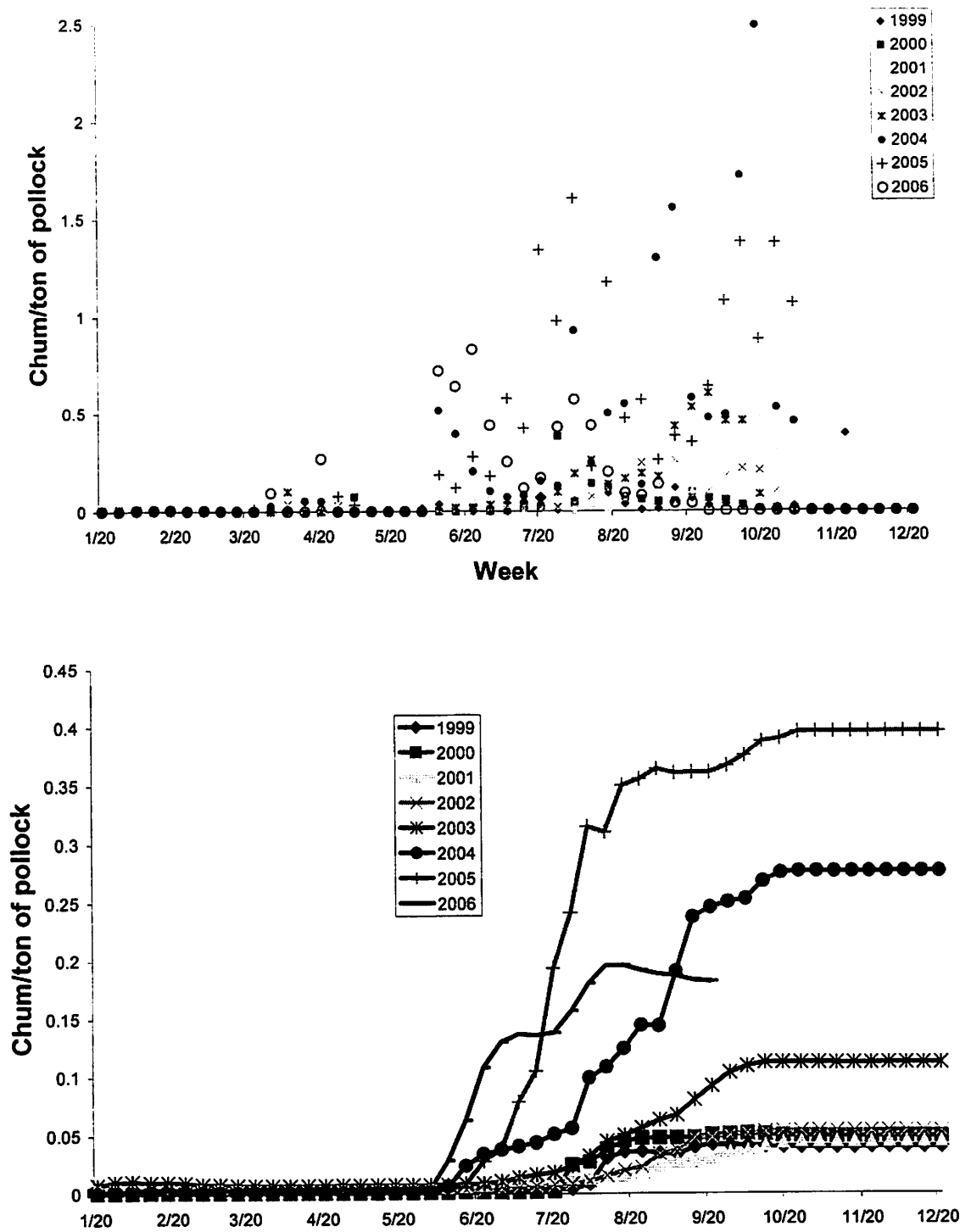


Figure 6. Chum salmon catch rate (number per ton of pollock) based on observed vessels only (2000-2006). Top panel represents the average bycatch at weekly intervals while the bottom panel represents the cumulative number per cumulative ton of pollock. Data for 2006 are preliminary and extend to September 25, 2006.

Attachment 1

Information Bulletin 06-10
Sustainable Fisheries Division
907-586-7228

February 14, 2006
10:00 a.m.

NMFS Prohibits Directed Fishing for Non-CDQ Pollock in the Chinook Salmon Savings Areas of the Bering Sea and Aleutian Islands Management Area

The National Marine Fisheries Service (NMFS) is prohibiting directed fishing for non-Community Development Quota (CDQ) pollock with trawl gear in the Chinook Salmon Savings Areas of the Bering Sea and Aleutian Islands management area (BSAI) effective 12 noon, Alaska local time (A.l.t.), February 15, 2006, through 12 noon, A.l.t., April 15, 2006, and from 12 noon, A.l.t., September 1, 2006, through 12 midnight, A.l.t., December 31, 2006, according to Robert D. Mecum, Acting Administrator, Alaska Region, NMFS.

This action is necessary to prevent exceeding the 2006 non-CDQ limit of chinook salmon caught by vessels using trawl gear while directed fishing for non-CDQ pollock in the BSAI and is issued pursuant to 50 CFR 679.21(e)(7)(viii).

After the effective date of this closure the maximum retainable amounts at 50 CFR 679.20(e) and (f) apply at any time during a trip.

The Chinook Salmon Savings Areas are areas defined as the following portions of the BSAI:

(1) The area defined by straight lines connecting the following coordinates in the order listed:

54 degrees 00' N. lat., 171 degrees 00' W. long.
54 degrees 00' N. lat., 170 degrees 00' W. long.
53 degrees 00' N. lat., 170 degrees 00' W. long.
53 degrees 00' N. lat., 171 degrees 00' W. long.
54 degrees 00' N. lat., 171 degrees 00' W. long.

(2) The area defined by straight lines connecting the following coordinates in the order listed:

56 degrees 00' N. lat., 165 degrees 00' W. long.
56 degrees 00' N. lat., 164 degrees 00' W. long.
55 degrees 00' N. lat., 164 degrees 00' W. long.
55 degrees 00' N. lat., 165 degrees 00' W. long.
54 degrees 30' N. lat., 165 degrees 00' W. long.
54 degrees 30' N. lat., 167 degrees 00' W. long.
55 degrees 30' N. lat., 167 degrees 00' W. long.
55 degrees 30' N. lat., 165 degrees 00' W. long.
56 degrees 00' N. lat., 165 degrees 00' W. long.

This information bulletin only provides notice of a regulatory change. For the purposes of complying with the regulatory change, you are advised to see the actual text in the Code of Federal Regulations.

Attachment 2

SSC minutes April 2006 on Salmon Bycatch Workshop**D-1 (c,d) Progress Report on BSAI salmon bycatch amendment and Salmon Research Workshop**

Diana Stram (NPFMC staff) provided an overview of the problem statement and suite of alternatives for amendment package 84B. Public testimony was received by Karl Haflinger (SeaState), Jennifer Hooper (Association of Village Council Presidents), Mike Smith (Tanana Chiefs Conference), and Becca Robbins (Yukon River Drainage Fisheries Association).

Analysis and refinement of the current salmon savings areas may be necessary in the event pollock vessels either surrender or lose their exemption and return to fishing under the regulatory salmon bycatch program. There is a need for development of more effective alternatives to the voluntary rolling hot spot system (VRHS). Amendment packages B-1 and B-2 are intended to provide those additional alternatives. Amendment package B-1 would be to establish new regulatory salmon savings systems that take into account the most recent available salmon bycatch data. Amendment package B-2 would be to develop a regulatory individual vessel salmon bycatch accountability program.

Salmon Workshop

The SSC conducted a salmon research workshop intended to aid in the discussion and development of bycatch management alternatives, such as biomass-based caps, updated salmon savings areas, and analysis of the current system under VRHS. Jim Ianelli (AFSC) provided a report on salmon bycatch patterns in the Bering Sea pollock fishery. Jim Murphy (AFSC) presented BASIS survey results on distribution and abundance of salmon in the Bering Sea. Richard Wilmot (AFSC) presented information on the stock origins of salmon caught in the Bering Sea groundfish fishery. Jim and Lisa Seeb (ADF&G) presented work on development of standardized DNA baselines for identifying mixtures of salmon stocks. Tony Gharrett (UAF) reported on genetic methods for determining salmon stock origins. Gene Sandone and Dan Bergstrom (ADF&G) presented information on Chinook and chum salmon stock status in the AYK region. Lastly, Alan Haynie (AFSC) presented information on incentives for bycatch avoidance. Summaries of the workshop presentations will be posted on the NPFMC website by Council staff.

SSC Discussion

The ensuing SSC discussion focused on attempting to address the following questions:

- 1) How to craft biomass-based caps?
- 2) What are innovative ideas for salmon savings systems and how to craft them to be more responsive to changing conditions?
- 3) What are appropriate milestones and standards for effective bycatch reduction?

Given the recent bycatch rates and presentations at the workshop, it is clear that the current state of knowledge is in flux so the Council should anticipate that additional changes may be required as research projects are completed.

How should we craft biomass based caps?

The SSC notes that developing a basis to establish biomass-based caps will be difficult and perhaps years away. Improved escapement enumeration and identification of salmon to stock of origin are required. Progress is being made in these areas.

To establish an abundance index, time trends of average run size from regions that correspond to the origins of salmon in the bycatch would be needed. This would allow analysts to assess whether increases in the encounter rate of salmon in the pollock fishery are a function of population trends. If an index of this

type could be developed, then bycatch caps could include adjustments for the status of salmon runs likely to be contributing to bycatch.

In addition to run size indicators by stock, it may be possible to utilize the BASIS survey to infer future returns of Alaskan origin salmon in the EBS. If the survey is used in this manner, NMFS should attempt to standardize the start date and station grid used for the BASIS survey to reduce the potential for missing out-migrations of salmon in some years. Such projections would need to adjust for natural mortality rate and migration. NMFS should also review the station spacing to assess whether the station allocation is appropriate for a comparative analysis of distribution and abundance of chum and Chinook salmon.

The information on the stock origin by age was informative, and the SSC recommends that the data collected from the EBS shelf be re-evaluated to assess the potential impact of age on the composition of home stream origin. The analysis of the home stream origin of salmon appeared to reveal that the regional contribution to the sample changed with age. This suggested that older salmon might have a different regional breakdown than younger salmon. This makes sense on two grounds: (1) younger salmon may not be fully mixed with the adult population, and (2) adult salmon from different regions may occupy different parts of the Bering Sea and sub-arctic Pacific thus, at older age groups we would see different regional contributions to the sample. Perhaps there are other explanations for the result. The bottom line is that there appears to be an age effect on regional partitions of home stream of origin. If this is the case, then the samples from the Bering Sea need to be re-examined to evaluate whether this effect could be impacting our samples.

Genetic analyses indicate that salmon from a broad geographic range of stocks contribute to salmon bycatch in pollock fisheries. Future cap calculations should reflect the likelihood that the origin of salmon captured as bycatch varies with season and location over the EBS shelf and slope. The SSC commends the collaboration of state, federal and academic geneticists and encourages these scientists to continue to work together to develop SNPs and microsatellite markers to assess home stream origin of salmon captured as bycatch. It is also recommended that geneticists work together with the industry on a sampling plan that will provide a reasonable representation of the annual bycatch. Given the apparent dependence of home stream origin on age, and the potential for shifts in the spatial distribution of pollock fishing, this study should include multiple years of sampling. The investigators should also determine the desired sample size necessary to assess home stream origin of schools encountered by commercial groundfish fisheries.

The SSC recommends devoting research to oceanographic factors influencing the spatial and temporal distribution and concentration of salmon. This includes an investigation of prey distributions relative to spatial distribution of salmon over the EBS shelf.

Other research should be devoted to examining vessels with a history of low bycatch rates. Factors such as gear configuration, deployment procedures or other fishing methods might be important determinants of salmon bycatch rates. If such factors can be associated with "clean" fishing then those might be more broadly applied to the fleet.

Dr. Ianelli recommended that a robust cap linked to an index of the catch rate in the pollock fishery could be considered. The SSC also considered the possibility of using in-season bycatch rates to establish in-season caps. Several problems with this approach were noted including: the lack of evidence that bycatch rates are an indicator of abundance and the possibility that the bycatch rate could be intentionally influenced to inflate the cap. The SSC noted that bycatch rates may vary with changes in abundance or density or both.

Given the current state of knowledge and potential difficulties in achieving research results in the near-term, the SSC discussed the possibility of setting an interim precautionary – arbitrary cap. The SSC concluded that setting an arbitrary cap was not a scientific issue but something that the Council would need to negotiate among the interested parties.

Innovative ideas for a salmon savings area

The SSC noted that the existing rolling hotspot approach is a logical way to attempt to control bycatch at the current time. A problem with the current situation is that the base rate continues to change. **Incentives should be considered to get fishers to move back into closed areas after they are reopened to collect post-closure bycatch rates in those areas.** It was noted that both bycatch rate of salmon and catch rate of pollock decrease at night but the drop in salmon bycatch is greater than the drop in pollock catch. However, it is not clear that a shift to night-time fishing is practical.

Historical salmon spatial bycatch patterns should be analyzed to determine if there are coherent shifts that might allow for periodic adjustment of closure areas. The Council may wish to consider techniques, including whether shifts in the A and B fishing season apportionments can yield additional salmon savings.

Individual vessel accountability programs

The SSC briefly discussed individual bycatch quotas. One idea put forward, given the lack of data, would be to put the fleet in competition to reduce salmon bycatch by posting a bond that would be distributed back to a portion of the fleet with the lowest bycatch rates of the end of the season (and perhaps affected Alaska communities). Any individual vessel accountability strategy would put a focus on getting good counts of salmon in the catch, which might put additional pressure on observers. Any vessel accountability program would also require a mechanism to limit catch and the identification of a target cap.

SSC Comments on Workshop

The SSC appreciates the efforts of the Council staff to organize the workshop, and extends thanks to all the presenters for providing us with the most up to date information on their research efforts. It is clear that the combined efforts of the several research programs are leading us towards a much better understanding of the origins of salmon taken as bycatch and their distribution in the Bering Sea.



YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

September 22, 2006

North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

RECEIVED
SEP 25 2006

N.P.F.M.C.

Re: Salmon Bycatch, Agenda Item D-2(b)

Dear Chairwoman Madsen and Council Members:

I am writing on behalf of the Yukon River Drainage Fisheries Association (YR DFA). YR DFA is an association of commercial and subsistence fishers on the Yukon River, Alaska's longest river. The Yukon River flows over 2,300 miles from British Columbia and Yukon Territories, Canada to its mouth at the Bering Sea and is home to one of the world's longest migrating salmon runs. These salmon provide a primary source of food for the people of the Yukon River. For many residents the commercial salmon harvest also provides the only means of income for those who live in the 49 remote villages of the Yukon River.

YR DFA members and staff have appeared before the Council for years on the issue of salmon bycatch. While we have new solutions on the table, the problem for Western Alaskan salmon stocks has not changed: to date over 64,000 Chinook salmon and more than 264,000 "other" (chum) salmon have been caught as bycatch in the BSAI pollock fleet this year. These numbers continue the trend of high bycatch numbers which has been developing over the last several years. Last year alone over 70,000 Chinook and 700,000 Chum salmon were caught as bycatch in the pollock fishery.

These increasingly high bycatch numbers are of particular concern to Western Alaskans in general and Yukon River fishers in particular. While Yukon River Chinook runs have recovered remarkably since the crashes in 1999-2001, Chinook returns are still average to below average on the Yukon River, and the commercial harvests are below the 10-year historical average. While chum salmon have returned in strength, with record high returns last year, the same can not be said for Chinook salmon. Salmon bycatch poses a significant problem because we know that a large portion of Chinook salmon bycatch is of Western Alaskan origin. In a study of samples taken from the BSAI pollock fleet in 1997-1999, University of Washington scientist Kate Myers found that 56% of the salmon caught as bycatch in the BSAI pollock fleet were of Western Alaskan origin, and of that 56%, 40% are from the Yukon River.¹ Using the final bycatch numbers from 2005, that means over 15,000 Yukon River Chinook were caught as bycatch, of which more than 13,000 would have returned to the Yukon River. In 2005, that number represented 42% of the 2005

¹ From Kate Myers, et. al, *Estimates of the Bycatch of Yukon River Chinook Salmon in U.S. Groundfish Fisheries in the Eastern Bering Sea, 1997-1999* (March 2004).

commercial catch, 27% of the 2005 subsistence catch, and 47% of the 2005 border passage goal under the U.S.-Canada Yukon River Salmon Agreement.

While many cite high salmon bycatch numbers as indicators of salmon abundance, subsistence catches on the Yukon River are still at the bottom of the federally-designated range of the "amount required for subsistence."² Chinook salmon commercial catches on the river are being managed conservatively, with total catches below the 10-year average despite increasing markets.

Within Alaska, the federal government is required to give subsistence needs priority over other fish and wildlife needs under the Alaska National Interest Lands Conservation Act (ANILCA).³ While ANILCA does not apply to the federal EEZ, it is not logical that the same government which is required to protect subsistence rights above all other harvest rights on land has no similar obligation to do so at sea.⁴

In the absence of a specific subsistence priority, the Magnuson-Stevens Act itself offers standards which should direct the Council to reduce salmon bycatch. National Standard 9 charges the Council "to the extent practical, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch."⁵ While the Council has undertaken actions to reduce salmon bycatch in several ways throughout the years, first through the Salmon Savings Areas and now through the Voluntary Rolling Hot Spot (VRHS) program adopted in Amendment 84, these efforts, while laudable, have certainly not reduced salmon bycatch to a minimal amount, particularly compared to in-river returns. The VRHS system is based on a bycatch rate, and closures are based on a base rate. This means that there is no numerical limit on the number of salmon which can be caught under this system. Further, because of the way the base rate is calculated, in a year with high bycatch rates at the beginning of the season the threshold base rate for closing areas will be similarly high, and without a limit, high bycatch numbers could result even within the confines of the VRHS system.

An effective means of minimizing salmon bycatch which meets the requirements of National Standard 9 should involve a set limit on the number of salmon which can be caught. To this end, we urge the Council to analyze the efficacy of applying soft or hard caps on the number of salmon which can be caught by the pollock fishery in a year. A cap would not necessarily have to shut the fishery down for the remainder of the season, but could be designed to close the fishery for a set period of time, or move it out of an area as the Salmon Savings Areas did. This could be utilized in place of or in addition to the VRHS system and can be analyzed within the parameters of Amendment Package B. Within this analysis, both fixed caps and indexed caps which are linked to salmon abundance should be considered. Attention should also be paid to the Salmon Savings Areas, as this concept may still be a useful one if redesigned around current salmon migration patterns.

Reducing salmon bycatch is of vital importance to the primarily Native Alaskan Yukon River communities who depend on salmon for their sustenance and their livelihoods. Increased salmon bycatch

² Fred J. Bue & Steve J. Hayes, ALASKA DEPARTMENT OF FISH AND GAME, *2006 Yukon Area Subsistence, Personal Use, and Commercial Salmon Fisheries Outlook and Management Strategies*, FISHERY MANAGEMENT REPORT No. 06-32, 2 (May 2006); See 5 AAC 01.236 (b) for amounts necessary for subsistence in the Yukon-Northern area.

³ 16 U.S.C. §3114.

⁴ *Amoco Production Co. v. Village of Gambell*, 480 U.S. 531, 547-548 (1987).

⁵ Magnuson-Stevens Fishery Management and Conservation Act, 16 U.S.C. §1851(a)(9) (2004).

places a disproportionately high burden on these communities because of the central importance of this resource to Native Alaskan communities. Under Executive Order 12898, federal agencies are required to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions.”⁶ Under this Executive Order, which has been interpreted as evidence of the government’s heightened responsibility toward protecting the resources that these communities and cultures have historically depended upon,⁷ the National Marine Fisheries Service and the Council should address the disparate impacts placed on Western Alaska’s Native communities by increased levels of salmon bycatch.

Finally, the Council is bound by international law to reduce salmon bycatch. Under the terms of the Yukon River Salmon Agreement, the U.S. agreed 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.”⁸ The Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, to which the U.S. is a party, further requires that bycatch of salmon in other fisheries be minimized.

Given the numerous federal and international laws requiring salmon bycatch reduction, and the supreme importance of this resource to the residents of Western Alaska, we urge the Council to analyze the alternatives under Amendment Package B quickly. Implementing an effective salmon bycatch reduction strategy which will reduce the *number* of salmon caught as bycatch will ensure this priceless resource is protected for the Western Alaskans who so depend on it.

Sincerely,



Rebecca Robbins Gisclair
Policy Coordinator

cc. Bill Alstrom, YRDFA Co-Chair
Richard Burnham, YRDFA Co-Chair
Gene Sandone, Alaska Department of Fish & Game
Elizabeth Andrews, Yukon River Panel
Sandy Johnston, Yukon River Panel
Mike Smith, Tanana Chiefs Conference
Karen Gillis, Bering Sea Fishermen’s Association
Jennifer Hooper, Association of Village Council Presidents
Ragnar Alstrom, Yukon Delta Fisheries Development Association
John Gruver, United Catcher Boats
Joe Sullivan, Mundt MacGregor, LLP

⁶ Executive Order 12898 (February 11, 1994) § 1-101.

⁷ See Campo Band of Mission Indians v. U.S., 2000 U.S. Dist. LEXIS 7269, 7 (Dist. D.C. 2000).

⁸ Pacific Salmon Treaty, Annex IV Chapter 8 (27)(Yukon River Salmon Agreement)(2002).