AGENDA D-2(a,b)
DECEMBER 2006

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver
Executive Director

ESTIMATED TIME
2 HOURS

DATE: November 27, 2006

SUBJECT: Prohibited Species Bycatch

ACTION REQUIRED

(a) Final action on VIP repeal amendment package
(b) Review EFP for salmon bycatch

BACKGROUND

(a) Final Action on VIP repeal amendment package

In October, the Council completed initial review of an EA/RIR/IRFA to evaluate repealing the Vessel Incentive Program (VIP). The public review draft was posted on the NMFS Alaska Region website in early November and the Executive Summary is is attached as Item D-2(a) (Copies of full the document are available if necessary). This analysis assesses the potential environmental and economic 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 VIP were designed to increase the amount of harvested 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 Council because of costs associated with enforcement and the relatively small number of vessels impacted by the regulation. Three alternatives are considered in the analysis:

Alternative 1) No Action. No regulatory action taken to change or abolish the VIP.

Alternative 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).

Alternative 3) VIP 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).

In October, the Council identified Alternative 3, Option 2 as its preliminary preferred alternative. This analysis is scheduled for final action at this meeting.

(b) Review EFP for salmon bycatch

In October 2005, the Council took final action on BSAI Amendment 84, electing to 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 Intercooperative Agreement (ICA). In October 2006, the Council requested staff bifurcate the two provisions adopted under proposed Amendment 84 in order to pursue the Chum Salmon Savings Area exemption for the non-pollock trawl fleet on a faster timeline than was anticipated for the main exemption for vessels under the ICA. It is the latter provision which has delayed the regulations for this amendment package. Since that time it has become apparent to NMFS and Council staff that this bifurcation is more complex than envisioned at the time of Council action. A letter from NMFS is attached as Item D-2(b)(1) which describes why it appears to be more prudent at this time to focus staff resources upon the implementation of both provisions of Amendment 84 together as initially envisioned at the time of Council final action in 2005. Staff will provide an update to the Council on progress towards implementation of Amendment 84 at this meeting.

As a short-term measure to evaluate the operational flexibility needed to efficiently reduce salmon bycatch under key components of the ICA, an exempted fishing permit (EFP) was issued effective August 3, 2006. This permit expired in November 2006. A report on the progress of this EFP will be provided by the applicants at this meeting. An additional EFP application has been requested for the 2007 A and B pollock seasons. The EFP, letters of approval, and the associated EA were mailed to you on November 17th. A copy of the letter of approval from NMFS is attached as Item D-2(b)(2). The application permit is attached as Item D-2(b)(3) and the executive summary of the EA is attached as Item D-2(b)(4). Approval of the 2007 EFP is scheduled for final action at this meeting.

Draft for Public Review

Repeal of the Vessel Incentive Program

Environmental Assessment/Regulatory Impact Review//Initial Regulatory Flexibility Analysis

October 2006

Lead Agency
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Regional Office
Juneau, Alaska

Responsible Official
Robert D Mecum
Acting Regional Administrator
Alaska Regional Office

For Further Information Contact
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Abstract: This document contains an Environmental Assessment (EA), a Regulatory Impact Review (RIR), and an Initial Regulatory Flexibility Analysis (IRFA) analyzing the potential impacts of repealing the groundfish Vessel Incentive Program (VIP) in the EEZ off of Alaska. The analyses in this document address the requirements of the National Environmental Policy Act (NEPA), Executive Order 12866, and the Regulatory Flexibility Act (RFA).

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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. 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 Elimination Alternative (Preferred 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. In October 2006 the Council selected Alternative 3, Option 2, as its preferred alternative.

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. 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 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 Fishieres, and Observer Program activities. Defendents 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 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.

The Council has chosen Alternative 3, Option 2, as its preferred Alternative. 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 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 VIP. The FMP authority for a program does not mandate the specific VIP 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. 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.

UNITED STATES DEPARTMENT
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

November 27, 2006

Stephanie Madsen, Chair
North Pacific Fishery Management Council
605 W. 4th Avenue
Anchorage, AK 99501-2817

Dear Stephanie,

At its October 2006 meeting, the North Pacific Fishery Management Council (Council) requested staff to bifurcate the two provisions adopted by the Council under proposed Amendment 84 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP). These two provisions would (1) exempt non-pollock trawl fisheries from Chum Salmon Savings Area closures, and (2) exempt from all salmon savings area closures those vessels which participate in the pollock intercooperative agreement (ICA) to reduce salmon bycatch rates. The Council requested that the first provision be developed as a separate FMP amendment in response to a report by the National Marine Fisheries Service (NMFS) that additional time would be needed to address legal requirements for the Amendment 84 proposed rule that are associated with the ICA infrastructure for the salmon savings area exemptions. The Council also considered testimony by representatives for the non-pollock trawl catcher processor fleet that the exemption from the Chum Salmon Savings Area closures should move forward expeditiously given that this fleet contributes little to the salmon bycatch problem.

When the Council voted to bifurcate the two Amendment 84 provisions, it understood that the development of a separate analysis and FMP amendment for the non-pollock fishery trawl exemption would be straightforward and timely, allowing for implementation of this exemption by August 1, 2007, when the non-Chinook salmon savings area closure is triggered by regulation. Since October, NMFS and Council staff have determined that bifurcation of the Amendment 84 provisions is more complex than originally thought. Further, Council, NMFS, and NOAA General Counsel staff time and resources would need to be reprioritized to ensure submission of the proposed amendment by February 1 and an effective date by August 1. We also remain optimistic about support by ICA participants for Amendment 84 and have scheduled an early January meeting with ICA representative to discuss remaining concerns about the agency's legal requirements for the proposed rule. Although the proposed rule to implement Amendment 84 still is under development, we believe that the full Amendment 84 package as adopted by the Council may be able to move forward sooner than we had anticipated if staff resources are committed to this project.

After discussing these issues with the Council's Executive Director and staff, we believe the best course of action is to continue to develop both provisions of Amendment 84 and the proposed rule as a single package. Although we cannot guarantee that Amendment 84 would be implemented by August 1, 2007, this approach will best ensure that both exemptions would be effective by 2008 and is a more effective use of limited staff resources. We will report to you in February on the outcome of our meeting with the pollock harvesting cooperatives and status of the Amendment 84 package.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P O Box 21668
Juneau, Alaska 99802-1668

November 13, 2006

Stephanie Madsen, Chair
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501

Re Issuance of an Exempted Fishing Permit to Reduce Salmon Bycatch Rates in the Bering Sea Pollock Fishery

Dear Stephanie,

We received an application for an exempted fishing permit (EFP) from the AFA Catcher Vessel Intercooperative and the Pollock Conservation Cooperative on October 16, 2006 We are providing the application to the U S Coast Guard (USCG) and the Council, as required by 50 CFR 600 745(b)(3)(i) and 50 CFR 679 6(c)(2) The proposed EFP would evaluate the effectiveness of a salmon bycatch intercooperative agreement (ICA) in identifying "hot spot" salmon closures, and monitoring and enforcing provisions of the ICA NMFS has found the application complete and is initiating consultation with the North Pacific Fishery Management Council (Council) The application for the EFP will be presented at the December 2006 Council meeting for public review and Council consideration Issuance of EFPs is authorized by the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area and its implementing regulations at 50 CFR 679 6, Exempted Fisheries

The EFP would be conducted during the seasonal pollock fisheries from January 20, 2007, through November 1, 2007, and would exempt pollock vessels operating in the Bering Sea under a salmon bycatch reduction ICA from Chinook and chum salmon savings area closures Fishing would occur in the Bering Sea subarea during the normal fishing seasons described in regulation at § 679 23 Fishing would occur within the annual specified prohibited species catch limits and total allowable catch for pollock No additional fish would be allocated for fishing under this EFP Exemptions to salmon savings area closures granted under the EFP would apply to all directed Bering Sea pollock fisheries, including participants in the Western Alaska Community Development program who participate in the ICA

The purpose of the project is to evaluate the effectiveness of a "voluntary rolling hot spot" (VRHS) salmon bycatch management system developed by the Bering Sea pollock harvesting cooperatives 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 The long term goal of the EFP is to employ the flexibility of the ICA and associated VRHS during years of relatively low, moderate, and high salmon bycatch incidence without imposing

impracticable restrictions on the affected fleet The bycatch management system is described in the ICA

The EFP is designed is to assess the feasibility of a Bering Sea pollock fishery salmon bycatch management system that quickly and efficiently adapts to changes in salmon bycatch patterns This would be accomplished by using daily reports from observers, electronic logbook submissions from vessel operators, and vessel monitoring system data to identify areas of high salmon bycatch rates These areas would be assessed several times a week and provisions for a VRHS closure system would be used to effectively reduce pollock fishing activity in areas of elevated salmon bycatch

Under regulations at § 679 6, we have consulted with the Alaska Fisheries Science Center (AFSC), and have determined that the application contains all the information necessary to judge whether the proposal constitutes a valid fishing experiment appropriate for further consideration We are initiating consultation with the Council by forwarding the application, as required by 50 CFR 679 6 (a)(2) We are also providing the draft EA for the Council's consideration We understand that you have scheduled Council review of the proposed project at the Council's December 2006 meeting in anticipation of our review and determination that the application warrants further consideration and consultation with the Council

Please notify Mr John Gruver of the AFA Catcher Vessel Intercooperative of your receipt of the application and invite him to appear before the Council in December in support of the application We will publish a notice of receipt of the application in the Federal Register with a brief description of the proposal Enclosed are copies of the application, EA, and the AFSC's memorandum of approval of the experimental design

Issuance of EFPs is authorized by the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area and its implementing regulations at 50 CFR 679 6, Exempted Fisheries

Sincerely,

Robert D Mecum
Acting Administrator, Alaska Region

Enclosures (3)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Alaska Fisheries Science Center
7600 Sand Point Way N E
Bldg 4 F/AKC
Seattle Washington 98115-0070

NOV 8 2006

MEMORANDUM FOR Robert D Mecum
Acting Regional Administrator, Alaska Region

FROM Douglas P DeMaster
Science and Research Director, Alaska Region

SUBJECT Application for an Exempted Fishing Permit from the AFA Catcher Vessel Intercooperative and Pollock Conservation Cooperative

AFSC staff has reviewed the referenced Exempted Fishing Permit (EFP) application from the AFA Catcher Vessel Intercooperative and Pollock Conservation Cooperative This EFP request seeks to further evaluate the effectiveness of Voluntary Rolling Hot Spots (VHRS) in reducing salmon bycatch This would extend work begun under EFP in 2006 While AFSC reviewers expressed concern over the lack of an effective experimental plan and analytical framework, it is believed that information gained will still be useful for assessing the VHRS system for reducing bycatch We recommend approval of this application We further recommend that if an EFP is sought beyond 2007 that the applicants work closely with AFSC scientists in plan development and that data collected under the first two EFP's be provided

cc F/AKR - J Anderson

AFA Intercooperative
4005 20th Ave West
Suite 116
Seattle, Wash 98199

October 16, 2006

Mr Robert D Mecum
Regional Administrator, Alaska Region
National Marine Fisheries Service
P O Box 21668
Juneau, Alaska, 99802

Dear Mr Mecum,

Attached to this letter is an application for an exempted fishing permit (EFP) from the owners and representatives of AFA-endorsed vessels that participate in the Eastern Bering Sea non-CDQ and CDQ trawl Pollock fishery for your review and approval The primary reason the Bering Sea Pollock fleet is requesting this EFP is to further evaluate the effectiveness of the Voluntary Rolling Hotspot System (VRHS) in reducing salmon bycatch in the directed pollock fishery as implemented by the Intercooperative Agreement ("ICA")

As a follow up to the EFP granted to the cooperatives for the 2006 B season, this EFP will allow the pollock cooperatives to evaluate the VRHS during the pollock A season when Chinook bycatch is the most prevalent Additionally, unique fishing conditions experienced over the 2006 B season resulted in less than normal pollock harvest inside the Chum Salmon Savings Area (CSSA) and the Chinook Salmon Savings Area (CHSSA) Carrying this EFP over an additional B season will allow the cooperatives an opportunity to evaluate the VRHS in conjunction with more typical fishing conditions

Our EFP proposal is based on the information presented to the North Pacific Fishery Management Council (NPFMC) in connection with its adoption of Amendment 84 to the BSAI Fishery Management Plan The Environmental Assessment for Amendment 84 to the BSAI FMP provides detailed analysis of the proposed ICA VRHS program and examines the benefits of managing salmon bycatch through this program This analysis concludes that salmon bycatch is expected to decrease under an ICA managed bycatch program

Under this EFP, the "permitted vessels" would be exempted from the current Chum and Chinook time and area closure bycatch regulations for the Eastern Bering Sea Pollock fishery The bycatch of Chinook and Chum salmon in the directed Pollock fishery would be managed by the provisions of the ICA as agreed to by the non-CDQ and CDQ pollock fleet (A copy of the ICA is attached to the enclosed EFP application) Section 11 of the

ICA provides conditions under which that exemption would be forfeited by a pollock harvesting cooperative that breaches the ICA Further, the NPFMC, on an annual basis, could recommend that the exemption granted under the EFP be terminated

Under this EFP, the permitted vessels will continue to operate under all other current federal fishery regulations, except for the suspension of EBS Chum and Chinook bycatch regulations Therefore all record keeping and reporting requirements, observer program requirements, vessel monitoring requirements such as VMS, SSL management measures and other relevant management measures remain in effect as do the federal fishery regulation enforcement provisions

In addition to the EFP reports made to the North Pacific Management Council as described in sections K and L of the application, concurrent reports will be provided to the NMFS Northwest Region

Please note that because VMS tracking data and vessel-specific observer data are collected under the existing Bering Sea pollock fishery regulations, such data should not be considered information obtained under the EFP, and therefore the enclosed EFP application stipulates that all such data would remain confidential Also, because communications from SeaState, Inc to individual vessels would not constitute information obtained under the EFP, the enclosed application stipulates that such communications would remain confidential, as well

As you are aware, the NPFMC, in choosing their Amendment 84 preferred alternative, directed Council and NMFS staff to develop and examine alternatives to the VRHS system and/or the current regulatory salmon bycatch program and assess whether they would be more effective in reducing salmon bycatch Information gathered under this EFP will be useful to the Council and NMFS staff to look at possible subsequent salmon bycatch reduction management actions

Sincerely,

John Gruver,
AFA Catcher Vessel Intercooperative Manager

Kevin C Duffy

Kevin Duffy,
Pollock Conservation Cooperative

EXEMPTED FISHING PERMIT APPLICATION (EFP)

1 Date of Application:

October 16, 2006

2. Applicant's Name:

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 98199
(206) 285-5139

3. Purpose and Goal of the Experiment:

Current Chinook and chum salmon savings areas were adopted based on historic observed salmon bycatch rates and were designed to avoid high spatial and temporal levels of salmon bycatch From 1990 through 2001, the BSAI salmon bycatch average was 37,819 Chinook and 69,332 chum annually Recently, however, salmon bycatch numbers have increased substantially In 2003, 54,911 Chinook salmon and 197,091 chum salmon were taken incidentally in the trawl fisheries In 2004, salmon bycatch increased substantially to 62,493 Chinook and 465,650 chum salmon Bycatch amounts remained high in 2005 and totaled 67,852 Chinook and 711,813 chum salmon To date, chum bycatch for the 2006 pollock fishery is down from recent levels, approximately 309,248 through September 16th 2006 Chinook bycatch as of October 7th is 71,912 fish

Anecdotal information from participants in the BSAI trawl fisheries indicated that salmon bycatch rates may be higher outside the Chinook and chum salmon savings area The analysis prepared for this action provides spatial and temporal comparisons of non-Community Development Quota (CDQ) vessels fishing outside of the salmon savings areas with CDQ vessels fishing inside of the salmon savings areas The analysis indicated that bycatch rates were much higher outside of the savings areas

The purpose of the project is to evaluate the effectiveness of a "voluntary rolling hot spot" ("VRHS") salmon bycatch management system developed by the Bering Sea pollock harvesting cooperatives 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 The bycatch management system to be evaluated is described in the "Salmon Bycatch Management Agreement 2006 – 2008 Bering Sea Pollock

Fishery" (the "Intercooperative Agreement" or "ICA"), a copy of which is attached Please note that while the ICA title implies that the Agreement life span is only through 2008 there is an annual automatic extension clause found in Section 10 (Term) on page 15 of the ICA This provision rolls over the term of the Agreement on September 15th of each year to continually maintain the Agreement's three year span Members of the Agreement may opt out by providing notice to all other parties to the Agreement by the September 15th deadline, however their membership will continue for 2 more years No members opted out of the Agreement prior to the recent September 15th deadline

The goal of the project is to develop a Bering Sea pollock fishery salmon bycatch management system that quickly and efficiently adapts to changes in salmon bycatch patterns through the course of pollock fishing seasons, and that effectively reduces pollock fishing activity in areas of elevated salmon bycatch during years of relatively low, medium and high salmon bycatch incidence without imposing impracticable restrictions on the affected fleet

In addition to the purpose and goal described above, the cooperatives expect that the information gathered during the EFP could provide the basis for potential future changes to the ICA to further decrease salmon bycatch Pending the implementation of Amendment 84 to the Bering Sea Aleutian Islands (BSAI) Groundfish Fishery Management Plan, this information also could provide the basis for rulemaking to adjust ICA provisions that would be established in regulations, e g changes to the salmon base rate

The proposed EFP exempts vessels listed in the application from chum and Chinook salmon savings area closures These exemptions are necessary to allow the permit holder to test the effectiveness of the VRHS salmon bycatch management system The purpose and need for these exemptions is addressed in the analysis prepared for North Pacific Fishery Management Council in connection with Amendment 84 The EFP would exempt the applicant from fishing closures related to salmon bycatch implemented under 50 CFR §§ 679 21 and 679 22 Additionally, vessels listed on the application would be exempt from salmon bycatch related prohibitions against fishing described in § 679.7(c)(2) Vessels would still be subject to all other requirements described in 50 CFR part 679, including monitoring and observer coverage requirements described in §§ 679 28 and 679 50

While this EFP application is similar to the EFP applied for and granted to the AFA pollock cooperatives during the 2006 B season, it will allow the cooperatives to evaluate the VRHS during an A season when Chinook bycatch is the most prevalent The cooperatives did operate under the ICA during the 2006 A season, however the regulatory Chinook Salmon Savings Area was triggered in mid-season (February 15, 2006), eliminating a large portion of the A season fishing grounds, some of which had fairly low bycatch rates This EFP will provide the pollock cooperatives the opportunity to test the VRHS as intended in Amendment 84 by exempting the fleet from a regulatory closure Additionally, rather unique fishing conditions experienced during the 2006 B season resulted in less than normal pollock harvest inside the regulatory salmon savings areas

Carrying this EFP over another B season will allow the cooperatives an opportunity to evaluate the VRHS in conjunction with more typical fishing conditions

Disposition of all species harvested under the EFP will be handled in a manner typical to each sector, catcher-processor, mothership, and inshore, of the American Fishery Act (AFA) and Community Development Quota (CDQ) Bering Sea pollock fisheries, and in accordance with all applicable regulations

4 Technical Details of the Experiment:

i Species Harvested.

This experiment will be conducted using the Directed Fishing Allowance (DFA) and CDQ pollock allocations as described in the 2007 annual specifications process and any rollover directed pollock allocations released from the Incidental Catch Allowance as determined by the regional administrator All pollock and Pacific cod harvested will be retained as required under IRIU regulations at §679 27

Other species taken incidentally should be typical of previous Bering Sea pollock fisheries and will be either retained or discarded at sea after being logged as required in § 679 5(c)

Prohibited species catch will be handled as required in § 679 21 However, a vessel or processor opting to participate in the Prohibited Species Donation program (PSD) as described in §679 26 will retain all salmon deemed fit for human consumption Salmon determined to be unfit for human consumption will be discarded under § 679 21(b)

Each vessel and processor will be individually responsible for meeting these requirements

ii Area and timing of the experiment.

All fishing will be conducted in the Bering Sea as described in § 679 2 (Bering Sea Subarea of the BSAI) in a manner typical to the Bering Sea CDQ and non-CDQ pollock fisheries All closure areas as described in §679 22 apply with the exception of the prohibited species salmon savings area closures, both Chinook and non-Chinook salmon, for the CDQ pollock fishery as described at § 679 7(d)(9,10) and the non-CDQ pollock fishery as described at § 679 21(e)(1)(vii, viii) and § 679 21(e)(7)(vii, viii) Each vessel will be individually responsible for meeting these requirements

The experiment will run from January 20, 2007 through November 1, 2007 or the implementation of Amendment 84, whichever comes first

iii Vessels and gear to be used.

All vessels operating under this permit will be AFA qualified catcher/processors as described at § 679 4(l)(2) and AFA qualified catcher vessels as described at § 679 4(l)(3) All vessels are owned and/or operated by members in good standing of the 10 AFA pollock harvesting cooperatives, i e 1) the Pollock Conservation Cooperative, 2) High Seas Catchers Cooperative, 3) Mothership Fleet Cooperative, 4) Akutan Catcher Vessel Association, 5) Arctic Enterprise Association, 6) Northern Victor Fleet Cooperative, 7) Peter Pan Fleet Cooperative, 8) Unalaska Fleet Cooperative, 9) UniSea Fleet Cooperative, and 10) Westward Fleet Cooperative (together, the "Cooperatives") All owners and/or operators of the vessels eligible to fish under this EFP are parties to the ICA

All vessels participating in the non-CDQ pollock fishery will use pelagic trawl gear (defined at § 679 2) as required for the BSAI pollock fishery at § 679 24(b)(4) Each vessel will be individually responsible for meeting these requirements

iv Experimental design.

To evaluate the mechanisms described in the salmon bycatch reduction Intercooperative Agreement, including the dissemination of observer collected salmon bycatch information and catch information reported from the vessels, we propose to 1) determine if the information is readily available (i e what is the latency of observer data and elog data vs information received directly from coops), and 2) whether this information is adequate for the purpose of making salmon bycatch closure decisions Where possible we will evaluate the statistical variance associated with the supplied data (elog vs observer) to determine whether the differences in reported bycatch rates are significant

We will also test the effectiveness of these bycatch closure decisions Closures are based on information from vessels experiencing high bycatch rates, and the assumption behind the program is that closing these areas to coops exhibiting high bycatch rates will result in a displacement of effort to areas with lower bycatch rates Effectiveness can be evaluated by seeing if high-bycatch vessels are found to have lower bycatch rates after closures are in effect We will compare the bycatch rates of those vessels that trigger a closure by virtue of fishing in the closure area during the evaluation period that precedes the closure announcement, to those vessels' bycatch rates after the closure This comparison cannot evaluate the effect of these closures on preventing new vessels from moving into the closure area, and it cannot evaluate the likelihood that vessels would have moved out of the announced closure area anyway in the normal course of following schools of pollock However, it will provide a gross indication of the soundness of logic behind the salmon ICA that is, that we can determine the areas of the ocean where high salmon bycatch rates are being experienced and keep the fleet from fishing in those areas Note that for the ICA approach to succeed we need to not only determine in near-real-time where salmon bycatch rates are highest, but we also assume the patterns will stay constant over the period of the announced closures, which are generally three or four days, but which may be longer if we feel certain that spatial patterns of bycatch rates have not changed

In addition, VMS records for all participating vessels will be obtained and analyzed to determine if any affected vessels failed to observe the closure action

v Public release of obtained information and submission of interim and final reports.

Under the terms of the EFP, the Cooperatives, through the Applicants will produce a report to the North Pacific Fishery Management Council (NPFMC) that will contain the following

- Number of salmon taken by species during the experiment
- Estimated number of salmon avoided as demonstrated by the movement of fishing effort away from salmon hot-spots
- List of each vessel's number of appearances on the weekly dirty 20 lists for both salmon species
- 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

While calculating the number of salmon avoided cannot be done with absolute precision, an estimate will be provided for purposes of comparison with number of salmon caught by the fleet under the ICA system This will be accomplished by calculating the number of salmon that the fleet would have caught in each "hot spot" had that area remained open for the time period of the voluntary hot spot closure The number of salmon the fleet would have caught is the product of the pollock catch (in the following week) of the vessels that have moved from the hotspot closure and their bycatch rate while in the closed area

The interim report will be presented to the NPFMC at the December 2007 meeting and will cover the first three bullet points listed above A final EFP report, including all of the above bulleted points, will be presented to the NPFMC at its February 2008 meeting

In addition to the above-mentioned information to be provided in the interim and final reports to the NPFMC, copies of the weekly (or semi-weekly) reports and fleet-wide notices made pursuant to the ICA issued by SeaState will be made available to the NPFMC and the NMFS Alaska Region offices

Note that because individual vessel VMS and observer program data are gathered under existing fishing regulations, and thus are not data obtained under the EFP the Applicants stipulate that such information will remain confidential under the Magnuson-Stevens Act Further, data transmitted to SeaState Inc from individual vessels participating in the VRHS system is not information obtained under the EFP, and thus the Applicants stipulate that it will remain confidential

vi Anticipated impacts on marine mammals and/or endangered species.

Section 7 consultations have been undertaken for species that are listed under the Endangered Species Act (ESA) and present in the BSAI management area, with respect to the impact of the Federal groundfish fisheries

An FMP level Section 7 consultation BiOp was completed for the groundfish fisheries in November 2000 The FMP level BiOp is limited to those species under NMFS jurisdiction and covers most of the endangered and threatened species occurring in the action area, including marine mammals, and Pacific salmon

Under NMFS' FMP level BiOp, the western population segment of Steller sea lions was the only ESA listed species identified as likely to be jeopardized by the groundfish fisheries A subsequent biological opinion on the Steller sea lion protection measures was issued in 2001 The 2001 BiOp found that the groundfish fisheries conducted in accordance with the Steller sea lion protection measures were unlikely to cause jeopardy of continued survival and recovery or adverse modification or destruction of critical habitat for Steller sea lions This EFP would be implemented within the protection measures

The effects of the groundfish fisheries on ESA listed salmon are discussed in Chapter 4 0 of the EA An ESA consultation for Chinook salmon in the BSAI was reinitiated in 2004 and continued into 2005 and 2006, following the 2004, 2005, and 2006 fisheries having exceeded the Incidental Take Statement (ITS) approved under the BiOp In July, 2004, the Northwest Region of NMFS upheld the ITS, and concluded that the fishery is not likely to further impact ESA-listed salmon at present, however the consultation noted the continued need to monitor Chinook bycatch in the BSAI trawl fisheries, as well as actions taken by the Council and industry to minimize this bycatch Because this EFP is expected to reduce salmon bycatch, it is not likely to adversely impact ESA-listed salmon in ways not already analyzed in previous analyses

Seabirds are under the jurisdiction of the United States Fish and Wildlife Service (USFWS) which has completed an FMP level (USFWS 2003a) and project level BiOp (USFWS 2003b) for the groundfish fisheries Both USFWS BiOps concluded that the groundfish fisheries and the annual setting of harvest specifications were unlikely to cause the jeopardy of extinction or adverse modification or destruction of critical habitat for ESA listed birds

NMFS has consulted on northern right whales after designation of critical habitat, and has determined that the Alaska groundfish fisheries are not likely to adversely affect these whales or their critical habitat. No other consultations are required for this action because it would not modify the actions already analyzed in previous BiOps, and are not likely to adversely affect ESA listed species beyond the effects already analyzed

5. Observer Coverage:

Observer coverage for vessels participating under this EFP will operate in accordance with the regulatory requirements typical to the BSAI pollock fishery as described in § 679 50 --Groundfish Observer Program Each vessel will be individually responsible for meeting these requirements

6. Details for coordinating parties engaged in the experiment and signatures of all representatives of all principal parties:

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 SeaState 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 SeaState reports to their member vessels in a timely manner The signature of each coop's representative is found in the ICA

7. Vessel Information:

Attached is a spreadsheet of all vessels applying to fish under this EFP, by coop and sector, and their required information Additionally, all vessels applying to operate under this EFP are members of AFA cooperatives participating in the ICA

8. Applicant Signatures:

John F Gruver, AFA Catcher Vessel Intercooperative Manager

Kevin C. Duffy

Kevin Duffy, Pollock Conservation Cooperative

2007 SALMON ICA VESSEL LIST

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
AKUTAN	ALDEBARAN	ROYAL VIKING, INC.	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	48215	684363	901	SEATTLE, WA	132	138	190
AKUTAN	ARCTIC EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	57440	936302	3388	SEATTLE, WA	155	267 ITC	892 ITC
AKUTAN	ARCTURUS	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	45976	655326	533	SEATTLE, WA	132	135	187
AKUTAN	BLUE FOX	PACIFIC DRAGGERS, INC.	PO BOX 352	NEWPORT, OR 97365	62892	979437	4811	NEWPORT, OR	85	53 ITC	177 ITC
AKUTAN	BRISTOL EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	55923	647985	3007	SEATTLE, WA	182	218 ITC	727 ITC
AKUTAN	CAPE KIWANDA	CAPE KIWANDA, LLC	4225 23RD AVE W #103	SEATTLE, WA 98199	61432	618158	1235	SEATTLE, WA	76.4	110	138
AKUTAN	COLUMBIA	ROYAL VIKING, INC.	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	39056	615728	1228	SEATTLE, WA	123	137	195
AKUTAN	DOMINATOR	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	6868	602309	411	SEATTLE, WA	124	136	199
AKUTAN	EXODUS EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	33112	598666	1249	SEATTLE, WA	84	44	147
AKUTAN	GLADIATOR	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	32473	598380	1318	SEATTLE, WA	124	129	190
AKUTAN	GOLDEN DAWN	GOLDEN DAWN, LLC	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	35687	604315	1292	SEATTLE, WA	149	227	286
AKUTAN	GOLDEN PISCES	GOLDEN PISCES, INC.	PO BOX 1523	NEWPORT, OR 97365	32817	599585	588	NEWPORT, OR	82	132	194
AKUTAN	HAZEL LORRAINE	HAZEL LORRAINE JOINT VENTURE	192 NICKERSON ST., SUITE 301	SEATTLE, WA 98109	57117	592211	523	SEATTLE, WA	90	37 ITC	126 ITC
AKUTAN	LESLIE LEE	LESLIE LEE, INC.	106 NW NYE ST	NEWPORT, OR 97365	56119	584873	1234	NEWPORT, OR	98	134	197
AKUTAN	LISA MELINDA	LISA MELINDA FISHERIES, INC.	PO BOX 1650	NEWPORT, OR 97365	41520	584360	4506	NEWPORT, OR	81	39	131
AKUTAN	MAJESTY	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	60650	962718	3996	SEATTLE, WA	107	117	198
AKUTAN	MARCY J	MARCY J., INC.	1217 KOUSKOV	KODIAK, AK 99615	55	517024	2142	KODIAK, AK	96	127	171
AKUTAN	MARGARET LYN	GREAT WEST SEAFOODS, L.P	4225 23RD AVE W #103	SEATTLE, WA 98199	31872	615563	723	SEATTLE, WA	123	119	175
AKUTAN	MARK I	MARK I, INC.	4225 23RD AVE W #103	SEATTLE, WA 98199	6440	509552	1242	SEATTLE, WA	99	131	193
AKUTAN	NORDIC EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	51092	678234	3009	SEATTLE, WA	105	103	152
AKUTAN	NORTHERN PATRIOT	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	55153	637744	2769	SEATTLE, WA	165	247	394
AKUTAN	NORTHWEST EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	36808	609384	3002	SEATTLE, WA	160	244 ITC	816 ITC
AKUTAN	OCEAN EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	51073	678236	3011	SEATTLE, WA	155	268 ITC	896 ITC
AKUTAN	PACIFIC EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	50759	678237	3010	SEATTLE, WA	155	268 ITC	896 ITC
AKUTAN	PACIFIC RAM	BLUE SEA FISHERIES	PO BOX 1256	NEWPORT, OR 97365	61792	589115	4305	NEWPORT, OR	82	57	191
AKUTAN	PACIFIC VIKING	ROYAL VIKING, INC.	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	47	555058	422	SEATTLE, WA	126	131	193
AKUTAN	PEGASUS	NORTH SEA, INC.	PO BOX 207	CHINOOK, WA 98614	57149	565120	1265	ASTORIA, OR	98	55	184
AKUTAN	PEGGY JO	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	9200	502779	979	SEATTLE, WA	89	59 ITC	198 ITC
AKUTAN	PERSEVERANCE	MARCON FISHERIES, INC.	PO BOX 428	NEWPORT, OR 97365	12668	536873	2837	NEWPORT, OR	87	124	157
AKUTAN	PREDATOR	PATIENCE FISHERIES, INC.	PO BOX 428	NEWPORT, OR 97365	33744	547390	1275	NEWPORT, OR	90	128 ITC	188 ITC
AKUTAN	RAVEN	YAQUINA TRAWLERS, INC. ET AL.	75-667 PU HOALOHA PLACE#9	KAILUA KONA, HI 96740	58395	629499	1236	NEWPORT, OR	92	61	173
AKUTAN	ROYAL AMERICAN	ROYAL AMERICAN FISHERIES, LLC	4225 23RD AVE W. #103	SEATTLE, WA 98199	40840	624371	543	SEATTLE, WA	105	151	196
AKUTAN	SEEKER	F/V SEEKER, INC.	1121 SE FIRST ST	NEWPORT, OR 97365	59476	924585	2849	NEWPORT, OR	97.83	130	192
AKUTAN	SOVEREIGNTY	TRIDENT SEAFOODS CORP	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	55199	651752	2770	SEATTLE, WA	165	247	394
AKUTAN	TRAVELER	REX HOCKEMA	7071 HWY 20	TOLEDO, OR 97391	58821	929356	3404	NEWPORT, OR	109	150	199
AKUTAN	VIKING EXPLORER	ROYAL VIKING, INC.	5303 SHILSHOLE AVE NW	SEATTLE, WA 98107	36045	605228	1116	SEATTLE, WA	123	131	193

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
ARCTIC	INTREPID EXPLORER	B & N FISHERIES COMPANY	1959 NW DOCK PLACE SUITE 3000	SEATTLE, WA 98107	64105	988596	4993	SEATTLE, WA	112	161 ITC	538 ITC

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
N. VICTOR	ANITA J	EVENING STAR, INC.	4019 21st Ave. West	Seattle, WA. 98199	29	580532	1913	Seattle, WA	129.6	80	268
N. VICTOR	COLLIER BROTHERS	JIM SCHONES/SANDRA SCHONES	9589 SE Birch	South Beach, OR. 97366	54648	593809	2791	Portland, OR	95	45	153
N. VICTOR	COMMODORE	EVENING STAR, INC.	4019 21st Ave. West	Seattle, WA. 98199	53843	914214	2657	Seattle, WA	133	201	291
N. VICTOR	EXCALIBUR II	EXCALIBUR II LLC	PO Box 2243	Sisters, OR. 97759	54653	636602	410	Newport, OR	92	48	160
N. VICTOR	GOLD RUSH	F/V GOLD RUSH FISHERIES LLC	25195 SW Parkway Ave. #111	Wilsonville, OR. 97070	40309	521106	1868	Kodiak, AK	98	104	168
N. VICTOR	HALF MOON BAY	EVENING STAR, INC.	4019 21st Ave. West	Seattle, WA. 98199	39230	615796	249	Seattle, WA	121	135	198
N. VICTOR	MISS BERDIE	MISS BERDIE INC.	1483 Old River Road NE	Siletz, OR. 97380	59123	913277	3679	Newport, OR	88	53	178
N. VICTOR	NORDIC FURY	FURY GROUP, INC.	4005 20th Ave. West, Suite 207	Seattle, WA. 98199	200	542651	1094	Seattle, WA	111.1	92	187
N. VICTOR	PACIFIC FURY	FURY GROUP, INC.	4005 20th Ave. West, Suite 207	Seattle, WA. 98199	33	561934	421	Seattle, WA	110	135	199
N. VICTOR	POSEIDON	JOHANNESSEN ENTERPRISES, INC.	10727 226th SW	Edmonds, WA. 98020	37036	610436	1164	Seattle, WA	124	125	183
N. VICTOR	ROYAL ATLANTIC	ROYAL ATLANTIC LLC	10727 226th SW	Edmonds, WA. 98020	48	559271	236	Seattle, WA	124	135	196
N. VICTOR	STORM PETREL	EVENING STAR, INC.	4019 21st Ave. West	Seattle, WA. 98199	39560	620769	1641	Seattle, WA	124	187	276
N. VICTOR	SUNSET BAY	EVENING STAR, INC.	4019 21st Ave. West	Seattle, WA. 98199	35527	598484	251	Seattle, WA	112.8	135	198

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
P. PAN	AJ	F/V AJ, LLC	2200 6TH AVE SUITE 720	SEATTLE, WA 98121	57934	599164	3405	Seattle	150	137	456
P. PAN	AMERICAN BEAUTY	ALAKANUK BEAUTY LLC	2200 SIXTH AVE STE 707	SEATTLE, WA 98121	24255	613847	1688	Seattle	123	135	199

P. PAN	ELIZABETH F	ELIZABETH F, INC.	PO BOX 1275	KODIAK, AK 99615	14767	526037	823	Kodiak	81	145	198
P. PAN	MORNING STAR	DONA MARTITA LLC	20308 DAYTON AVE N	SHORELINE, WA 98133	70323	1037811	6204	Seattle	57	57	70
P. PAN	OCEAN LEADER	EMMONAK LEADER, LLC	2200 SIXTH AVE #707	SEATTLE, WA 98121	32	561516	1229	Seattle	119	96	321
P. PAN	OCEANIC	OCEANIC FISHERIES, LLC	19731 21 ST AVE NW	SEATTLE, WA 98177	3404	602279	1667	Seattle	122	134	192
P. PAN	PACIFIC CHALLENGER	PACIFIC DAWN LLC	2324 N.W.90TH ST	SEATTLE, WA 98117	6931	518937	657	Seattle	104	105	155
P. PAN	PROVIDIAN	TRIDENT MARITIME CO.	PO BOX 190	WOOLWICH, ME 04579	70709	1062163	6308	Juneau	113	159	532
P. PAN	TOPAZ	CHANDLER FISHERIES, INC.	4934 LAKESHORE DR	FLORENCE, OR 97439	40250	575428	405	Coos Bay	86	91	134
P. PAN	WALTER N	ELIZABETH F, INC.	PO BOX 1275	KODIAK, AK 99615	34919	257365	825	Kodiak	86	120	160

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
UNALASKA	ALASKA ROSE	ALASKA ROSE LP	PO BOX 5030	SEATTLE, WA 98105	38989	610984	515	Unalaska, Ak	124	123	198
UNALASKA	BERING ROSE	BERING ROSE LP	PO BOX 5030	SEATTLE, WA 98105	40638	624325	516	Unalaska, AK	124	125	196
UNALASKA	DESTINATION	F/V DESTINATION LP	PO BOX 5030	SEATTLE, WA 98105	60655	571879	3988	Seattle, WA	160	195	459
UNALASKA	GREAT PACIFIC	GREAT PACIFIC LP	PO BOX 5030	SEATTLE, WA 98105	37660	608458	511	Seattel, WA	124	136	199
UNALASKA	MESSIAH	F/V MS AMY AND MESSIAH LP	PO BOX 5030	SEATTLE, WA 98105	66196	610150	6061	Seattle, WA	63	52	176
UNALASKA	MORNING STAR	DONA MARTITA LLC	20308 DAYTON AVE N	SEATTLE, WA 98133	38431	610393	208	Dutch Harbor	141	122	180
UNALASKA	MS AMY	F/V MS AMY AND MESSIAH LP	PO BOX 5030	SEATTLE, WA 98105	56164	920936	2904	Seattle, WA	90	101	149
UNALASKA	PROGRESS	RONDYS, INC.	5349 229TH AVE SE	ISSAQUAH, WA 98029	6	565349	512	Portland, Ore.	114	137	193
UNALASKA	SEA WOLF	KENDRICK BAY LP	PO BOX 5030	SEATTLE, WA 98105	35957	609823	1652	Unalaska	143	135	200
UNALASKA	VANGUARD	FUTURA FISHERIES, INC.	PO BOX 37	KODIAK, AK 99615	39946	617602	519	Juneau, AK	94	124	169
UNALASKA	WESTERN DAWN	F/V WESTERN DAWN, LLC	15409 NE 153rd STREET	WOODINVILLE, WA. 98072	22294	524423	134	Seattle, WA	112	134	198

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
UNISEA	ALSEA	RONDYS, INC.	5349 229TH AVE SE	ISSAQUAH, WA 98029	40749	626517	2811	Seattle, WA	124	80	168
UNISEA	AMERICAN EAGLE	TYNES ENTERPRISES, INC. ET AL.	1212 NW CULBERTSON DR	SEATTLE, WA 98177	39	558605	434	Seattle, WA	120	129	190
UNISEA	ARGOSY	RONDYS, INC.	5349 229TH AVE SE	ISSAQUAH, WA 98029	36547	611365	2810	Kodiak, AK	124	102	182
UNISEA	AURIGA	AURORA/AURIGA GP	2415 T AVE.	ANACORTES, WA 98221	56153	639547	2889	Seattle, WA	193	873	1249
UNISEA	AURORA	AURORA/AURIGA GP	2415 T AVE.	ANACORTES, WA 98221	56154	636919	2888	Seattle, WA	193	873	1249
UNISEA	DEFENDER	F/V DEFENDER LLC	2442 N W MARKET ST #414	SEATTLE, WA 98107	56676	554030	3257	Seattle, WA	195	423	1412
UNISEA	FIERCE ALLEGIANCE	FIERCE ALLEGIANCE, LLC	7215 156TH ST SW	EDMONDS, WA 98026	55111	588849	4133	Seattle, WA	166	134	198
UNISEA	GUN-MAR	ILDHUSO FISHERIES, INC.	101 NICKERSON, STE 340	SEATTLE, WA 98109	41312	640130	425	Seattle, WA	164	306	450
UNISEA	MAR-GUN	MARGUN ENTERPRISES, LLC	101 NICKERSON STE 340	SEATTLE, WA 98109	12110	525608	524	Seattle, WA	112	131	193
UNISEA	NORDIC STAR	F/V NORDIC STAR LLC	5470 SHILSHOLE AVE NW, STE 300	SEATTLE, WA 98107	961	584584	428	Seattle, WA	123	132	195
UNISEA	PACIFIC MONARCH	PACMON, LLC	5470 SHILSHOLE AVE NW, STE 500	SEATTLE, WA 98107	54645	557467	2785	Seattle, WA	185	326	479
UNISEA	SEADAWN	FV FISHERIES, INC. ET AL.	75-670 HALEWILI PLACE	KAILUA KONA, HI 96740	77	548885	2059	Newport, OR	124	128	189
UNISEA	STAR FISH	ALEUTIAN SPRAY FISHERIES, INC.	5470 SHILSHOLE AVE NW, STE 300	SEATTLE, WA 98107	12	561651	1187	Seattle, WA	123	133	196
UNISEA	STARLITE	STARLITE FISHERIES, LLC	7215 156TH ST SW	EDMONDS, WA 98026	34931	597065	1998	Seattle, WA	123	134	192
UNISEA	STARWARD	STARWARD FISHERIES, LLC	7215 156TH ST SW	EDMONDS, WA 98026	39197	617607	417	Seattle, WA	123	140	197

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
WESTWARD	ALASKAN COMMAND	ALASKAN COMMAND, LLC	2101 FOURTH AVE #1710	SEATTLE, WA 98121	57321	599383	3391	Unalaska	171	320 ITC	1067ITC
WESTWARD	ALYESKA	WA'ATCH, INC.	PO BOX 135	NEAH BAY, WA 98357	00045	560237	395	Neah Bay	111.5	134	198
WESTWARD	ARCTIC WIND	DONA MARTITA LLC	20308 DAYTON AVE N	SHORELINE, WA 98133	01112	608216	5137	Seattle	106.4	106 ITC (133 NRT)	356 ITC (196 GRT)
WESTWARD	CAITLIN ANN	DOOLEY, JOHN ET AL.	48 FAIRWAY PL	HALF MOON BAY, CA 94019	59779	980836	3800	San Francisco	106	108 NRT	135 GRT
WESTWARD	CHELSEA K	OCEAN DYNASTY LIMITED PARTNERS	2101 FOURTH AVE #1710	SEATTLE, WA 98121	62906	976753	4620	Seattle	136.5	307 ITC	1023 ITC
WESTWARD	DONA MARTITA	DONA MARTITA LLC	20308 DAYTON AVE N	SHORELINE, WA 98133	51672	651751	2047	Seattle	149.6	176 ITC (247 NRT)	589 ITC (394 GRT)
WESTWARD	HICKORY WIND	HICKORY WIND, LLC	PO BOX 908	KODIAK, AK 99615	47795	594154	993	Kodiak	107	98	140
WESTWARD	OCEAN HOPE 3	U.S. MARINE CORPORATION	4201 21ST AVE W	SEATTLE, WA 98199	48173	652397	1623	Kodiak	103 LOA	24NRT/73ITC	183GRT/243ITC
WESTWARD	PACIFIC KNIGHT	PACIFIC KNIGHT, L.L.C.	2101 FOURTH AVE #1710	SEATTLE, WA 98121	54643	561771	2783	Unalaska	165.1	202 NRT	297 GRT
WESTWARD	PACIFIC PRINCE	DOOLEY, JOHN ET AL.	48 FAIRWAY PL	HALF MOON BAY, CA 94019	61450	697280	4194	San Francisco	149	133 NRT	197 GRT
WESTWARD	VIKING	VIKING LIMITED PARTNERSHIP	2101 FOURTH AVENUE #1710	SEATTLE, WA 98121	00008	565017	1222	Seattle	135.1	124 ITC	416 ITC
WESTWARD	WESTWARD I	WESTWARD I, P	2101 FOURTH AVE #1710	SEATTLE, WA 98121	53247	615165	1650	Seattle	126.5	125 NRT	184 GRT

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
MOTHERSHIP	ALEUTIAN CHALLENGER	MEDDAR CORPORATION	2324 NW 90TH STREET	SEATTLE, WA 98117	50570	603820	1687	Seattle	89	52	175
MOTHERSHIP	ALYESKA	WA'ATCH, INC.	PO BOX 135	NEAH BAY, WA 98357	00045	560237	395	Neah Bay	111.5	134	198
MOTHERSHIP	AMERICAN BEAUTY	ALAKANUK BEAUTY LLC	2200 SIXTH AVE STE 707	SEATTLE, WA 98121	24255	613847	1688	Seattle	105.3	135	199
MOTHERSHIP	CALIFORNIA HORIZON	KYDAKA CORPORATION	4225 23RD AVE W #104	SEATTLE, WA 98119	33697	590758	412	Neah Bay, WA	82	123	181
MOTHERSHIP	MARGARET LYN	GREAT WEST SEAFOODS, L.P	4225 23RD AVE W #103	SEATTLE, WA 98199	31672	615563	723	Seattle	123	119	175
MOTHERSHIP	MAR-GUN	MARGUN ENTERPRISES, LLC	101 NICKERSON STE 340	SEATTLE, WA 98109	12110	525608	524	Seattle	112	130	190
MOTHERSHIP	MARK I	MARK I, INC.	4225 23RD AVE W #103	SEATTLE, WA 98199	6440	509552	1242	Seattle	98	124	182
MOTHERSHIP	MISTY DAWN	KATAHDIN, INC.	4225 23RD AVE W #104	SEATTLE, WA 98199	68858	926647	5946	Neah Bay, WA	96.8	100	199

MOTHERSHIP	MORNING STAR	SUPREME ALASKA SEAFOODS, INC.	4225 23RD AVE W #104	SEATTLE, WA 98199	41009	618797	7270	Anchorage, AK	87	54	180
MOTHERSHIP	NORDIC FURY	FURY GROUP, INC.	4005 20TH AVE W SUITE 207	SEATTLE, WA 98199	200	542651	1094	Seattle	110	133	198
MOTHERSHIP	OCEAN LEADER	EMMONAK LEADER, LLC	2200 SIXTH AVE #707	SEATTLE, WA 98121	32	561518	1229	Seattle	102.5	134	197
MOTHERSHIP	OCEANIC	OCEANIC FISHERIES, LLC	19731 21 ST AVE NW	SEATTLE, WA 98177	3404	602279	1667	Seattle	122	134	192
MOTHERSHIP	PACIFIC CHALLENGER	PACIFIC DAWN LLC	2324 N.W.90TH ST	SEATTLE, WA 98117	6931	518937	657	Seattle	104	105	155
MOTHERSHIP	PACIFIC FURY	FURY GROUP, INC.	4005 20TH AVE W SUITE 207	SEATTLE, WA 98199	33	561934	421	Seattle	110	133	198
MOTHERSHIP	POPADO II	PAPADO, INC.	101 NICKERSON, STE. 340	SEATTLE, WA 98109	55512	536161	2087	Neah Bay, WA	118.5	137	199
MOTHERSHIP	TRAVELER	REX HOCKEMA	7071 HWY 20	TOLEDO, OR 97391	58821	929358	3404	Newport, OR	109	150	199
MOTHERSHIP	VESTERAALEN	VESTERAALEN L.L.C.	4225 23 AVE W # 100	SEATTLE, WA 98119	38342	611642	517	Seattle	105	136	198
MOTHERSHIP	VANGUARD	FUTURA FISHERIES, INC.	PO BOX 37	KODIAK, AK 99615	39948	617802	519	Juneau, AK	94	124	189
MOTHERSHIP	WESTERN DAWN	F/V WESTERN DAWN, LLC	12711 6TH NW	SEATTLE, WA 98177	22294	524423	134	Seattle, WA	112	134	198

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS	ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
PCC	ALASKA OCEAN	Alaska Ocean Seafood	2415 T Avenue #206, Anacortes, WA 98221	60407	637856	3794	Seattle	376	2542	7419
PCC	AMERICAN DYNASTY	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	59378	951307	3881	Seattle	272	2535 ITC	5111 ITC
PCC	AMERICAN ENTERPRISE	INACTIVE Trident		54836	594803	2760				
PCC	AMERICAN TRIUMPH	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	60660	646737	4055	Seattle	286	2151 ITC	5015 ITC
PCC	ARCTIC FJORD	Arctic Fjord, Inc.	400 North 34th Street, Seattle, WA 98103	57450	940666	3396	Seattle	275	1058 ITC	3369 ITC
PCC	ARCTIC STORM	Arctic Storm, Inc.	400 North 34th Street, Seattle, WA 98103	54886	903511	2943	Seattle	334	3198 ITC	4068 ITC
PCC	ENDURANCE	INACTIVE		57201	592206	3360				
PCC	HIGHLAND LIGHT	Highland Light Seafoods, LLC	3600 15th Avenue West, Suite 300, Seattle, WA 98119	56974	577044	3348	Seattle	270	940	2417
PCC	ISLAND ENTERPRISE	Trident Seafoods Corporation	5303 Shilshole Avenue NW, Seattle, WA 98107	59503	610290	3870	Seattle	304	2262	2766
PCC	KATIE ANN	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	55301	518441	1996	Seattle	296	693 NRT	1593 GRT
PCC	KODIAK ENTERPRISE	Trident Seafoods Corporation	5303 Shilshole Avenue NW, Seattle, WA 98107	59170	579450	3871	Seattle	262	1190	1584
PCC	NORTHERN EAGLE	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	56618	506694	3261	Seattle	344	1592 ITC	5308 ITC
PCC	NORTHERN GLACIER	Glacier Fish Company	1200 Westlake Avenue North, Ste. 900, Seattle, WA 98109	48075	663457	661	Seattle	201	947	1109
PCC	NORTHERN HAWK	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	60785	643771	4063	Seattle	344	1557 ITC	5190 ITC
PCC	NORTHERN JAEGER	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	60202	521069	3896	Seattle	336	1577 ITC	5239 ITC
PCC	OCEAN ROVER	American Seafoods Company	Market Place Tower, 2025 First Avenue, Ste. 900, Seattle, WA 98121	56987	552100	3442	Seattle	256	1303 ITC	4345 ITC
PCC	PACIFIC GLACIER	Glacier Fish Company	1200 Westlake Avenue North, Ste. 900, Seattle, WA 98109	56991	933827	3357	Seattle	276	1531	2241
PCC	SEATTLE ENTERPRISE	Trident Seafoods Corporation	5303 Shilshole Avenue NW, Seattle, WA 98107	56789	904787	3245	Seattle	270	1162	1562
PCC	STARBOUND	Starbound LLC	5470 Shilshole Avenue NW, Ste. 300, Seattle, WA 98107	57621	944656	3414	Seattle	205.8	1042	1533
PCC	U.S. ENTERPRISE	INACTIVE - Trident		55125	921112	3004				

COOP NAME	VESSEL NAME	OWNER	OWNER ADDRESS		ADFG	CG NUM	AFA PERMIT	HOME PORT	LENGTH	NET TONNAGE	GROSS TONNAGE
HSCC	AMERICAN CHALLENGER	AMERICAN CHALLENGER, LLC	2025 1ST AVE, STE 900	SEATTLE, WA 98121	62152	633219	4120	Seattle, Wa.	106'	82	255
HSCC	FORUM STAR	FORUM STAR LLC	2025 1ST AVE, STE 900	SEATTLE, WA 98121	59687	925863	4245	Seattle, Wa	116'	120	176
HSCC	MUIR MILACH	ALEUTIAN SPRAY REVERSE LLC	5470 SHILSHOLE AVE STE 300	SEATTLE, WA 98107	41021	611524	480	Seattle, Wa	102' 2"	54	182
HSCC	NEAHKAHNIE	F/V NEAHKAHNIE, LLC	400 N 34TH ST, STE 306	SEATTLE, WA 98103	32658	599534	424	Seattle, Wa	109'	133	196
HSCC	OCEAN HARVESTER	HARVESTER ENTERPRISES, LLC	101 NICKERSON ST #340	SEATTLE, WA 98109	101	549892	5130	Seattle, Wa	108'	138	198
HSCC	SEA STORM	SEA STORM LP	400 N 34TH ST, STE 306	SEATTLE, WA 98103	40969	626959	420	Seattle, Wa	123' 8"	146	199
HSCC	TRACY ANNE	TRACY ANNE, INC.	3600 15TH AVE W, STE 300	SEATTLE, WA 98119	54654	904659	2823	Seattle, Wa	86' 3"	93	138

Draft ENVIRONMENTAL ASSESSMENT
for the Issuance of an Exempted Fishing Permit to Exempt Pollock Vessels Operating Under a Salmon Bycatch Reduction Intercooperative Agreement from Salmon Savings Area Closures

October 2006

Lead Agency: National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Regional Office
Juneau, Alaska

Responsible Official: Robert D. Mecum
Acting Regional Administrator
Alaska Regional Office

For Further Information: Jason Anderson
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802
(907) 586-7228

Abstract: This document is an Environmental Assessment (EA) of the potential impacts of issuing an exempted fishing permit (EFP) to exempt vessels engaged in directed fishing for pollock and operating under a salmon bycatch reduction intercooperative agreement (ICA) from salmon savings area closures. The purpose of the project is to evaluate the effectiveness of a "voluntary rolling hot spot" (VRHS) salmon bycatch management system developed by the Bering Sea pollock harvesting cooperatives 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. The bycatch management system to be evaluated is described in the "Salmon Bycatch Management Agreement 2006 – 2008 Bering Sea Pollock Fishery" (the Intercooperative Agreement or ICA), a copy of which is attached. The goal of the project is to develop a Bering Sea pollock fishery salmon bycatch management system that quickly and efficiently adapts to changes in salmon bycatch patterns through the course of pollock fishing seasons, and that effectively reduces pollock fishing activity in areas of elevated salmon bycatch during years of relatively low, moderate, and high salmon bycatch incidence without imposing impracticable restrictions on the affected fleet. Our analysis found no significant impacts on the human environment for this action.

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EXECUTIVE SUMMARY

In the mid-1990s, the Council and NOAA Fisheries implemented regulations to control the bycatch of Chinook salmon and non-Chinook salmon[1] taken in the BSAI trawl fisheries. These regulations established closure areas where and when salmon bycatch had been highest, based on historical observer data. Information from the fishing fleet indicates that bycatch may be exacerbated by the current regulatory closures, as much higher salmon bycatch rates are reportedly encountered outside of the closure areas. Some of these bycaught salmon include Chinook and chum stocks of concern, originating from western Alaska. Furthermore, the closure areas impose increased costs on the pollock fleet and processors. To address this immediate problem, the pollock industry has applied for an exempted fishing permit (EFP) to exempt these vessels from salmon savings area closures when they are operating under an innovative contractual agreement to avoid salmon bycatch.

This EFP would continue work completed under a separate EFP in effect from August 3, 2006 through November 1, 2006. The 2007 EFP would mirror the 2006 EFP, but would allow participants to explore the use of these contractual agreements during a different season, with different salmon bycatch problems.

This analysis considers the following alternatives to address the problem identified above.

Alternative 1: Status Quo

No EFP is issued. Pollock vessels would not be exempted from closures of Chinook and chum salmon savings areas.

Alternative 2: An EFP is issued (preferred alternative)

Under Alternative 2, an EFP would exempt non-community development quota (CDQ) and CDQ pollock vessels participating in a salmon bycatch reduction ICA from closures of the Chinook and chum salmon savings areas in the Bering Sea and enable the pollock fleet to utilize its internal cooperative structure to implement a salmon reduction ICA. The salmon bycatch reduction ICA describes operational requirements for participants and is intended to reduce salmon bycatch in the BSAI non-CDQ and CDQ pollock fisheries. A full discussion of the intercooperative agreement, and how the fleet would be organized within this system, is contained in Chapter 2. The EFP would be effective from January 20, 2007, through November 1, 2007, and could be extended for an additional year by the NMFS Regional Administrator.

Environmental Assessment

Alternative 1

The fishery performance analysis indicates that salmon bycatch may be higher outside the savings areas than inside. However, evidence indicates that the amount of salmon caught incidentally in the groundfish fisheries represents a low overall proportion of salmon abundance and harvest in the directed salmon fisheries (commercial, subsistence, and recreational). The results of an ongoing ESA consultation on ESA-listed Chinook salmon are as yet unknown.

[1] Non-Chinook salmon bycatch in the BSAI groundfish fisheries, while comprised of all four of the remaining salmon species, has historically been composed of upwards of 95% chum salmon. For purposes of this document, reference to "non-Chinook" bycatch will reflect this historical species composition pattern.

The *Final Alaska Groundfish Fisheries Programmatic Supplemental Environmental Impact Statement* (NMFS 2004b) and the *Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska* (NMFS 2005) have both concluded that there are no significant adverse impacts on the physical and biological environment or the ecosystem from the current groundfish management regime. As a result, Alternative 1 is found to have no significant impacts on these components. The socioeconomic and economic impacts are discussed below.

Alternative 2

Salmon bycatch is expected to decrease under this alternative, given the flexible system provided by dynamic hot spot management of the pollock fleet. Evidence indicates that the amount of salmon caught incidentally in the groundfish fisheries represents a low overall proportion of salmon abundance and harvest in the directed salmon fisheries (commercial, subsistence, and recreational).

No significant impact on pollock or other fish stocks is anticipated under this alternative. Impacts on pollock catch per unit effort cannot be predicted, but to the extent that it differs from the status quo, this may benefit or disadvantage habitat, marine mammals, and seabirds. Any change is likely to be small, however, and not discernable at a population level, therefore no significant impacts would result from this alternative. This action has no discernable impacts on the ecosystem. Socioeconomic and economic impacts are discussed below.

Socioeconomic Analysis

The socioeconomic analysis of alternatives presented in the EA has shown that Alternative 1, the status quo, has likely resulted in dramatic increases in salmon bycatch in the Bering Sea pollock trawl fishery in recent years. This potentially translates into foregone salmon use values, widely distributed across geographic regions and user groups. A very crude "first approximation" of these foregone use values can be made by assuming that, absent their loss as bycatch in the trawl fisheries, these salmon would all have been commercially harvested as mature fish, in terminal fisheries. Making this clearly extreme simplifying assumption, the resulting ex-vessel value of bycaught Chinook salmon would have been nearly $1 million, and for bycaught non-Chinook salmon more than $250,000, based on 2003 bycatch and ex-vessel price data.

For a number of reasons, these estimates should be regarded with care. First, while these values likely overstate the true commercial ex-vessel values foregone, by failing to account for natural mortality, growth and years from maturity, avoidance of capture in terminal fisheries, and source of origin, they may indeed understate the total economic (and social) value, when all uses and users are included. Evidence strongly suggests that a significant part of the chum salmon biomass present in the Bering Sea is of Asian origin. Attributing the lost ex-vessel value of these bycaught fish to U.S. commercial fisheries exaggerates the commercial impacts of this bycatch. Alternatively, for some salmon species, in some areas, "commercial" catch is neither the most prevalent, nor most valuable form of use. For example, the "value" of foregone subsistence catches, which may be substantial in some impacted areas and for some salmon species, has not been treated in this analysis (nor, have "personal-use" impacts where this distinction is relevant). Similarly, some of these fish likely would have recruited into sport fisheries, not only in Alaska, but south through British Columbia (the value of which is not of concern), Washington, and Oregon. These differential values, as between commercial ex-vessel and U.S. sport fishing use, are not reflected in the analysis. Almost certainly, some of the bycaught salmon are from Washington and Oregon runs that are listed under ESA as threatened or endangered. The analysis does not account for the genetic, reproductive, and non-use values that are associated with bycatch losses of these fish. Finally, even for those salmon that are not members of ESA listed runs, their interception in the trawl fisheries of

the BSAI potentially impose economic and biological losses through foregone reproductive potential. Fish that contribute to escapement generate successive cohorts that perpetuate the biological, genetic, economic, and non-economic use cycle of these species. These values have not been included in this analysis.

While it has been demonstrated (Queirolo 1986, 1988; and Queirolo et al., 1988) that it is technically feasible to quantitatively account for the economic and biological impacts attributable to bycatch loss, beyond those accruing in the short run to terminal area commercial fishing, it was not possible, due to data and technical constraints, to adapt Queirolo's methodological approach to the present assessment.

Nonetheless, the dramatic increases in salmon bycatch observed recently under the status quo likely translate into increases in forgone value accruing across the entire spectrum of users and uses. Retention of the status quo alternative also carries with it the risk of future (potentially economically and operationally drastic) time and area restrictions on the Bering Sea pollock trawl fleet, as a result of exceeding the ESA Chinook salmon incidental take permit cap.

Alternative 1 also imposes increased operational costs on the trawl fleet when the salmon savings areas are closed, and may adversely affect vessel safety. The closures may also be responsible for detrimental effects on product quality for the inshore catcher vessel (CV) fleet. The decreased quality appears to have reduced product grade, eliminated fillet production in some cases, and increased shoreside processing facility costs. Alternative 1 also results in some management and enforcement costs to administer the closures and monitor vessel locations.

Alternative 2 would issue an EFP to exempt pollock vessels from compliance with salmon savings area closures if they operate under a salmon bycatch reduction intracooperative agreement, creating economic incentives for individual vessels to reduce salmon bycatch by penalizing the worst offenders. This alternative would likely reduce operational costs, improve vessel safety, and improve product quality, at least for the inshore sector. Alternative 2 also has the potential to reduce salmon bycatch more than the status quo management measures, increasing the overall benefits of bycatch reduction. Alternative 2 also provides some mitigation possibilities for western Alaska fishing organizations.

Alternative 2 would reduce management and enforcement costs for government agencies, by transferring much of that cost to industry. However, the industry has volunteered to bear this cost, in hopes of reducing operational costs associated with the status quo, while at the same time attempting to reduce salmon bycatch. If bycatch is not reduced under Alternative 2, and the Bering Sea pollock trawl fleet continues to exceed the ESA Chinook salmon incidental take permit cap, severe operational restrictions on the fleet could result. Perhaps the greatest benefit of this alternative is that it increases the economic incentive for industry to reduce salmon bycatch rates.

Public Testimony Sign-Up Sheet

Agenda Item D-2(a) PSC VIP

	NAME (PLEASE PRINT)	AFFILIATION
1	LORI SWANSON	GFF
2	Paul MacGregor	At-Sea Processors Assn
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NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person " to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

Public Testimony Sign-Up Sheet

Dec 11 2006

Agenda Item D-2(5) PSC EFP ~~[illegible]~~

	NAME (PLEASE PRINT)	AFFILIATION
1	Becca Robbins Gisclair	Yukon River Drainage Fishers A.
2	Lori Swanson	GTF
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Draft Report to the North Pacific Fishery Management Council For the Bering Sea and Aleutian Islands Management Area (BSAI) Groundfish Fishery Exempted Fishing Permit #06-04.

Karl Haflinger, Sea State Inc. - Project Manager

John Gruver, AFA Catcher Vessel Intercooperative - Project Manager and Permit Holder

Kevin Duffy, Pollock Conservation Cooperative - Permit Holder

This draft report is to the North Pacific Fishery Management Council and covers the Bering Sea and Aleutian Islands Management Area (BSAI) Groundfish Fishery Exempted Fishing Permit #06-04. During the course of the fishery, the pollock Intercoop closed 25 different areas to fishing, based on high bycatch rates for chinook or chum salmon, experienced by vessels working in the area. Maps of the closures are shown in Appendix 1. Under the terms of the EFP, applicants are to submit to the Council a report analyzing:

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. 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 sued as the basis of the audit.

A final report which will include an additional section on compliance/enforcement will be presented to the Council in February and will include the results of an external audit to be performed by Alaska Biological Research (ABR Inc).

Number of salmon taken by species during the experiment:

The EFP ran from 8/1 through the end of the pollock fishery. For the sake of comparison we have included catch and bycatch running back to 2000. These data are compiled from plant landing information for catcher vessels delivering to shoreside processors, and observer data for mothership catcher vessels and catcher-processors. The "other salmon" category includes all non-chinook salmon. Observer data for both offshore and shoreside deliveries show that only very small numbers of salmon other than chum in this category (152 unidentified, 31 pinks, and 5 silvers for the 2006B season EFP).

Table 1. Catch and bycatch of pollock and salmon in the directed pollock fishery for full year and from August 1 through October 31, 2000 – 2006 (includes CDQ harvest).

	8/1 of year onward			Full year		
Year	Pollock (mt)	Chinook (N)	Other sal (N)	Pollock (mt)	Chinook (N)	Other sal (N)
2006	546,499	21,244	123,266	1,453,037	80,844	277,996
2005	495,544	42,581	333,401	1,451,268	68,038	638,570
2004	490,934	27,889	380,652	1,437,776	50,714	428,793
2003	526,149	13,083	156,909	1,453,525	44,425	174,070
2002	558,510	12,996	78,407	1,437,789	33,786	83,833
2001	601,151	13,546	47,061	1,351,956	30,163	53,255
2000	562,660	1,618	40,771	1,080,734	5,245	57,541

Evaluation of salmon savings.

The evaluation of the number of salmon saved by the IC program is based on tracking vessels that fished in a closed area before it closed, and then comparing their subsequent bycatch to see if it was lower than expected if the area had not closed. The procedure is as follows:

1. Extract all observer data for haul locations falling inside a closure area, for a 5 day period preceding the closure. For shoreside catcher vessels, aggregate the hauls that have the same "start fishing date" so that hauls with the same bycatch rate are not artificially repeated. As an example, if 2 hauls from the same catcher vessel trip show up in the closed area, they will have the same bycatch rate because observers pro-rate bycatch evenly across all hauls. Consider them a single observation with a value equal to the sum of the two hauls' pollock and salmon.
2. Consider all of independent offshore sector (C/P and mothership) hauls, and combined "trip-level" hauls to be estimates of the bycatch ratio $Ri = \sum yi / \sum xi$, where y are counts of chinook or chum salmon, and x is the pollock catch from individual hauls (offshore sector) or grouped, same-trip hauls (shoreside), and *i* indicates a separate closure.
3. Extract the same haul or "grouped" haul information, for the same vessels, for the next 5 days. Their associated bycatch is available from either observer or plant delivery information. Compute their expected bycatch had they been able to stay and fish inside the now-closed area, by summing the pollock catch of all vessels in this category, and multiplying this summed pollock catch by the matching bycatch ration, *R*i above.
4. Compute the standard error of this estimated Y (overall salmon bycatch if vessels had stayed in the area and fished with bycatch rate R) treating R as a ratio estimator (Snedecor and Cochran, Statistical Methods, 8th Edition, p 452).

The three maps below illustrate this procedure for the chinook closure of 9/22/06. Figure 1 shows the chinook closure that began on 9/22/06, and includes the locations of observed hauls taken in that area during the 5 day period preceding the closure. After the closure, vessels who had been in that closure area (i.e. those whose hauls are shown in Figure 1) either moved a small distance to the southwest, or made large moves to the northwest (Figures 2 and 3). Lower chinook rates were found in all of the new fishing areas.

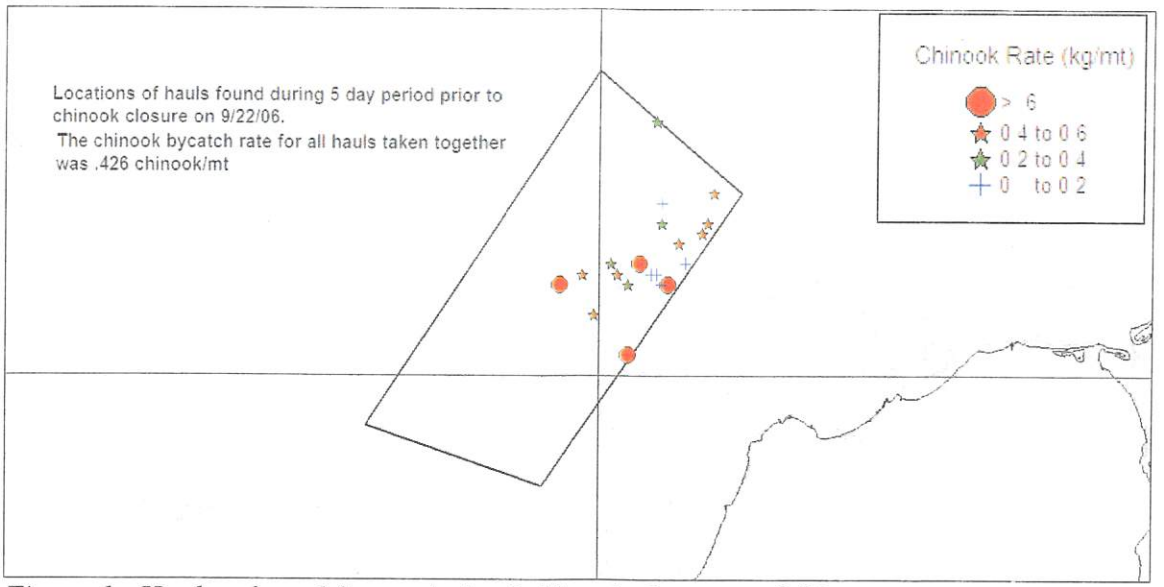


Figure 1. Hauls selected for analysis of chinook closure on 9/22

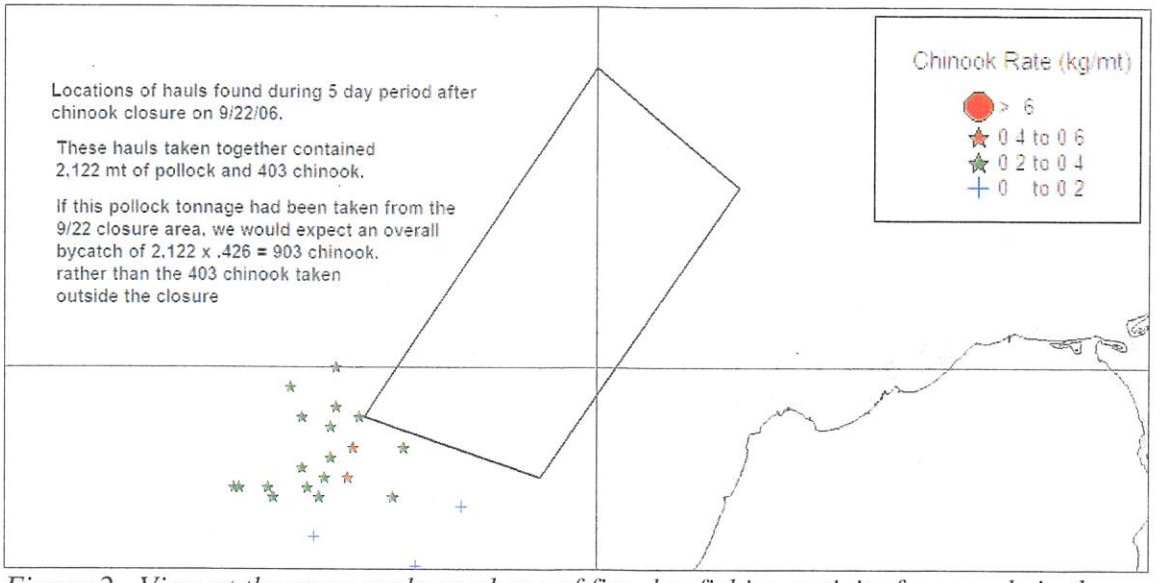


Figure 2. View at the same scale as above of five day fishing activity for vessels in the first map (Fig 2) showing positions that led to a reduction from an expected chinook take of 903 to 403 actual (i.e. counted by observers from the haul positions shown).

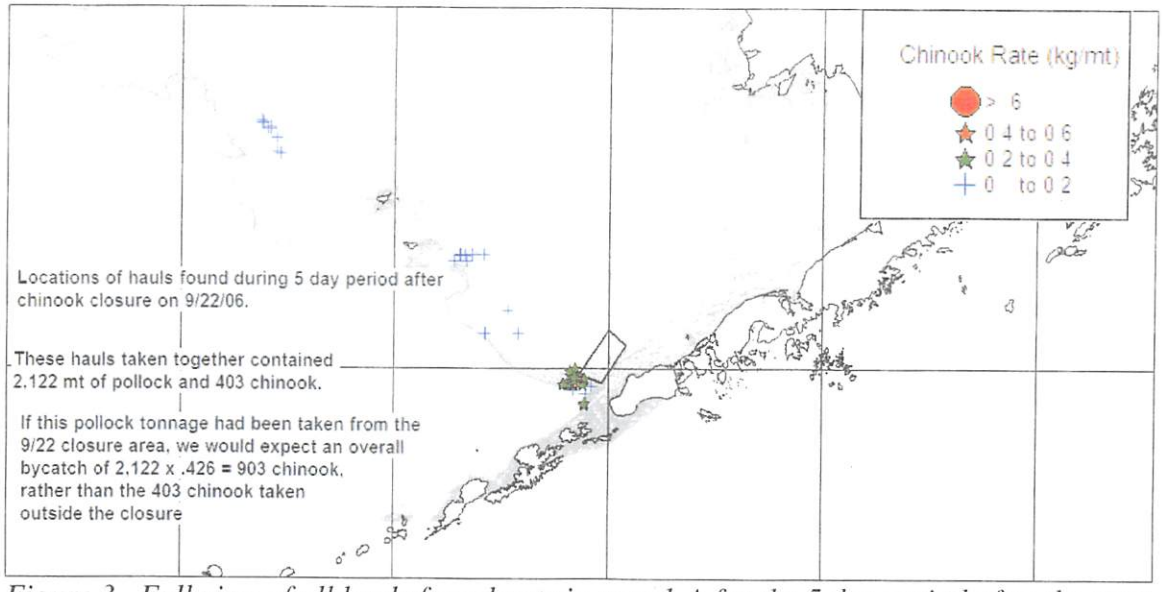


Figure 3. Full view of all hauls from boats in map 1-A for the 5 day period after the start of the 9/22 closure

The results from these calculations are shown in tables below. For the period 8/1/06 – 10/31/06 there were 25 closures that could be evaluated, and of these 24 closures for which observer data could be found from vessels fishing inside the areas before they closed. (Note that closures may be based on deliveries from catcher vessels that did not carry observers, and thus there could be closures for which there is no observer information prior to the closure). Of these 24, we were able to find 20 that also had post-closure observer information for vessels that fished inside prior to the closure (that is, we had observer information for boats both before and after the closure). Again, shoreside catcher vessels may have had an observer aboard before the closure but then delivered and come back to the grounds without an observer, thus removing the boat from before/after comparisons. Finally, two of the closures with both prior and subsequent observer information were limited to a sample size of one tow (or one combined tow for shoreside CVs with aggregated tow data), and for those closures estimates of variance about R could not be calculated.

Table 2 below is a summary of the results for both chinook and salmon closures (Tables 4 and 5 at the end of this section show the underlying data, by closure, with associated standard errors). The results indicate that for the approximately 40,000 mt of observed groundfish associated with boats that fished inside areas before they were closed, and that also had observers after closures, 1,692 chinook and 62,732 chum were avoided. These numbers represent reductions of 20% and 64% respectively for these species, for the

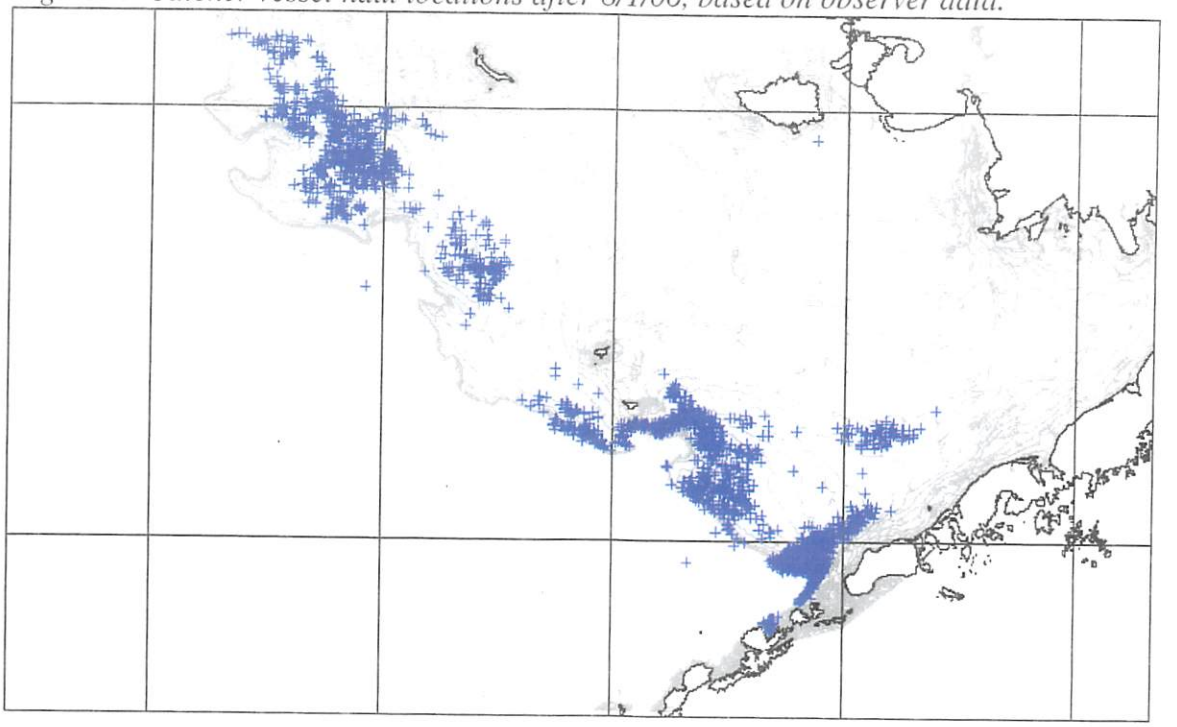
vessels analyzed. Chinook closures appear to have had an associated significant effect in lowering chum bycatch, while chum closures appear to have a negative, but likely insignificant, effect in lowering chinook bycatch.

Table 2. Summary of Chinook and chum closure effectiveness

	Chinook closures	Chum closures	All closures
Pollock catch (after closure)	24,852	16,839	41,691
Actual chinook bycatch	6,270	448	6,718
Expected chinook bycatch	8,057	353	8,410
Chinook savings	1,787	-95	1,692
% reduction	22%	-27%	20%
Actual chum bycatch	7,671	27,697	35,368
Expected chum bycatch	22,786	75,314	98,100
Chum savings	15,115	47,617	62,732
% reduction	66%	63%	64%

It should be emphasized that the overall numbers of salmon saved are for the group of vessels with observers that could be tracked by fishing immediately prior to the closure in the closure area, and then just after the area closed. There are other boats whose activities are affected by closures but that don't fall into this analysis. These include vessels without observers and vessels that avoided the closure areas entirely and chose instead to fish to the northwest, where salmon are rarely encountered. For shoreside catcher vessels in particular, the uncertainty over whether or not the grounds they are fishing will be closed is significant. These catcher vessels often have only two days time in which to fill their vessels and if in the middle of a trip their grounds are taken away by a salmon closure, they may eventually be forced to return to shore with only a partial load. We cannot quantify the weight of this factor in captain's decision to fish away from the closure areas, but have had the concern reported to us and note that it is another avenue in which salmon closures reduce bycatch, but one that cannot be analyzed with the methods at hand. Figure 4 below shows haul locations based on observer data for shoreside catcher vessels after August 1. The set of hauls to the west of 171 W (i.e. those up to the northwest of the Pribilof Islands) represent 98,000 mt of pollock, while those to the east represent 82,000 mt.

Figure 4. Catcher vessel haul locations after 8/1/06, based on observer data.



Finally, Figure 5 shows bycatch rates for various pollock fishing areas from 9/5 onward, which is when most chinook were encountered (see Figure 6 below for chinook bycatch timing diagram). The EFP closures were concentrated in the Unimak Pass area (known as the horseshoe) and extending up along Unimak Island. Their overall effect was to keep the bycatch rate for this area down to .26. Most of the main fishing grounds south of Pribilof canyon showed similar bycatch rates. An area at the head of Pribilof Canyon had somewhat lower rates, but was still not free of chinook salmon. The only areas that appeared to be almost completely clean were up near Zhemchug canyon (R = .01), which is out of the reach of many shoreside catcher vessels, and an area further up in Bristol Bay (R = .03) which is much closer, but which rarely has fishable concentrations of pollock in the B season. It is apparent that, for 2006 at least, no closures short of a complete cessation of pollock fishing south of the Pribilof Islands would have reduced overall bycatch rates south of the Pribilofs to much below .25 salmon per mt. Individual closure bycatch rates listed in Table 3 below show that the closure areas generally had bycatch rates higher than the .25 level that appeared widespread south of the Pribilofs during the 2006B season. This indicates that the procedures used to identify hotspots successfully result in creating closure areas that effectively reduce salmon bycatch in the Bering Sea pollock fishery.

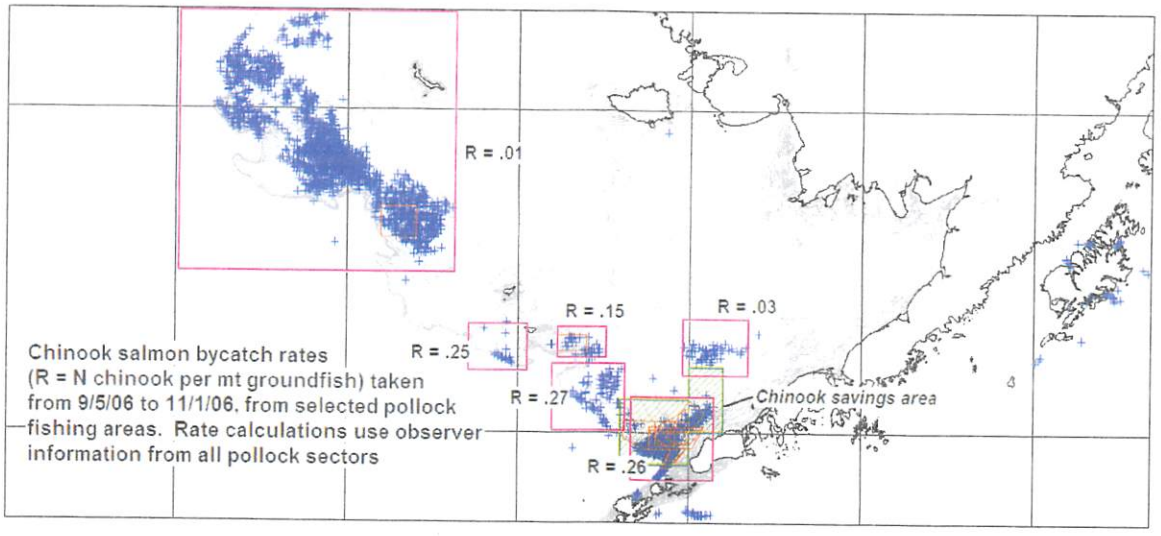


Figure 5. Chinook bycatch rates for major pollock grounds, 9/5/06 – 11/1/06. Rates were computed from all observer hauls that occurred in purple blocks. Thin red shapes indicate EFP chinook and chum closures from 9/5 onward. Green shading indicates the old Chinook Salmon Savings Area.

Table 3. Bycatch rates found within closure areas for the 5 day interval preceding the closure.

ClosureType	Date	Chinook rate (N/mt)	Chum rate (N/mt)
Chum	80406	0.00	4.08
Chum	80406	0.02	3.99
Chum	80806	0.01	4.33
Chinook	81106	0.09	15.98
Chum	81506	0.01	2.42
Chum	81806	0.01	3.55
Chum	82206	0.02	8.16
Chum	82506	0.03	11.50
Chinook	90106	0.08	0.61
Chum	90806	0.17	0.32
Chum	91206	0.33	0.00
Chinook	91506	0.33	0.44
Chinook	91906	0.32	0.04
Chinook	92206	0.43	0.44
Chinook	92606	0.22	0.38
Chinook	92906	0.33	0.34
Chinook	100306	0.14	0.02
Chinook	100606	0.32	0.52
Chinook	101006	0.17	0.39
Chum	101006	1.09	23.64
Chinook	101306	0.43	0.17
Chinook	101706	0.33	0.13
Chinook	102006	0.31	0.14
Chinook	102406	0.34	0.16

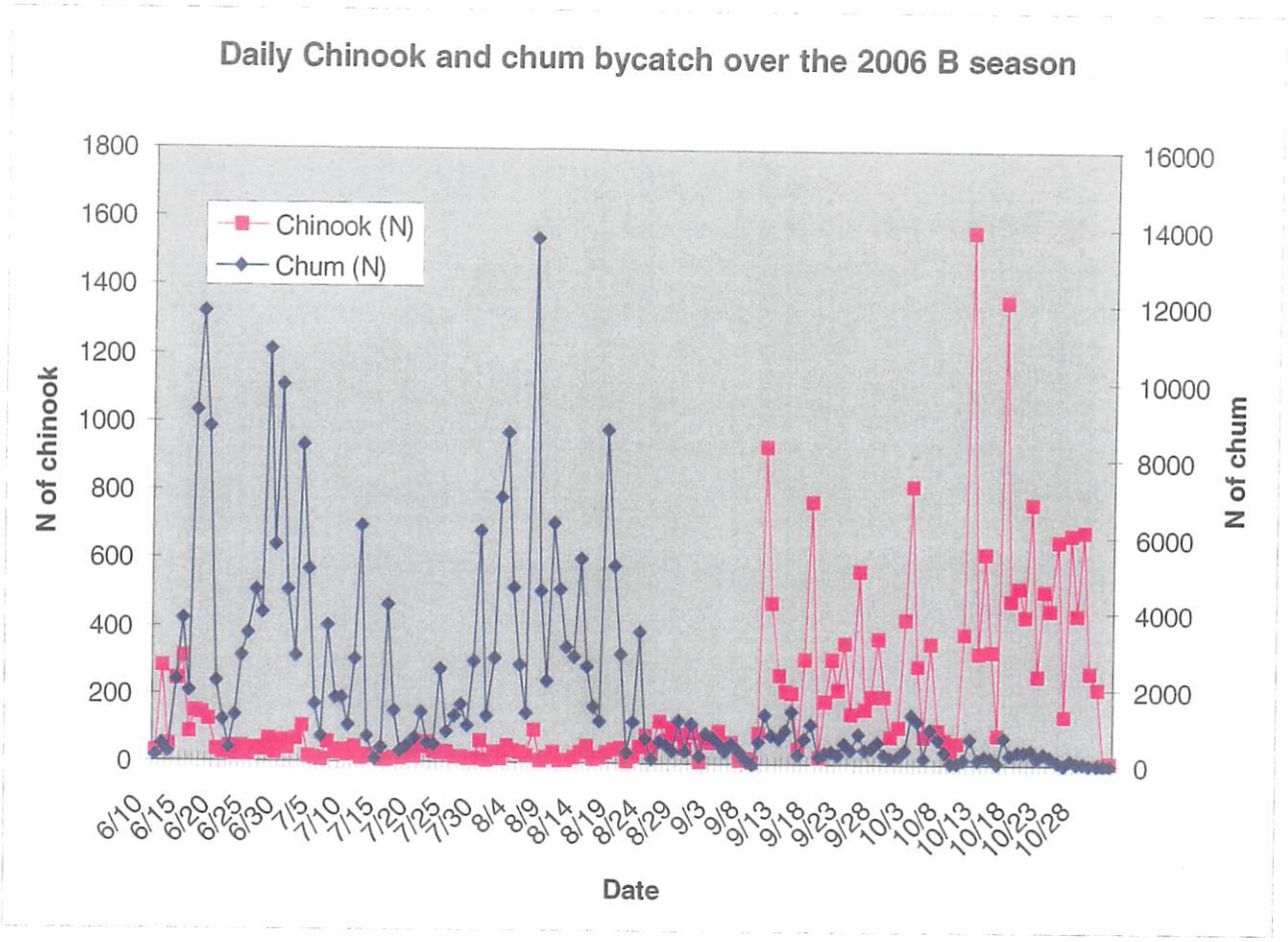


Figure 6. Timing of chinook and chum bycatch during the 2006 B season

Table 4. Chinook and chum salmon closure effectiveness, by chinook closure

Closure type	Date of closure	"After" closure pollock catch (mt)	"After" closure chinook	"After" closure chums	Estimated chinook catch	Chinook reduction (estimate - actual)	Std Err chinook	Estimated chum catch	Chum reduction (estimate - actual)	Std Err chum	Number of samples prior to closure	Number of samples after closure
Chinook	8/11/06	1,003	9	2,505	94	85	12	16,027	13,522	977	4	6
Chinook	9/01/06	640	16	279	49	33	1	391	111	4	3	4
Chinook	9/15/06	3,900	948	872	1,303	355	80	1,724	852	138	19	21
Chinook	9/19/06	609	100	99	196	96		22	-77		1	3
Chinook	9/22/06	2,122	403	660	906	503	53	931	271	32	11	12
Chinook	9/29/06	1,640	573	664	540	-33	37	554	-110	65	12	11
Chinook	10/03/06	359	21	93	49	28		6	-87		1	2
Chinook	10/06/06	2,156	558	1,072	681	123	102	1,112	40	294	17	18
Chinook	10/10/06	594	220	113	104	-116	16	231	118	24	3	3
Chinook	10/13/06	2,163	654	254	935	281	88	361	107	30	7	13
Chinook	10/17/06	3,290	1,116	427	1,081	-35	100	438	10	65	16	28
Chinook	10/20/06	2,089	570	357	648	79	73	295	-61	49	14	14
Chinook	10/24/06	4,286	1,083	275	1,471	389	134	695	419	53	20	21
Totals		24,852	6,270	7,671	8,057	1,787		22,786	15,115			

Table 5. Chinook and chum salmon closure effectiveness, by chum closure

Closure type	Date of closure	"After" closure pollock catch (mt)	"After" closure chinook	"After" closure chums	Estimated chinook catch	Chinook reduction (estimate - actual)	Std Err chinook	Estimated chum catch	Chum reduction (estimate - actual)	Std Err chum	Number of samples prior to closure	Number of samples after closure
Chum	8/04/06	9,814	94	18,025	157	63	21	39,166	21,142	6,143	17	59
Chum	8/08/06	509	3	1,005	6	3	1	2,204	1,199	79	3	2
Chum	8/15/06	1,744	24	5,943	14	-10	3	4,221	-1,722	591	9	9
Chum	8/18/06	1,063	21	1,144	15	-6	2	3,771	2,627	919	4	6
Chum	8/22/06	2,823	163	1,428	44	-119	9	23,026	21,598	3,531	8	17
Chum	8/25/06	237	5	55	6	2	0	2,722	2,667	7	2	2
Chum	9/08/06	649	138	97	111	-27	16	205	108	10	3	4
Totals		16,839	448	27,697	353	-95		75,314	47,618			

Dirty 20 list appearances

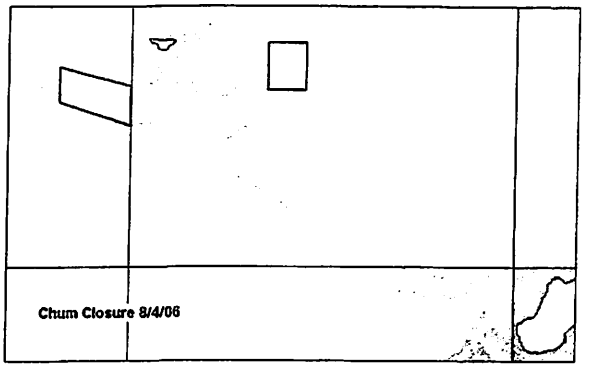
Number of weeks each vessel was on the chinook dirty 20 list

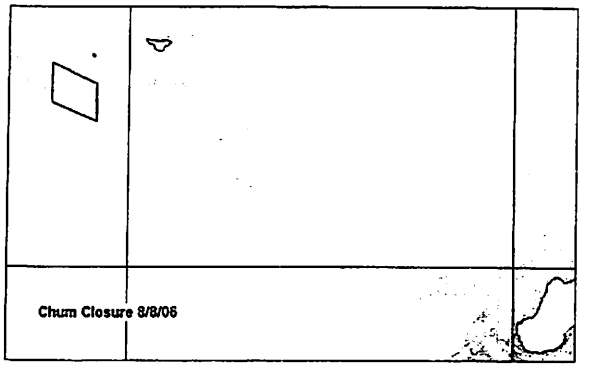
Vessel	N of weeks	Vessel	N of weeks	Vessel	N of weeks
ALASKA OCEAN	0	FIERCE ALLEGIANCE	0	OCEANIC	0
ALASKA ROSE	2	GLADIATOR	3	PACIFIC CHALLEN	0
ALASKAN COMMAND	0	GOLD RUSH	0	PACIFIC EXPLORER	2
ALDEBARAN	4	GOLDEN DAWN	2	PACIFIC GLACIER	0
ALSEA	0	GOLDEN PISCES	0	PACIFIC PRINCE	0
ALYESKA	0	GREAT PACIFIC	3	PACIFIC RAM	0
AMERICAN BEAUTY	0	GUN-MAR	0	PACIFIC VIKING	5
AMERICAN DYNASTY	0	HALF MOON BAY	0	PEGASUS	0
AMERICAN EAGLE	0	HAZEL LORRAINE	0	PEGGY JO	0
AMERICAN TRIUMPH	0	HICKORY WIND	0	PERSEVERANCE	0
ANITA J	0	HIGHLAND LIGHT	0	POSEIDON	0
ARCTIC EXPLORER	3	ISLAND ENTERPRISE	0	PREDATOR	0
ARCTIC FJORD	0	KODIAK ENTERPRISE	0	PROGRESS	2
ARCTIC STORM	0	LESLIE LEE	0	RAVEN	0
ARCTIC WIND	0	LISA MELINDA	0	ROYAL AMERICAN	2
ARCTURUS	5	MAJESTY	0	SEA WOLF	3
ARGOSY	0	MAR-GUN	0	SEA WOLF	0
AURIGA	0	MISS BERDIE	0	SEADAWN	0
AURORA	0	MORNING STAR	0	SEATTLE ENTERPRIS	0
BERING ROSE	2	NORDIC FURY	0	SEEKER	0
BLUE FOX	0	NORDIC STAR	0	SOVEREIGNTY	5
BRISTOL EXPLORER	4	NORTHERN EAGLE	0	STARBOUND	0
CAITLIN ANN	0	NORTHERN GLACIER	0	STARFISH	0
CHELSEA K	0	NORTHERN HAWK	0	STARLITE	0
COLUMBIA	4	NORTHERN JAEGER	0	STORM PETREL	0
COMMODORE	0	NORTHERN PATRIOT	3	SUNSET BAY	0
DEFENDER	0	NORTHWEST EXPLOR	0	TRAVELER	0
DESTINATION	0	OCEAN EXPLORER	4	VANGUARD	0
DOMINATOR	3	OCEAN HOPE 3	0	VIKING	0
ELIZABETH F	0	OCEAN LEADER	0	VIKING EXPLORER	4
EXCALIBUR II	0	OCEAN ROVER	0	WALTER N	0
				WESTERN DAWN	0
				WESTWARD I	0

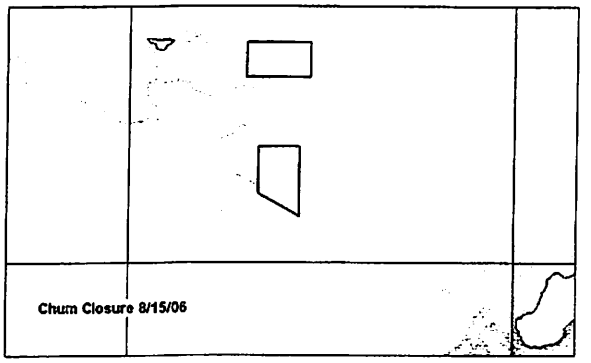
Number of weeks each vessel was on the chum dirty 20 list

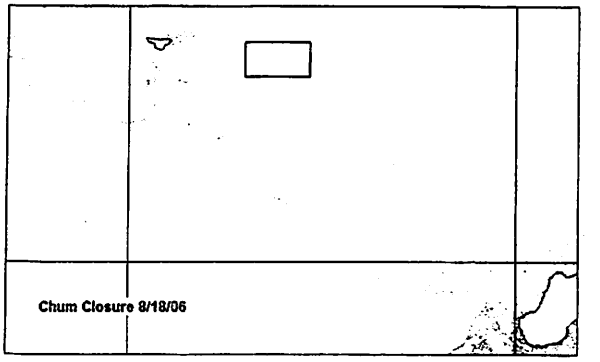
Vessel	N of weeks	Vessel	N of weeks	Vessel	N of weeks
ALASKA OCEAN	0	FIERCE ALLEGIANCE	2	OCEANIC	0
ALASKA ROSE	2	GLADIATOR	7	PACIFIC CHALLEN	0
ALASKAN COMMAND	3	GOLD RUSH	0	PACIFIC EXPLORER	6
ALDEBARAN	8	GOLDEN DAWN	5	PACIFIC GLACIER	0
ALSEA	0	GOLDEN PISCES	0	PACIFIC PRINCE	0
ALYESKA	0	GREAT PACIFIC	7	PACIFIC RAM	0
AMERICAN BEAUTY	4	GUN-MAR	2	PACIFIC VIKING	9
AMERICAN DYNASTY	0	HALF MOON BAY	2	PEGASUS	0
AMERICAN EAGLE	2	HAZEL LORRAINE	0	PEGGY JO	0
AMERICAN TRIUMPH	0	HICKORY WIND	0	PERSEVERANCE	0
ANITA J	2	HIGHLAND LIGHT	0	POSEIDON	0
ARCTIC EXPLORER	9	ISLAND ENTERPRISE	3	PREDATOR	0
ARCTIC FJORD	0	KODIAK ENTERPRISE	3	PROGRESS	4
ARCTIC STORM	0	LESLIE LEE	0	RAVEN	0
ARCTIC WIND	0	LISA MELINDA	0	ROYAL AMERICAN	8
ARCTURUS	7	MAJESTY	2	ROYAL ATLANTIC	4
ARGOSY	0	MAR-GUN	0	SEA WOLF	5
AURIGA	0	MISS BERDIE	0	SEADAWN	0
AURORA	0	MORNING STAR	0	SEATTLE ENTERPRISI	2
BERING ROSE	8	NORDIC FURY	0	SEEKER	0
BLUE FOX	0	NORDIC STAR	0	SOVEREIGNTY	11
BRISTOL EXPLORER	7	NORTHERN EAGLE	0	STARBOUND	2
CAITLIN ANN	0	NORTHERN GLACIER	2	STARFISH	2
CHELSEA K	0	NORTHERN HAWK	0	STARLITE	2
COLUMBIA	7	NORTHERN JAEGER	0	STORM PETREL	2
COMMODORE	5	NORTHERN PATRIOT	7	SUNSET BAY	0
DEFENDER	0	NORTHWEST EXPLOR	3	TRAVELER	0
DESTINATION	0	OCEAN EXPLORER	10	VANGUARD	2
DOMINATOR	12	OCEAN HOPE 3	0	VIKING	0
ELIZABETH F	0	OCEAN LEADER	0	VIKING EXPLORER	9
EXCALIBUR II	0	OCEAN ROVER	0	WALTER N	0
				WESTERN DAWN	3
				WESTWARD I	2

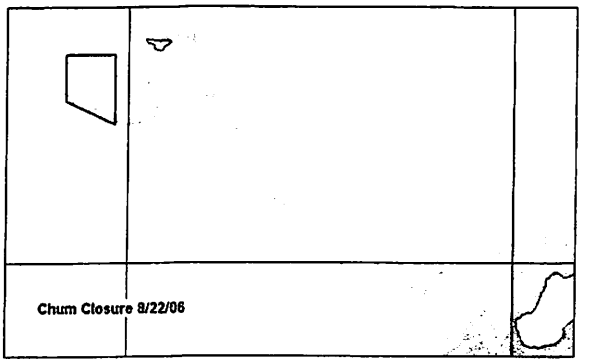
Appendix 1. Intercoop salmon closures, August 1 – October 31, 2006

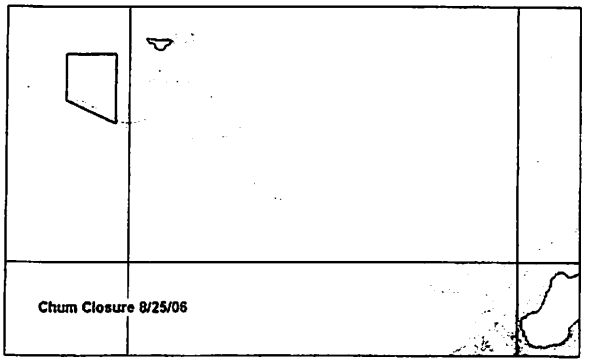


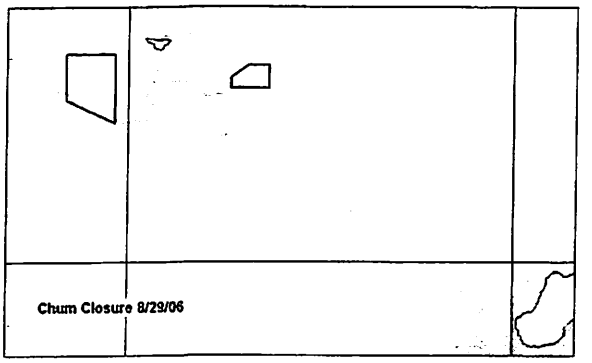


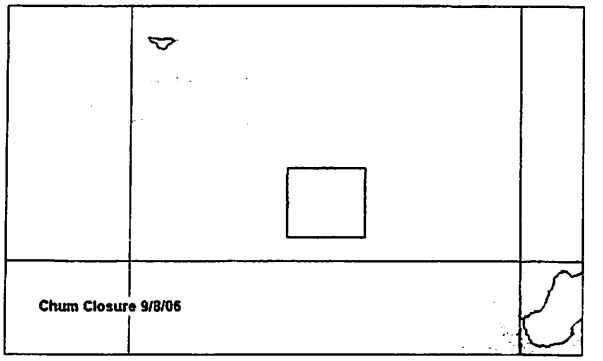


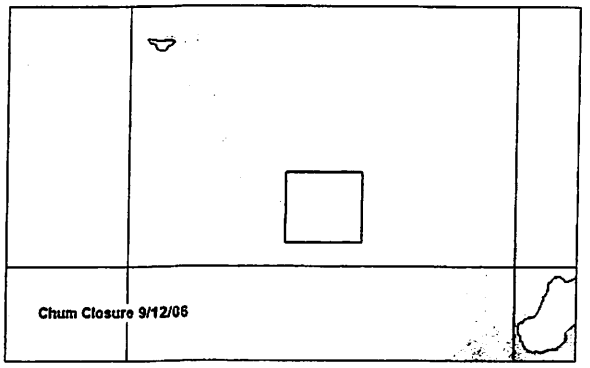


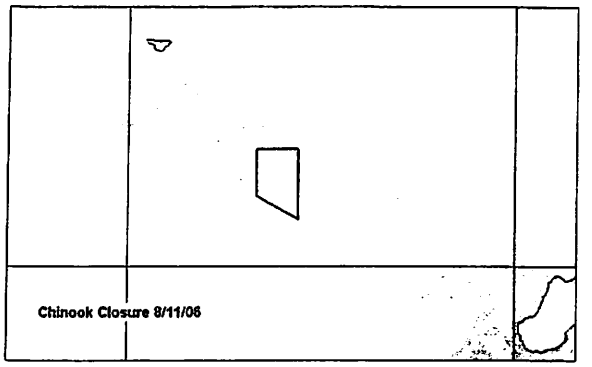









Chum Closure 9/12/06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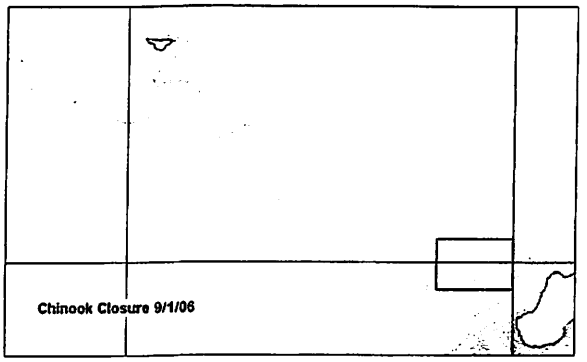
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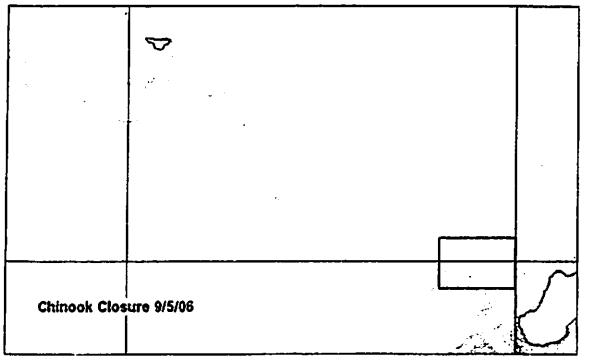
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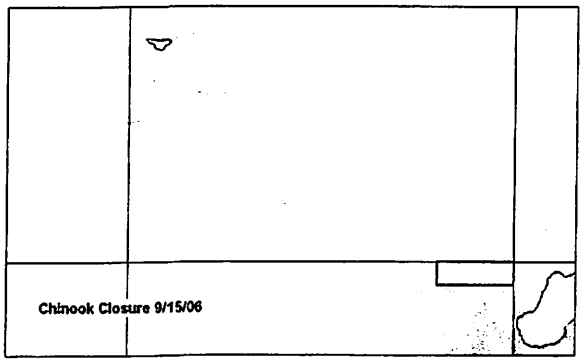
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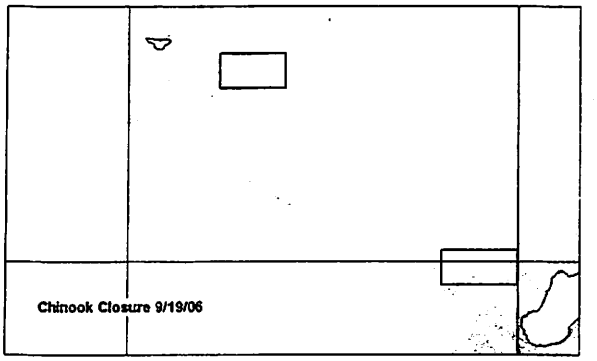
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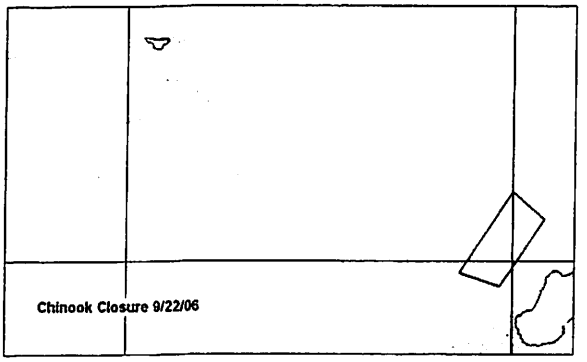
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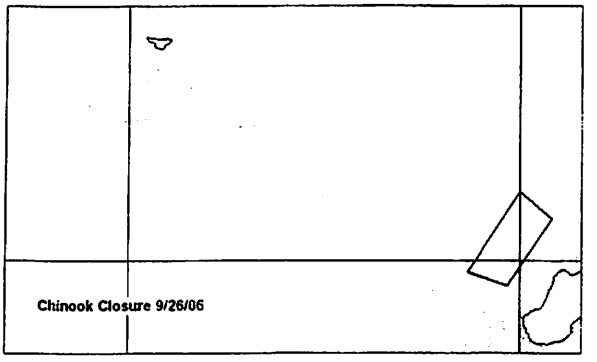
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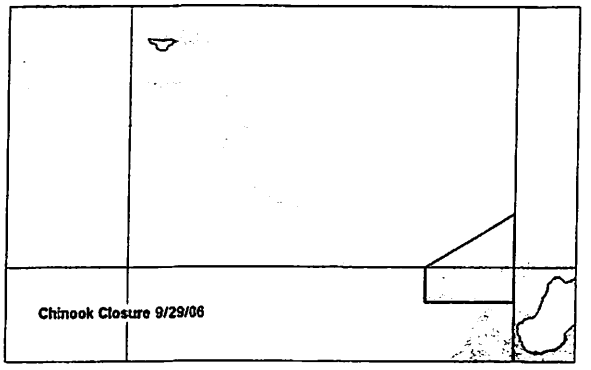
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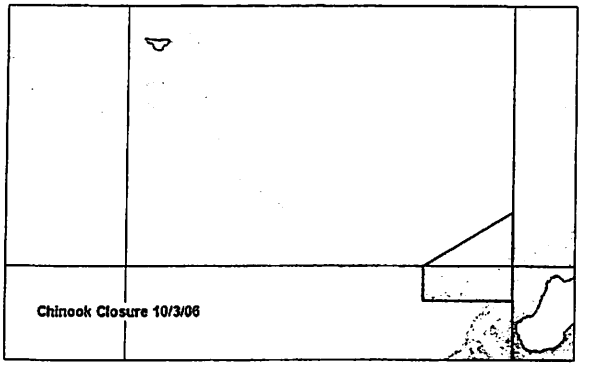
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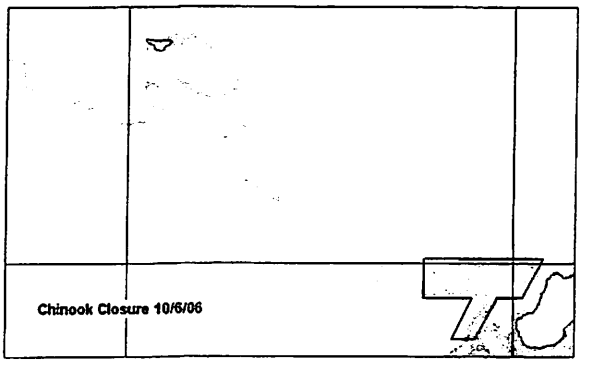
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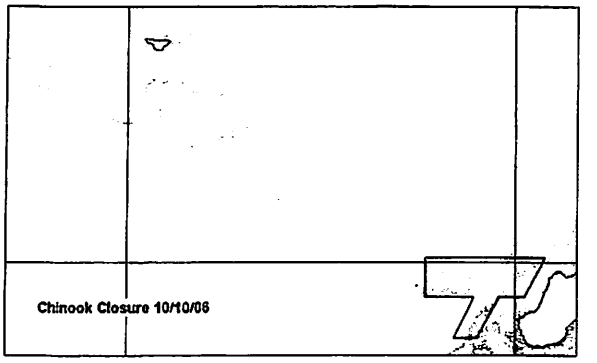
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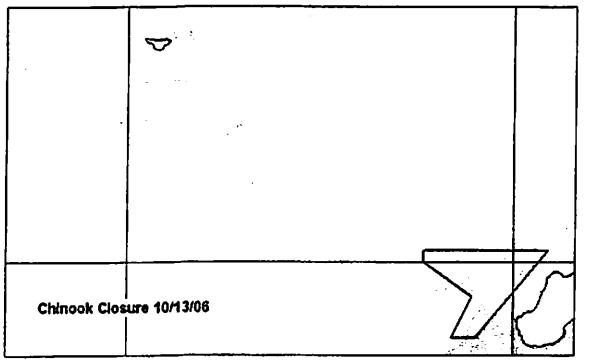
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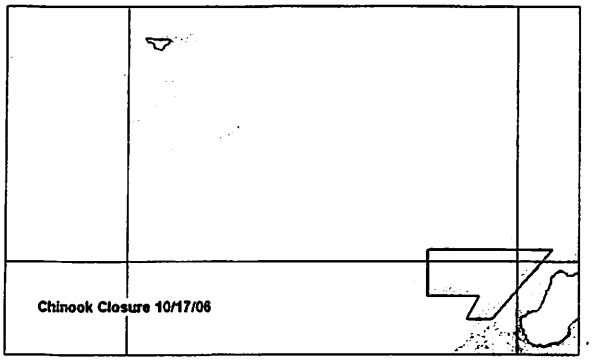
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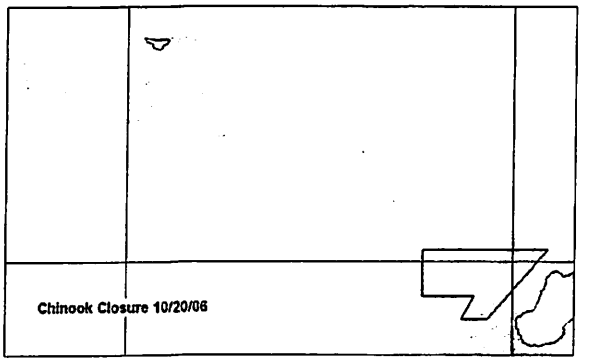
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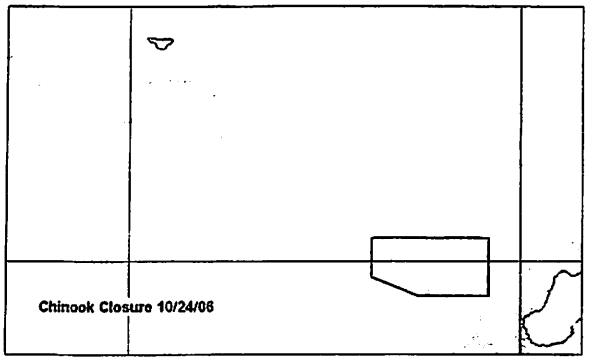
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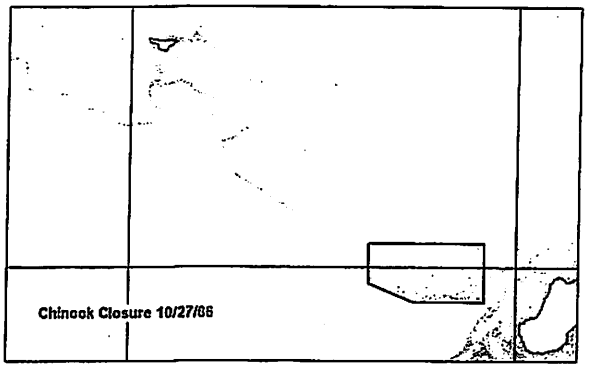
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Draft for Public Review

Repeal of the Vessel Incentive Program

Environmental Assessment/Regulatory Impact Review//Initial Regulatory Flexibility Analysis

October 2006

Lead Agency	National Oceanic and Atmospheric Administration National Marine Fisheries Service Alaska Regional Office Juneau, Alaska
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Abstract: This document contains an Environmental Assessment (EA), a Regulatory Impact Review (RIR), and an Initial Regulatory Flexibility Analysis (IRFA) analyzing the potential impacts of repealing the groundfish Vessel Incentive Program (VIP) in the EEZ off of Alaska. The analyses in this document address the requirements of the National Environmental Policy Act (NEPA), Executive Order 12866, and the Regulatory Flexibility Act (RFA).

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List of Acronyms

ABC	Allowable Biological Catch
ADCED	Alaska Department of Community and Economic Development
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
AP	Advisory Panel
APA	Administrative Procedures Act
B	Biomass
BiOp	Biological Opinion
BS	Bering Sea
AI	Aleutian Islands
BSAI	Bering Sea and Aleutian Islands
CDQ	Community Development Quota
CEQ	Council of Environmental Quality
CEY	Constant Exploitation Yield
CFEC	Alaska Commercial Fisheries Entry Commission
CFR	Code of Federal Regulations
CP	catcher-processor
CV	catcher vessel
DFA	Directed Fishing Allowance
DFL	Directed Fishing Level
EA	Environmental Assessment
EIS	Environmental Impact Statement
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
ESA	Endangered Species Act
F	Fishing mortality rate
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impact
FR	*Federal Register*
FRFA	Final Regulatory Flexibility Analysis
GOA	Gulf of Alaska
FRFA	Final Regulatory Flexibility Analysis
HAPC	Habitat Area of Particular Concern
IFQ	Individual Fisherman's Quota
ITAC	Initial Total Allowable Catch
IRFA	Initial Regulatory Flexibility Analysis
MSST	Minimum Stock Size Threshold
MSY	Maximum Sustainable Yield

mt	metric ton
NEPA	National Environmental Policy Act
nm	nautical mile
NMFS	National Marine Fishery Service
NOA	Notice of Availability
NOAA	National Oceanographic and Atmospheric Administration
OFL	Overfishing Level
OY	Optimum Yield
PSC	Prohibited Species Catch
PSQ	Prohibited Species Quota
PSEIS	Programmatic Supplemental Environmental Impact Statement
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SAFE	Stock Assessment and Fishery Evaluation Report
SBREFA	Small Business Regulatory Enforcement Fairness Act
SEIS	Supplemental Environmental Impact Statement
SSC	Scientific and Statistical Committee
TAC	Total Allowable Catch
USFWS	United States Fish and Wildlife Service

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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. 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 Elimination Alternative (Preferred 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. In October 2006 the Council selected Alternative 3, Option 2, as its preferred alternative.

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. 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 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 Fishieres, and Observer Program activities. Defendents 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 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.

The Council has chosen Alternative 3, Option 2, as its preferred Alternative. 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 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 VIP. The FMP authority for a program does not mandate the specific VIP 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. 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.

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1.0 Introduction

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 VIP which is promulgated at 50 CFR 679.21(f).

The VIP was designed to reduce prohibited species catch (PSC) rates in the Alaska groundfish trawl fisheries, thereby potentially increasing the amount of groundfish TACs that could be harvested under established PSC limits. However, the program has not performed as intended by the North Pacific Fishery Management Council or NMFS because of the costs associated with ongoing implementation and enforcement, resulting concerns about bias of observer data, and the relatively small number of vessels impacted by the program. Thus, action is needed to either modify or revoke the VIP.

This analysis is an Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA). An EA/RIR/IRFA provides assessments of the environmental impacts of an action and its reasonable alternatives (the EA), the economic benefits and costs of the action alternatives (the RIR), and the impacts of the action on small entities (the IRFA). This EA/RIR/IRFA meets the statutory requirements of the National Environmental Policy Act (NEPA), Presidential Executive Order 12866, and Regulatory Flexibility Act (RFA). An EA/RIR/IRFA is a standard document produced by the Council and the Alaska Region, to provide the analytical background for decision-making.

1.1 Background

Prohibited Species Catch (PSC)

Groundfish fisheries off Alaska take incidental catches of non-groundfish species as well. Some of these non-groundfish species are themselves the objects of valuable targeted fisheries. These species include Pacific halibut, salmon, several crab species, and herring. Provisions to prohibit the retention of these species by foreign fleets were incorporated early on in the Fishery Management Plans for the GOA and BSAI (hence the expression "prohibited species"). As the groundfish fisheries were Americanized during the 1980's, the prohibited species issue became one of allocation between the domestic groundfish fisheries and other domestic fisheries such as pollock.

During the mid 1980's, restrictions on the domestic groundfish fishery began to increase, due primarily to problems with incidental catches of non-target species. In 1983, Amendment 3 to the BSAI FMP established PSC policy for domestic fisheries, and defined prohibited species to include crab, halibut, herring, and salmon (NPFMC 1996). In 1986, Amendment 14 to the FMP for groundfish of the GOA established the allocation of sablefish for trawlers in the GOA. In the eastern GOA, 5 percent of the sablefish was allocated to trawlers for bycatch purposes only, while in the western and central GOA, 20 percent of the sablefish was allocated to trawlers for directed fishing. In 1987, the Council established bycatch limitation zones for prohibited species, and established limits on the amounts of PSC that could be taken (BSAI Amendments 11-12). However, the most far-reaching of these actions was the halibut PSC limit which, when met, closed the fishing season. Other PSC limits were not as onerous since they triggered area closures rather than closing entire fisheries.

A PSC limit in a fishery is essentially a common property quota. Although the purpose is to limit PSC, the effect of the cap is to create a quota that allows the catch, but not the retention of PSC by the

participants in the target fishery. Access to a PSC limit is highly competitive with the value of the PSC quota being associated with the value of the target species catch limited by PSC catch. The average PSC rate for a fishery translates into an effective target fishery quota on catch in the target fishery if the TAC is not completely harvested. This situation encourages excessively rapid catch of the PSC as individual vessels "race" to catch their intended target species before the fishery's PSC limit is taken and the fishery closed.

The "race for the fish," and attendant high PSC rates, occur because the competition created by PSC does not encourage individual fishing operations to take full account of their actions when they make fishing decisions[1]. An operation that fished "dirty," that is, an operation that fished with high rates of associated PSC, obtained a benefit that accrued to it alone: cheaper groundfish. But the operation did so by hastening the closure of the groundfish fishery. If the closure came before the target groundfish TAC was fully caught, the entire groundfish fleet would incur a cost associated with the value of the foregone groundfish (unharvested TAC). The operation that was fishing dirty would bear some of this cost, but much of it would be borne by other operations in the fishery because no single operation would fully bear the costs of dirty fishing. However, dirty operations would realize economic benefits from their actions by shifting a large part of their bycatch costs to other operations. Thus, dirty operations do not have an incentive to control PSC rates[1].

If all the operations in a targeted groundfish fishery controlled their PSC, the fishery could operate longer and produce larger volumes of fish for the participants. However, no party could be excluded from the benefits of the longer fishery. Thus, an operator that did not effectively control PSC, would be able to "free ride" on the efforts of those fishermen that did effectively control PSC. This creates an incentive structure that does not encourage PSC reduction measures for any single operation. Without incentives for an individual operation, a group of fishermen may fail to take actions that would have a positive net benefit for them as a group.

At the heart of the "race for fish" is an incentive problem. Individual fishing operations must be forced to realize the costs they impose on other parties when they fish with excessive PSC rates. There are several ways this can be done:

- **Peer pressure** might be effective in small groups. This could be facilitated through the calculation and publication of bycatch rate standards.

- **A fee** that varied in magnitude with PSC rates could be charged to fishing operations. Higher rates would be associated with higher fees. Fees would ideally be proportioned to the costs the fishing operation with a high PSC rates imposes on other operations. This option does not imply the absence of PSC, but would take place within the context of an ongoing PSC program.

- **A catch rate limit** and associated penalty schedule could be imposed on fishermen (this is the approach that is used in the current VIP.

- **Tradable PSC quota**: The overall fishery PSC could be subdivided among the fishermen in the target fishery, and treated as a tradable individual PSC quota (similar to the Individual Fishing Quota's already in use in the halibut and sablefish fisheries). This is also a method of making the fishing operation face up to the costs of a high PSC rate: if the PSC quota were tradable, the

[1] The technical economic terms for the issues in these paragraphs are "common property," "externality" (imposing costs on others that one doesn't fully account for in one's decision making), and "public good" (no one in a defined group can be excluded from enjoying the benefits of this good if it is provided).

operation could either use its quota or sell it. If it had a natural ability to fish clean, it might find it profitable to sell the PSC quota to an operation that fished more effectively relatively dirtily. The cost of fishing dirtily would be the revenues forgone by not being able to sell one's quota, or of having to buy quota in the market place.

- **Corporations** could be formed that combine fishing operations in a fishery into a single entity. In this case, all vessels would be owned by the same party, so all the costs created by any one vessel would be "internalized" and borne by a single operating entity. In this case, all of the profits from fishing would be received by a single "residual claimant," the corporation, and the corporation would direct its operating units to fish in the optimal manner from its point of view, so that it maximized the value of its PSC target species allocations.

- **Compensation** could be provided to fishermen with low PSC rates; perhaps in the form of special fishing rights not available to operators with higher PSC rates. The loss of these rights when fishing dirty would then impose a cost on dirty operations.

These approaches attempt to make a fishing operation bear all of the costs it creates when it fishes in a relatively dirty way. These approaches also depend on accurate measurement and reporting of catch compositions.

Non-VIP bycatch reduction

To directly limit the bycatch of prohibited species, the Council and NMFS have supported numerous actions to establish PSC protection areas, encourage bycatch reduction, and improve the selectivity of fishing gear:

- Rockfish pilot program: PSC limit.
- Amendment 37: Implemented a trawl closure area in the Bristol Bay red king crab savings area, modified red king crab prohibited species limits, and established a trawl closure in nearshore areas in Bristol Bay.
- Amendment 50: Donation of incidentally caught halibut to food banks.
- Amendment 59: Prohibited fishing in important fish habitat areas.
- Amendment 60: Prohibited the use of trawl gear in Cook Inlet.
- Proposed Amendment 79 (FT 35054, June 16, 2005): Would establish a minimum groundfish retention standard and require all non- American Fisheries Act (AFA) trawl vessels greater than or equal to 125 LOA to use flow scales and carry two observers.
- Proposed Amendment 80: Would allocate specified target species' and PSC catch limits to non-AFA catcher trawl processors and all these vessels to form one or more fishery cooperatives.
- Issuance of an exempted fishing permit to test a new device designed to reduce halibut PSC bycatch in trawl gear.
- Use and research of halibut excluder devices in the trawl fishery.
- Installation of vessel monitoring systems
- The Council has encouraged industry bycatch control measures (e.g., Sea State Inc.).

Origin of the VIP

In 1989, the Council adopted Amendments 12a and 18, introducing PSC limits into groundfish management in the BSAI and GOA, respectively. PSC limits were established and apportioned among fisheries based on gear or target species. Once a fishery had taken its PSC limit for a given species,

directed fishing for the target species was closed. The program was introduced for part of 1989 and all of 1990, and was scheduled to "sunset" at the end of 1990. The program was thus experimental.

During the first full year of the program (1990), PSC limits led to numerous and expensive groundfish fishing closures. These closures had significant economic impacts on joint venture and domestic flatfish fisheries in the BSAI, domestic pollock and Pacific cod fisheries in the BSAI, and domestic hook-and-line and non-pelagic trawl fisheries in the GOA. Closure of these fisheries resulted in an estimated economic loss of tens of millions of dollars in groundfish fishing revenues, based on the amount of groundfish total allowable catch (TAC) that remained uncaught.

In June 1990, the Council addressed this incentive problem by adopting Amendments 21 and 16 to the FMPs for the GOA and BSAI. These amendments included provisions that would create incentives for individual fishing operations to control their PSC rates. The incentive program adopted by the Council was referred to as the "penalty box" program. The penalty box program required operations in a fishery to "maintain a four-week average bycatch rate less than two times the concurrent fleet average in each of the fisheries and for each of three bycatch species. Failure of a vessel to meet such bycatch rate standards would result in a suspension of the vessel from the Alaskan groundfish fishery (placement in the "penalty box") for a period ranging from five days to six weeks." (NMFS, 1990: 2).

A NMFS analysis after the Council had approved the penalty box program indicated that there were substantial revisions to the observer database after observers were debriefed ,and their data analyzed and corrected. At the time, the processed data might not be available for up to six months after a fishing week. Because enforcement of the incentive program could only be based upon corrected data, inseason action against vessels that fail to meet acceptable bycatch rate standards could not be taken. (NMFS, 1990: 2-3). The penalty box incentive program also failed to conform to requirements of other applicable law, including the Administrative Procedures Act. This Act requires that regulations be reasonable and effective. The observer data was insufficient to determine whether variability of PSC rates allowed the use of four-week fleet averages as a basis for legally acceptable standards. (NMFS, 1990: 3). As a result of these enforcement and legal deficiencies, the Secretary of Commerce disapproved the proposed penalty box incentive program.

Following the Secretary's rejection of the penalty box program, the Council adopted the VIP in a special teleconference meeting in November 1990. Under the VIP, fixed quarterly bycatch rate standards for 1991 were proposed for specific fisheries occurring in the GOA and the BSAI. On November 9, 1991, the Secretary approved revised Amendments 16 and 21 to the GOA and BSAI FMPs respectively and issued an interim final rule implementing the VIP on May 10, 1991. The interim final rule contained quarterly bycatch rate standards for the first and second quarters of 1991. Finally, on July 18, 1991, a Final Rule implementing Amendment 16a was published in the Federal Register. This rule authorized the NMFS Director (Regional Director, Alaska Region) to temporally prohibit directed fishing for specified groundfish species to reduce high PSC rates of prohibited species.

VIP Modifications in 1992 and 1993

The VIP bycatch rate standards published in 1991 applied only to the non-pelagic pollock fishery because halibut PSC rates were low in the pelagic pollock fishery. To avoid excessive PSC rates, non-pelagic pollock trawl fishermen reconfigured their nets as pelagic gear, but continued to fish the gear on the bottom. In June 1992, the Council and NMFS addressed this problem through an emergency rule that applied VIP requirements to the pelagic pollock fishery. In September 1992, a final rule was published that extended the VIP to all trawl fisheries in the GOA and BSAI.

In 1993, the final rule became effective and extended the VIP to all trawl fisheries in the GOA and BSAI. The Council viewed the extension of the VIP "as a means of decreasing the inequities between vessels in different fisheries which contributed to the same halibut bycatch allowances." It was also seen by the Council as a means of tightening up the regulation to prevent vessels from manipulating fishing targets in order to be excluded from the VIP. At this time, changes were also made to the definitions of target fisheries used for the VIP. In the GOA, the target categories of pelagic pollock, Pacific cod, and rockfish were replaced by two categories: "pelagic pollock;" and "other trawl," which includes any groundfish that does not qualify as pelagic pollock. In the BSAI, the target categories of pelagic pollock, Pacific cod, and flatfish were replaced by yellowfin sole, pelagic pollock, bottom pollock, and other trawl. (Renko 1998: 42-45).

1.3 The Current VIP

Vessels are subject to the VIP requirement "if the groundfish catch of the vessel is observed on board the vessel, or on board a mothership that receives unsorted codends from the vessel, at any time during a weekly reporting period" and the vessel is assigned to one of six trawl fisheries defined in 50 CFR part 679.21(f)(1)(ii). As a practical matter, groundfish trawl vessels carrying observers are subject to the VIP.

Regulations identify six fisheries to which trawl vessels are to be assigned for VIP purposes: are two GOA fisheries (GOA midwater pollock and GOA other trawl); and four BSAI fisheries (BSAI midwater pollock, BSAI yellowfin sole, BSAI bottom pollock, and BSAI other trawl). Regulations provide detailed criteria for assigning vessels to one of these target groups during a weekly reporting period. A vessel is assigned a target group based on the observed catch composition of its groundfish species. For example, vessels are assigned to the BSAI midwater pollock fishery if they fished "with trawl gear in the BSAI that results in an observed catch of groundfish from the BSAI during any weekly reporting period that is composed of 95 percent or more of pollock when the directed fishery for pollock by vessels using trawl gear other then pelagic trawl gear is closed." (50 CFR part 679.21(f)(2)).

Calculation and Publication of the VIP Bycatch Rate Standards

Calculation of VIP bycatch rate standards and monitoring of PSC and target catch is dependent on data collected at-sea by observers. Observers sample hauls and gather information on the date and target species harvested, area of catch, total round weight of caught groundfish, total round weight of caught halibut, and number of red king crab caught. The VIP requires that observers randomly predetermine the hauls to sample, and randomly sample a minimum of 100 kg of fish from throughout each sampled haul: Observers generally sample at least 300 kg of fish throughout the haul. Harvest data is reported to NMFS through the Observer Program and is used for inseason management, among other things.

Using observer data, robust[2] statistical inferences are made about PSC rates for a vessel in a given month for a specific target species. A robust statistical sample is obtained by statistically adjusting small samples with exorbitantly large PSC rates so they do not bias estimated PSC rates. A four step procedure is used to calculate PSC rates and associated 95 percent confidence intervals: during the first step, a robust bycatch rate using observer data is estimated; the second step estimates a 95 percent confidence interval around the estimated bycatch rate; the third step uses statistical inference to check assumptions made about the observer data; finally, the fourth step checks the reasonableness of the confidence intervals calculated in step two. These four steps allow a PSC rate to be calculated with a lower

[2] The statistical inferences used to estimate PSC rates are designed to not be influenced by inordinately large values which tend to cause vessel bycatch rate data to be skewed to the left (NMFS 1992).

confidence bound, and check the estimation procedures. Only the lower confidence estimate is used to determine vessel compliance with the published VIP bycatch rate standards.

Although the statistical procedures used to estimate the confidence interval are robust, they assume that a random data collection method is used. This assumption is violated on several levels during the data collection process: (1) observer coverage on vessels greater than 60 feet and smaller than 125 feet are not randomly selected; (2) avoiding a bias against large or infrequently occurring animals is difficult for a single observer; (3) sampling of a trawl tow may be done randomly, opportunistically, or through the use of systematic methodology; and (4) other sources of bias such as access to unsorted catch, time frame in which unsorted catch is available to the observer, and the level of crew cooperation (Renko 1998). These statistical violations may result in an inaccurate confidence interval being calculated for the VIP bycatch rate standards. The statistical estimation procedures are designed to minimize the influence of a small number of hauls; however, the procedure's robustness towards a violation of the random sampling design is unknown.

The VIP regulations specify that a vessel's PSC rate during any fishing month may not exceed the bycatch rate standard set by the Secretary. The bycatch rate standards for each fishery are published twice a year in the Federal Register. These standards are established for Pacific halibut in the GOA and BSAI trawl fisheries; the non pollock trawl fisheries also are held to a red king crab bycatch rate standard in Zone 1 of the BSAI. (50 CFR part 679.21(f)(1) and 50 CFR part 679.21(f)(3)). A vessel is non-compliant with the bycatch rate standard if the "vessel's bycatch rate for a fishing month...exceeds the bycatch rate standard established for that fishery..." (50 CFR part 679.21)

PSC rates can be reduced by modifying gear and/or fishing behavior. Some common examples of gear modification include halibut excluder devices; modifying mesh size; and modifying the cod end of a trawl net to accommodate other types of excluder devices. Significant reductions in PSC can be achieved by changing trawling behavior. These changes include modifying trawl depth and tow speed; reducing fishing effort in areas with high PSC; and adjusting seasonal fishing effort to accommodate prohibited species life history characteristics.

The VIP regulations require publication of the bycatch rate standards in the *Federal Register* for 30 days before they take effect, "unless NMFS finds for good cause that such notification and public comment are impracticable, unnecessary, or contrary to the public interest." (5 U.S.C. 553 (b)(B)). Bycatch rate standards are season and fishery specific. The Alaska Regional Administrator is required to publish bycatch rate standards for the first half of the year (before January 1) and for the second half of the year (before July 1). Although standards are published biannually, "the Regional Administrator may adjust bycatch rate standards as frequently as he or she considers appropriate." (50 CFR part 679.21(f)(3)).

Prior to 2003, publication of the bi-annual bycatch rate standards was expedited to the final rule by using the "good cause" exemption in the Administrative Procedures Act. The good cause waiver allows an agency to forgo publication in the *Federal Register* for a 30 day public comment period before a rule is promulgated. This waiver can only be used if "notification and public comment are impracticable, unnecessary, or contrary to the public interest." In spring 2003, NMFS concurred with NOAA GC that the rationale on which a good cause waiver of prior notice and opportunity to comment was based did not constitute adequate justification for such a waiver. Without use of the waiver, NMFS could not publish bycatch rate standards for the second half of 2003 because of the time and resources needed for notice, public comment, and analysis. VIP bycatch rate standards have not been published since the first half of 2003.

Rules governing Individual Vessel Bycatch Rates

Observers gather sample hauls and information about the Federal reporting area of harvest, total round weight of groundfish, total round weight of halibut, and number of red king crab. For VIP PSC rate calculation, observers randomly predetermine the hauls to sample, and randomly sample a minimum of 100 kg of fish from throughout the haul. Observers report to NMFS at least weekly with the information from sampled hauls, and allow the vessel operator to examine the data. (50 CFR 679.21(f)(7)). However, as previously discussed, not all hauls are randomly sampled.

At the end of a month in which an observer has sampled at least 50 percent of the vessel's total hauls (retrieved while an observer was on board), the Regional Administrator is to calculate the vessel's PSC rate for halibut and red king crab. The PSC rates reflect the weight of groundfish and halibut and the number of red king crab that were actually sampled. No extrapolations are made to the weight and numbers in sampled hauls, or the weight and numbers harvested in observed and unobserved hauls during the month. (50 CFR 679.21(f)(8) and (9)).

Enforcement actions may be taken if a "vessel has exceeded a bycatch rate standard for a fishery if that vessel's bycatch rate for a fishing month... exceeds the bycatch rate standard established for that fishery..." (50 CFR part 679.21 (f)(9).

History of this action

In June 2003, the Council initiated an amendment to repeal the VIP, given concerns
about the effectiveness of the program and its potential for additional administrative burden due to increased legal standards. In October 2003, the Council reviewed a NMFS discussion paper as the first step in a between the Council and NMFS to develop alternatives for analysis. The Council adopted the alternatives under evaluation in this EA/RIR/IRFA and scheduled initial review of the draft for its April 2004 meeting. The Council requested that a discussion of alternatives for analysis be placed on the agenda in December for additional public testimony. In December the Council reiterated its approval of the alternatives it had adopted in October.

In October 2006, the Council performed an initial review of the EA/RIR/IRFA. At that time it (a) identified Alternative 3, Option 2, as its preferred alternative; (b) approved release of the EA/RIR/IRFA for public review; and (c) scheduled final action for its December 2006 meeting in Anchorage, Alaska.

Table 1. VIP Chronology

1990	Jan	Implementation of required Observer Program
1991	May	Interim final rule published in *Federal Register* on May 10, effective on May 6 First violation that will be prosecuted occurs
	Jun-Jul	Second and third violations that will be prosecuted occur
	Sep	Fourth violation that will be prosecuted occurs
1992	Sept	Final rule published that expands VIP to include halibut PSC in all trawl fisheries
1993	May	Fifth and last violation that will be prosecuted occurs
1999		Last warning letter sent out in Fall
2003	June	VIP bycatch rate standards for second half of 2003 are not published Council votes to consider repeal of the VIP during its October meeting
	Oct	Council approves alternatives outlined in the NMFS discussion paper about VIP
	Dec	Council reiterates its approval of the alternatives outlined in the NMFS VIP discussion paper
2006	Oct	Council performs initial review of the EA/RIR/IRFA and releases it for public review. Final action is scheduled for December 2006.

1.4 Action Area and Time Period

The action for the proposed regulatory amendment is the GOA and BSAI management areas. The alternatives under consideration in this analysis are permanent.

1.5 Relationship of this Action to Federal Law

While NEPA and the RFA are the primary laws directing the preparation of this document, a variety of other Federal laws and policies require environmental, economic, and socio-economic analysis of proposed Federal actions. This document contains the required analysis of the proposed Federal action to ensure that the action complies with these additional Federal laws and executive orders (EOs):

- Magnuson-Stevens Fisheries Conservation and Management Act (including Sustainable Fisheries Act of 1996)
- Endangered Species Act
- Marine Mammal Protection Act
- Administrative Procedure Act
- Information Quality Act

The Harvest Specifications DEIS provides details on the laws and executive orders directing this analysis (NMFS 2006).

1.6 Statutory Authority

The National Marine Fisheries Service manages the U.S. groundfish fisheries of the GOA and the BSAI management areas in the Exclusive Economic Zone (EEZ) under the Fishery Management Plans (FMPs) for those areas. These FMPs are the Fishery Management Plan for Groundfish of the Gulf of Alaska (Council, 2005) and the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Island Management Area (Council, 2005). The Council prepared and the Secretary approved the FMPs under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801, et seq.).

1.7 Related NEPA Documents

The NEPA documents listed below have detailed information on the groundfish fisheries, and on the natural resources, the economic and social activities, and communities affected by those fisheries:

- Groundfish Programmatic Supplemental Environmental Impact Statement (PSEIS) (NMFS 2004)
- Essential Fish Habitat Environmental Impact Statement (EIS) (NMFS 2005)
- The Harvest Specifications Draft Environmental Impact Statement (DEIS)(NMFS 2006)
- SSL Protection Measures Supplemental Environmental Impact Statement (SEIS)(NMFS 2001)
- Crab rationalization EIS (NMFS 2004)
- American Fisheries Act Amendments 61/61/13/8 EIS (NMFS 2002)

Further information about these documents can be found in the 2006-2007 Harvest Specifications EA (NMFS 2005a) and Section 3.0 of this analysis.

2.0 Descriptions of Alternatives

Three alternatives are reviewed in this chapter: (1) No regulatory action to change or abolish the program; (2) modify the program to reduce the frequency of rate publication; (3) remove the regulatory authority for the VIP. In October 2006 the Council identified Alternative 3, Option 2, as its preferred alternative.

Alternative 1: No action

Under the No Action alternative, there would be no regulatory action to change or abolish the VIP. NMFS would publish VIP bycatch rate standards bi-annually through notice and comment rulemaking. VIP bycatch rate standards have not been published in the Federal Register since 2003. As a result, the VIP has not been enforced since the first half of 2003, and no cases have been prosecuted since the late 1990s. Therefore, the No Action Alternative would require rulemaking to establish VIP rate standards biannually, and increase enforcement effort.

Alternative 2: Burden frequency of publication

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 an annual (Option 1) process or permanently established in regulation through a single rulemaking event (Option 2). Under both options, NMFS would have to increase its enforcement effort, as under Alternative 1. Further description of Options 1 and 2 are as follows:

Option 1: Annual VIP bycatch rate standards publication

Under Alternative 2, Option 1, the VIP would remain in the BSAI and GOA FMPs, and in regulation at 679.21(f). However, regulations implementing the VIP would be revised to accommodate an annual rather than bi-annual process for establishing VIP bycatch rate standards. VIP bycatch rate standards would be established annually through proposed and final rulemaking.

Option 2: VIP bycatch rate standards placed in regulation

Under Alternative 2, Option 2, regulations authorizing the VIP would be retained in the BSAI and GOA FMPs, and in Federal regulation. The current VIP regulations would be amended to establish VIP bycatch rate standards in regulations through a single rulemaking event. A subsequent regulatory amendment would be required to make a change in VIP bycatch rate standards.

Alternative 3: VIP elimination (Preferred Alternative)

This alternative would eliminate the VIP from the GOA and BSAI FMPs and Federal regulation (Option 1), or remove the VIP from Federal regulations (Option 2), without changing the GOA or BSAI FMPs. The options for Alternative 3 are as follows:

Option 1: FMP Amendment and regulatory amendment to eliminate the VIP

This option would eliminate the authority for the VIP from the FMP, as well as Federal regulation. This alternative would require FMP and regulatory amendments to the GOA and BSAI FMPs and Federal regulation. This option would eliminate FMP authority that allows regulatory incentives for individual vessels to maintain average PSC rates within a performance standard. Option 1 would eliminate the following text in the GOA and BSAI FMPs:

Section 3.6.4 of the GOA FMP ("Bycatch Reduction Programs") provides for regulations that reduce halibut PSC rates:

> *"The Secretary of Commerce, after consultation with the Council, may implement by regulation measures that provide incentives to individual vessels to reduce halibut bycatch rates of halibut for which PSC limits are established under Section 4.2.3.1. The intended effect of such measures is to increase the opportunity to fish groundfish TACs before established PSC limits are reached by encouraging individual vessels to maintain average bycatch rates within acceptable performance standards and discourage fishing practices that result in excessively high bycatch" (Council, January 2005, page 33).*

Section 3.6.4 of the BSAI FMP ("Bycatch Reduction Incentive Programs") provides for regulations that reduce prohibited species PSC rates:

> *"The Secretary of Commerce, after consultation with the Council, may implement by regulations measures that provide incentives to individual vessels to reduce bycatch rates of prohibited species for which PSC limits are established under Section 2. The intended effect of such measures is to increase the opportunity to harvest groundfish TAC's before established PSC limits are reached (Council, January 2005, page36)."*

Option 2: Regulatory amendment to eliminate the VIP (Preferred Alternative)

Regulations providing for the VIP are at 50 CFR 679.21(f). The FMP language does not require an incentive program; therefore, it would be possible to eliminate the VIP by deleting this section of the regulations without changing the FMP language.

3.0 Affected Environment

The NEPA documents listed below contain extensive information on the fishery management areas, marine resources, ecosystem, social and economic parameters of these fisheries, and the annual harvest specifications. Rather than duplicate an affected environment description here, readers are referred to those documents. All of these public documents are readily available in printed form or over the Internet at links given in the references. Because this action is limited in area and scope, the description of the affected environment is incorporated by reference from the following documents:

Groundfish Programmatic EIS. The Alaska Groundfish Fisheries Final Programmatic Supplemental Environmental Impact Statement (PSEIS) evaluates the fishery management policies embedded in the GOA and BSAI groundfish FMPs against policy level alternatives and the setting of TACs, allowable biological catch (ABC), and overfishing level (OFL) at various levels (NMFS 2004). The PSEIS is available at http://www.fakr.noaa.gov/sustainablefisheries/default.htm. The following sections of this document are particularly relevant:

- Section 3.3 contains a description of the physical oceanographic environment for BSAI and GOA waters.
- Section 3.5.2 contains descriptions of prohibited species management, life history characteristics, trophic interactions, past and present effects analysis, comparative baseline and cumulative effects analysis.
- Section 3.5.3 contains descriptions of target groundfish species management, life history characteristics, trophic interactions, past and present effects analysis, comparative baseline and cumulative effects analysis.
- Section 3.9.2.4 contains socio-economic information on fishing sectors, including BSAI trawl and GOA trawl.

GOA Groundfish Rationalization Supplemental EIS. In this analysis, ongoing since May 2002, the Council is considering alternative management approaches to "rationalize" the GOA groundfish fisheries. Rationalization may improve the economic stability to the various participants in the fishery. These participants may include harvesters, processors, and residents of fishing communities. The Council is considering these new management policies at the request of the GOA groundfish industry to address its increasing concerns about the economic stability of the fisheries. Some of these concerns include changing market opportunities and stock abundance, increasing concern about the long-term economic health of fishing dependent communities, and the limited ability of the fishing industry to respond to environmental concerns under the existing management regime. The Council may consider rationalizing the fishery through individual fishing quotas, allocations to communities or processors, or cooperatives. Alternatively, the Council may choose to modify the License Limitation Program or maintain the existing management system. As yet, specific alternatives have not been selected, and the SEIS will guide the Council in its decision making process. For more information about the EIS see http://www.fakr.noaa.gov/ sustainablefisheries/goa_seis/default.htm.

Harvest Specification DEIS. The DEIS analyzed the 2007-2008 harvest specifications for the GOA and BSAI fisheries D (NMFS 2006). The DEIS included ecosystem considerations section of the Stock Assessment and Fishery Evaluation (SAFE) reports is included as Appendix C to the 2006-2007 harvest

specifications EA (NMFS 2006). It contains summaries and pointers to recent studies and information applicable to understanding and interpreting the criteria used to evaluate significance of impacts that will result from alternative harvest quotas. Appendix A and B contain the GOA and BSAI SAFE reports. The EA also contains a detailed description of the TAC, ABC, and OFL amounts for the GOA and BSAI.

Essential Fish Habitat Identification and Conservation in Alaska EIS. This EIS reexamines the effects of fishing on EFH in waters off Alaska, presents a wider range of alternatives, and provides a thorough analysis of potential impacts on EFH caused by the groundfish fishery. The analysis provides a description of managed groundfish species, marine mammals, and the socioeconomic environment in the Central GOA trawl fishery. The analysis indicates that there are long-term effects of fishing on benthic habitat features off Alaska and acknowledges that considerable scientific uncertainty remains regarding the consequences of such habitat changes for the sustained productivity of managed species. The EIS is found at http://www.fakr.noaa.gov/habitat/seis/efheis.htm.

Steller Sea Lion Protection Measures Final Supplemental Environmental Impact Statement (SEIS). The SEIS evaluates alternatives to mitigate potential adverse effects as a result of competition for fish between Steller sea lions under a no action alternative as well as other alternatives that would substantially reconfigure the GOA and BSAI groundfish fishery. Impacts are disclosed, both significantly positive and significantly negative as required by NEPA. A biological opinion prepared according to the Endangered Species Act is included for the preferred alternative. This document also describes the life history characteristics of Steller sea lions and potential interactions with the groundfish fishery. For more information see http://www.fakr.noaa.gov/sustainablefisheries/seis/sslpm/default.htm.

For those groundfish stocks where information is available, none are considered overfished or approaching an overfished condition and all are managed within the 2006-2007 annual harvest specifications. The ABC, OFL, and TAC amounts for each target species or species group for 2006 is specified in the *Federal Register* (71 FR 10870, March 3, 2006). The status of each target species category, biomass estimates, and acceptable biological catch specifications are presented both in summary and in detail in the annual stock assessment and fishery evaluation (SAFE) reports (NPFMC 2005b). The SAFE report also updated the economic status of the groundfish fisheries off Alaska and presented the ecosystem considerations relevant to the GOA and BSAI. This EA incorporates by reference stock status information in the SAFE reports (NPFMC 2005).

In the GOA, pelagic and non-pelagic trawl gear are used to target pollock, Pacific cod, deep-water flatfish, rex sole, flathead sole, shallow-water flatfish, arrowtooth flounder, sablefish, Pacific ocean perch, shortraker rockfish, rougheye rockfish, other rockfish, northern rockfish, pelagic shelf rockfish, thornyhead rockfish, big skates, longnose skates, other skates, demersal shelf rockfish, Atka mackerel, and "other species." For detailed life history, ecology, and fishery management information regarding groundfish stocks in the GOA see Section 3.3 in the final PSEIS (NMFS 2001) and the Groundfish DEIS (NMFS 2006).

In the BSAI, pelagic trawl gear is used to target pollock and non-pelagic trawl gear is used to target Pacific cod, yellowfin sole, rock sole, flathead sole, "other flatfish", Alaska plaice, arrowtooth flounder, sablefish, Pacific ocean perch, shortraker rockfish, rougheye rockfish, other rockfish, northern rockfish, Atka mackerel, squid, and "other species." For detailed life history, ecology, and fishery management information regarding groundfish stocks in the GOA see Section 3.3 in the final PSEIS (NMFS 2001) and the Groundfish DEIS (NMFS 2006).

4.0 Environmental and Economic Consequences

4.1 Environmental Components Potentially Affected

The approach to change or eliminate the VIP is limited in scope and will not likely affect all environmental components of the GOA and BSAI. Table 4.1 shows the three potentially affected components: groundfish, prohibited species, and socioeconomic. The effects of the alternatives on the resource components would be caused by increased harvest of underutilized groundfish species in the GOA and BSAI and lengthening of the fishing season. An increase in groundfish harvest may effect prohibited species catch (PSC) rates and the socioeconomic environment. The socioeconomic environment may be affected through an increase in groundfish harvest which would increase total revenue. The affected resource component in relation to each alternative is discussed in detail below.

Table 4.1. Resources components potentially affected by the alternatives

	Potentially Affected Component							
Alternatives	**Physical**	**Benthic Comm.**	**Groundfish**	**Marine Mammals**	**Seabirds**	**Non specified Species**	**Prohibited Species**	**Socioeconomic**
Alt 1	N	N	Y	N	N	N	Y	Y
Alt 2 Option 1	N	N	Y	N	N	N	Y	Y
Alt 2 Option 2	N	N	Y	N	N	N	Y	Y
Alt 3 Option 1	N	N	Y	N	N	N	Y	Y
Alt 3 Option 2	N	N	Y	N	N	N	Y	Y

N = no impact beyond status quo anticipated by the option on the component.
Y = an impact beyond status quo is possible if the option is implemented.

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 as described in previous NEPA documents (Section 3.0) would not be changed by any of the alternatives. No effects is 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.

The section below contains an explanation of the significance criteria. The significance ratings are: beneficial, adverse, insignificant, and unknown. Where sufficient information on direct and indirect effects is available, rating criteria are quantitative in nature. In other instances, where less information is available, the discussions and rating criteria are qualitative. In instances where criteria to determine an

aspect of significance (significant adverse, insignificant, or significant beneficial) do not logically exist, no criteria are noted. These situations are termed "not applicable" in the criteria tables. An example of an instance where criteria do not logically exist, is the evaluation of the impact vector of incidental take on a declining stock of marine mammals. In that situation, an increase in take that caused a downward change in the population trajectory by greater than 10 percent is significant adverse. Any level below that which would have an effect on population trajectories is insignificant because the stock is continuing to decline regardless of fishery effects. There is no logical significant beneficial alternative (a reduction in take resulting in a beneficial effect on the population trajectory). Therefore, a criterion for significant beneficial would not be applicable (NMFS 2004).

Differences between direct and indirect effects are primarily linked to the time and place of impact. Direct effects are caused by the action and occur at the same time and place. Indirect effects occur later in time and/or are further removed in distance from the direct effects (40 CFR 1508.27). For example, the direct effects of an alternative which lowers the harvest level of a target fish could include a beneficial impact to the targeted stock of fish, a neutral impact on the ecosystem, and an adverse impact on net revenues to fishermen, while the indirect effects of that same alternative could include beneficial impacts on the ability of Steller sea lions to forage for prey, neutral impacts on incidental levels of PSC, and adverse impacts in the form of economic distribution effects, for example, reducing employment and tax revenues to coastal fishing communities.

The rating terminology used to determine significance is the same for each resource, species, or issue being treated; however, the basic "perspective" or "reference point" differs depending on the resource, species, or issue being treated. The reference point refers to the biological environment. For each resource or issue evaluated, specific questions were considered in the analysis. In each case, the questions are fundamentally tied to the respective reference point. The generic definitions for the assigned ratings are as follows:

S+ Significant beneficial effect in relation to the reference point; this determination is based on interpretations of available data and the judgment of the analysts who addressed the topic.

I Insignificant effect in relation to the reference point; this determination is based upon interpretations of data, along with the judgment of analysts, which suggests that the effects are small and within the "normal variability" surrounding the reference point. When evaluating an economic or management issue it is used when there is evidence the alternative does not positively or negatively affect the respective factor.

S- Significant adverse effect in relation to the reference point and based on interpretations of data and the judgment of the analysts who addressed the topic.

U Unknown effect in relation to the reference point; this determination is made in the absence of information or data suitable for interpretation with respect to the question of the impacts on the resource, species, or issue.

NE No effect is anticipated from implementation of the action.

4.2 Groundfish

The reference point for the determination of significance for the effects on target groundfish species is the capacity of a stock to maintain benchmark population levels as specified in 2006-2007 Harvest Specifications. These set benchmark harvest levels in accordance with requirements described by the

MSA. Perhaps the most influential of these standards is MSA National Standard 1 which states: "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimal yield from each fishery for the United States fishing industry (16 U.S.C 1851). These benchmarks include OFLs, ABCs, and TACs as outlined in the GOA and BSAI fishery management plans. The OFL and ABC levels reflect sustainable harvest levels based on science. The TAC reflects a policy choice designating an allowable catch level which is always specified less than the OFL and less than or equal to the ABC.

The 2006-2007 Harvest Specifications specifies the TAC, ABC, and OFL for target groundfish species, as well as the other species category in the GOA and BSAI. Plan Teams, composed of Alaska, Oregon, and Washington fisheries scientists and management personnel (State and Federal), recommended benchmark harvest levels to the North Pacific Fishery Management Council (Council). These recommendations are based on stock assessment information prepared annually by the Alaska Department of Fish and Game (ADF&G) and NMFS. For most target groundfish species, the TAC is conservatively set below the ABC, and is strictly enforced by NMFS inseason management. Overfishing levels are set above the ABC.

For the purposes of this analysis, groundfish harvest above the OFL level has a significant adverse impact on the stock, and can be reasonably expected to jeopardize the capacity of the stock to maintain benchmark population levels. Table 4.2 summarize the significance criteria for evaluating the effects of the alternatives on groundfish in accordance with harvest benchmarks described in the 2006-2007 Harvest Specification EA.

Table 4.2. Criteria used to estimate the significance of effects on stocks of groundfish in the GOA.

Effect	Significant Adverse	Insignificant	Significant Beneficial	Unknown
Harvest of Groundfish Species	Reasonably expected to jeopardize the capacity of the stock to maintain benchmark population levels	Reasonably not expected to jeopardize the capacity of the stock to maintain benchmark population levels	NA	Insufficient information available

Potential impacts are limited to groundfish stocks that are currently underutilized because harvest is limited by king crab or Pacific halibut PSC limits. The trawl fisheries commonly affected by PSC closures in the GOA and BSAI include the following: GOA shallow-water trawl, GOA deep-water trawl, and BSAI trawl fisheries for Pacific cod, yellowfin and rock sole, and flatfish. Early closure of the GOA shallow-water trawl and GOA deep-water trawl results in a portion of the shallow and deep-water flatfish species TAC not being harvested. Table 4.3 summarizes trawl fisheries closed in 2005 because PSC allocations were reached. Potential impacts on these fisheries are discussed in subsequent discussion and tables.

Table 4.3. Summary of 2005 fishery closures resulting from the attainment Pacific halibut and red king crab PSC limits in the GOA and BSAI management areas.

Closure Date	Fishery	Target Species	Notes	Limiting PSC
9/27/2005	GOA trawl gear	All trawl in GOA		Halibut PSC limit
8/26/2005	GOA trawl shallow-water complex	Pollock, Pacific cod, shallow-water flatfish, flathead sole, Atka mackerel, skates, and other species	Does not apply to vessels using pelagic trawl gear in GOA areas open to directed fishing for pollock	Halibut PSC limit
8/18/2005	GOA trawl shallow-water complex	Pollock, Pacific cod, Shallow-water flatfish, flathead sole, Atka mackerel, skates, and other species	Does not apply to vessels using pelagic trawl gear in GOA areas open to directed fishing for pollock	Halibut PSC limit
8/17/2005	BSAI trawl	Yellowfin sole		Halibut PSC limit
8/17/2005	BSAI trawl	Pacific cod		Halibut PSC limit
8/17/2005	BSAI trawl	Rock sole, flathead sole, and "other flatfish"		Halibut PSC limit
7/21/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut PSC limit
4/7/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut PSC limit
3/23/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut PSC limit
3/14/2005	BSAI trawl Zone 1	Yellowfin sole		Red king crab PSC limit

4.2.1 Effects on GOA and BSAI Groundfish Species

In the GOA, groundfish species include pollock, Pacific cod, sablefish, shallow and deep-water flatfish, rex sole, flathead sole, arrowtooth flounder, Pacific ocean perch, shortraker rockfish, rougheye rockfish, northern rockfish, "other slope" rockfish, pelagic shelf rockfish, demersal shelf rockfish, thornyhead rockfish, Atka mackerel, "other species" and skates. In the BSAI, groundfish species include pollock, Pacific cod, yellowfin sole, rock sole, flathead sole, "other flatfish", Alaska plaice, arrowtooth flounder, sablefish, Pacific ocean perch, shortraker rockfish, rougheye rockfish, other rockfish, northern rockfish, Atka mackerel, squid, and "other species." Groundfish harvest amounts and methods under all alternatives are subject to the conditions outlined in the 2006-2007 Harvest Specifications. Groundfish species with an estimated spawning stock biomass are expected to be above their minimum size thresholds in 2006 and 2007. Moreover, the probability of overfishing any target groundfish species is low because of inseason harvest restrictions and the TAC setting process.

Alternative 3

Alternative 3 would not change current fishery conditions in the GOA or BSAI management areas. Under this alternative, the VIP would be removed from regulation through an FMP amendment (Option 1) or regulatory amendment (Option 2). Currently, the VIP is not enforced and bycatch rate standards have not been published in the *Federal Register* since 2003. Without biannual publication of bycatch rate standards, vessel operators have not been required by regulation to follow a halibut bycatch rate standard for several years. As a result, current fishery conditions are reflected under this alternative.

Alternative 3 has two associated options: Option 1 would eliminate the VIP from the BSAI and GOA FMP, as well as regulations at 679.21(f); and Option 2 would eliminate the VIP from regulations, while leaving the authority for a VIP in the BSAI and GOA FMPs. Under Option 1, future incentive programs would require an amendment to the GOA and BSAI FMP. Neither option under Alternative 3 would change current PSC and target species harvest limits or harvest methods as determined in the annual harvest specification process (NMFS 2006).

Alternatives 1 and 2

The effectiveness of the VIP to reduce PSC rates under Alternative 1 or 2 is largely unknown because of data limitations. Evaluation of the VIP is complicated by a lack of observer coverage for vessels less than 125 feet and the following exogenous factors: (1) the lack of enforcement since 2003 and prosecution since the late 1990's prevents an assessment of recent VIP activity; (2) other PSC reduction measures such as gear, area, and seasonal restrictions; and (3) industry cooperative agreements may reduce PSC rates in certain fisheries through hotspot avoidance techniques.

Assuming that an enforced VIP would have a positive effect on reducing PSC rates, Alternatives 1 and 2 may increase the utilization of several groundfish species typically constrained by PSC limits. These species include deep and shallow-water flatfish, flathead sole, and rex sole in the GOA; Pacific cod in the GOA and BSAI, and yellowfin, rock sole, and flatfish in the BSAI. However, any harvest increase would remain within OFL, ABC, and TAC limits, and would not result in overfishing of any target species.

Gulf of Alaska

Halibut PSC in the GOA trawl fisheries is managed as a PSC allocation between the shallow-water and deep-water species complexes. The seasonal allocations are specified in Table 4.4. If the seasonal limit

of halibut bycatch mortality is exceeded in the shallow-water or deep-water species complex, then the overage is deducted from the same species complex in the following season.

Table 4.4. Seasonal apportionments of PSC limits for Pacific halibut in the shallow-water and deep-water complex fisheries in the GOA.

Season	Shallow-water (mt)	Deep-water (mt)	Total
January 20-April 1	400	100	500
April 1-July 1	100	300	400
July 1 – September 1	200	400	600
September 1 – October 1	150	Any remainder	150
Subtotal January 20- October 1	900	800	1,700
October 1 –December 31	n/a	n/a	300

Trawling for shallow-water flatfish, deep-water flatfish, rex sole, and flathead sole in the GOA was closed by halibut PSC before TACs were reached in 2003, 2004, and 2005 (Table 4.5). Between 2003 and 2005, unharvested shallow-water flatfish and deep-water flatfish harvest ranged between 14,011 mt to 16,436 mt, and 2,748 mt to 5,381 mt, respectively. For these years, the portion of the shallow-water and deep-water flatfish TACs utilized ranged between 16 percent to 25 percent, and 7 percent to 26 percent for each species group, respectively. Halibut PSC also closed the flathead sole and rex sole fisheries before the TAC was harvested in 2003, 2004, and 2005 (Table 4.3). Utilization of the TAC in the flathead sole fisheries has been steady at approximately 25 percent, while TAC utilization in the rex sole fishery has ranged from 14 percent to 43 percent.

Table 4.5. Total catch, trawl harvest, and TAC for shallow-water and deep-water flatfish species in the Western, Central, and West Yakutat regions of the GOA.

		Catch (All Fisheries (mt)	Trawl Harvest (mt)	Percent trawl Harvest	TAC[1] (mt)	Percent TAC Harvest
Shallow-water flatfish	2005[2]	4,649	4,758	100	19,530	24
	2004	3,094	3,080	100	19,530	16
	2003	4,763	4,627	100	18,660	24
Deep-water flatfish	2005	982	404	99	5,790	7
	2004	676	663	98	5,160	13
	2003	409	970	99	3,730	26
Rex sole	2005	3,650	2,178	100	10,360	21
	2004	1,463	1,464	100	10,360	14
	2003	2,177	3,650	100	8,420	43
Flathead sole	2005	2,543	2,538	100	10,000	25
	2004	2,394	2,389	100	10,430	23
	2003	2,530	2,527	100	9,900	26

[1] *TAC does not include Southeast Alaska.*

[2] *Total catch and trawl data are preliminary for 2005. Thus, there may be small differences from the verified value.*

Given the large amount of underutilized groundfish, a halibut PSC rate reduction in the trawl fleet would increase the amount of TAC utilized by slowing down the rate at which halibut is harvested. All fishing activities would be constrained by TAC and PSC limits, and would thus be subject to harvest limits and methodology outlined in the Harvest Specification EA. Additional utilization of the shallow-water and deep-water species, as well as flathead and rex sole would not significantly impact these species. Because harvest levels will remain at or below the TAC, Alternatives 1 and 2 are not expected to jeopardize the capacity of the shallow-water flatfish, deep-water flatfish, rex sole and flathead sole stocks to maintain benchmark population levels.

In recent years, Pacific cod harvest in the Central and Western GOA has been constrained by halibut PSC limits (Table 4.6). If successfully enforced, Alternatives 1 and 2 may allow more Pacific cod to be harvested in these areas. The greatest increase in Pacific cod harvest may be realized in the Central GOA offshore area and the Western GOA inshore area. However, based on 2005 harvest amounts, all areas may see some benefit to a reduction in halibut PSC rates. These small overages were below the ABC and OFL for the GOA.

Table 4.6. Total catch, TAC, and percent retained for the inshore and offshore Pacific cod sectors in the Central and Western GOA.

GOA		Inshore			Offshore		
		Catch (mt)	TAC (mt)	Percent TAC harvested	Catch (mt)	TAC (mt)	Percent TAC harvested
Central	2005	22,234	22,578	98	361	2,508	14
	2004	25,507	24,404	105	1,931	2,712	71
	2003	20,163	20,421	99	2,110	2,269	93
Western	2005	11,978	14,118	85	424	1,569	27
	2004	14,273	15,261	94	1,281	1,696	76
	2003	13,843	13,905	100	2,050	1,545	133

An increase in harvest because of decreased halibut PSC rates would be constrained by the area specific TAC set by the Council and NMFS during the harvest specification process. Thus, because Pacific cod harvest would remain within the TAC and below the ABC and OFL, Alternatives 1 and 2 are not expected to jeopardize the capacity of the Pacific cod stock in the GOA to maintain benchmark population levels.

Bering Sea and Aleutian Islands

Pacific cod harvest in the BSAI is constrained by Pacific halibut closures on an annual basis (Table 4.5). With the exception of 2004, both the trawl catcher vessel (CV) and catcher processor (CP) sectors have been constrained by PSC closures in the late summer and fall. Between 2002 and 2005, the CP and CV sectors have left between 1,600 and 11,500 mt of the Pacific cod TAC unharvested. It is unknown what proportion of this TAC could be harvested if halibut PSC rates were reduced. Even with an increase in utilization, harvest would be constrained by the TAC (and below the ABC and OFL) and would not be expected to jeopardize the capacity of Pacific cod stocks in the BSAI to maintain benchmark population levels.

Table 4.7. Pacific cod catch for the trawl sector in the BSAI management area.

BSAI		Catch (mt)	TAC (mt)	Unharvested TAC (mt)	Percent TAC harvested
Trawl CP	2002	36,975	43,475	6,500	85
	2003	33,605	45,105	11,500	75
	2004	41,144	46,844	5,700	88
	2005	35,506	44,779	9,273	79
Trawl CV	2002	41,475	42,475	2,000	98
	2003	43,434	45,105	1,671	96
	2004	39,844	46,844	7,000	86
	2005	35,847	44,779	8,932	81

Yellowfin sole, rock sole, and other flatfish (flathead sole, "other flatfish", and Alaska plaice) harvests are constrained by halibut PSC limits and TACs in the BSAI. The amount of TAC harvested, and resulting halibut PSC for these species is somewhat dependent on dockside prices, and the overall BSAI TAC limit of 2 million mt. In recent years, a large pollock TAC has reduced the TACs for flatfish because of the overall BSAI TAC limit. As a result, a large portion of the flatfish TACs have been harvested at or before PSC limits are reached (Table 4.7). Moreover, harvest of flatfish and Pacific cod may also vary in concert with product values. For example, if flatfish prices are higher than Pacific cod, fishermen may optimize their targeting of flatfish rather than expend PSC on Pacific cod.

The amount of underutilized TAC for yellowfin sole, rock sole, and flatfish harvest is small because these species are limited by the overall BSAI TAC limit. If the VIP successfully reduced PSC rates, a portion of the underutilized TAC may be harvested. If pollock TACs are reduced in the future, flatfish TACs may increase. An increase in TAC for these species would result in PSC limiting a larger amount of harvest. Successful enforcement of the VIP in the BSAI under Alternatives 1 and 2 may mitigate some of the PSC issues in the Pacific cod, yellowfin sole, rock sole, flathead sole, and other flatfish fisheries; especially if TAC levels were raised for these species. However, harvest amounts for these groundfish species would be subject to OFL, ABC, and TAC amounts, and the location and method of harvest would be restricted to current regulation. Thus, an increase in groundfish harvested by reducing PSC rates would not jeopardize the capacity of PSC constrained groundfish stocks to maintain benchmark population levels.

Table 4.8. Flatfish catch and TAC amounts for the BSAI between 2003 and 2005.

		Catch (mt)	TAC (mt)	Unharvested TAC (mt)	Percent TAC harvested
Yellowfin sole	2005	87,792	87,784	-8	100
	2004	69,046	73,164	4,118	94
	2003	74,418	74,688	270	100
Rock sole	2005	35,546	35,502	-44	100
	2004	47,769	42,115	-5,654	113
	2003	35,395	37,400	2,005	95
Flathead sole	2005	15,260	16,575	1,315	92
	2004	16,862	16,650	-212	101
	2003	13,792	17,000	3,208	81
Other flatfish	2005	4,532	4,568	36	99
	2004	4,899	4,675	-224	105
	2003	2,749	2,775	26	99

4.2.2 Conclusion

Alternative 3 would remove the VIP from regulation (Option 2) or through an FMP amendment (Option 1). Because the VIP is not currently enforced and bycatch rate standards are not published, the program is effectively latent. Alternative 3 reflects this condition and would not result in a change in the amount of groundfish harvested by the trawl fishery. Moreover, all groundfish harvest amounts would be restricted to the annual TACs, ABCs, and OFLs, and current fishery regulations describing methods and areas of harvest. As a result, Alternative 3 would not jeopardize the capacity of groundfish stocks to maintain benchmark population levels and would therefore have an insignificant effect on groundfish.

Alternative 1 and 2, and associated options are not expected to result in a large change in the amount of groundfish harvested. Annual and inseason adjustment of the bycatch rate standards would allow responsive changes to fishing behavior, but would not necessarily allow more groundfish to be harvested. Placement of VIP bycatch rate standards in regulation as described under Alternative 2, Option 1, would reduce the Council's ability to make annual or biannual adjustments to bycatch rate standards (as described in Alternative 2, Option 2, and Alternative 1). Annual (Alternative 2, Option 2) or biannual adjustments (Alternative 1) of VIP bycatch rate standards would allow bycatch rates to be adjusted in concert with changes in PSC and target species abundance, or changes in industry behavior (e.g., cooperatives). However, because of questions about the effectiveness of the VIP (Section 3.0, 7.0, and 8.0), annual or inseason adjustment to bycatch rate standards is not expected to result in a large change in the amount of groundfish harvested.

In conclusion, an increase in groundfish harvest would be restricted to the annual TACs, ABCs, and OFLs as specified in the Harvest Specification DEIS (NMFS 2006), 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.

4.3 Prohibited Species Catch

The reference point for significance determination for the effects on PSC is the capacity of the stock to maintain benchmark population levels. Table 4.9 summarizes the significance criteria for evaluating the effects of the alternatives on Pacific halibut and red king crab.

Table 4.9. Criteria used to estimate the significance of effects on stocks of Pacific halibut and Red King Crab.

Effect	Significant Adverse	Insignificant	Significant Beneficial	Unknown
Incidental catch of halibut and red king crab	Reasonably expected to jeopardize the capacity of the stock to maintain benchmark population levels	Reasonably not expected to jeopardize the capacity of the stock to maintain benchmark population levels	NA	Insufficient information available

Benchmarks: Pacific halibut - estimated long term constant exploitation yield (CEY),
NA: not applicable.

4.3.1 Effects on Prohibited Species

Pacific Halibut

The IPHC is responsible for the conservation of the Pacific halibut resource. The IPHC uses a policy of harvest management based on a constant exploitation rate. The constant exploitation rate is applied annually to the estimated exploitable biomass to determine a total constant exploitation yield (total CEY). The total CEY represents the total allowable harvest within an IPHC statistical area and is calculated as the product of the exploitable biomass and the harvest rate (a stock assessment parameter defined by the IPHC). The total CEY, derived from the exploitable biomass, is estimated using a variety of stock assessment inputs including hook-and-line survey data, reported sources of mortality from the commercial fishery and other removals, and demographic information. To obtain a harvest limit for the directed fishery, the IPHC adjusts the total CEY to account for incidental catch in the groundfish fishery; wastage; personal use; and mortality associated with sport catch.

Incidental catch of halibut in the groundfish fisheries results in a decline in the standing stock biomass, a lowering of the reproductive potential of the stock by harvesting sub-adults and pre-recruits, and reduced short and long term yields to the directed hook-and-line fisheries. To compensate the halibut stock for these removals over the short term, halibut mortality in the groundfish fisheries is deducted on a pound for pound basis each year from the directed hook-and-line quota. Halibut incidentally taken in the

groundfish fisheries are of smaller average size than those taken in the directed fishery, this results in further impacts on the long term reproductive potential of the halibut stock. This impact, on average, is estimated to reduce the reproductive potential of the halibut stock by 1.7 pounds for each 1 pound of halibut mortality in the groundfish fisheries. These impacts are discussed by Sullivan, *et al.* (1994).

The benchmark used to determine the significance of effects of the alternatives on the halibut stock is whether or not incidental catch of halibut would be expected to lower the total CEY of the halibut stock in and of the IPHC management areas in the GOA or BSAI. The total CEY is used as a benchmark measure because it represents a biological target limit for total removals in the GOA in and BSAI. Fishery harvest recommendations from IPHC staff may be higher or lower than the CEY depending on statistical, policy, and biological considerations.

The 2006 stock assessment for Pacific halibut in the GOA and BSAI was conducted in December 2005. This stock assessment utilizes scientific survey and harvest data to estimate the exploitable biomass and total CEY for each IPHC statistical area: the GOA contains IPHC statistical areas 2C to 4A, and the BSAI contains IPHC statistical areas 4A to 4E.

Changes in total CEY and exploitable biomass may be caused by changes in halibut abundance or revisions made the models used to estimate abundance. Between 2004 and 2006, exploitable biomass and total CEY declined by 44 million pounds and 20.52 million pounds, respectively (Table 4.10). Much of this decline is attributed to a downward revision of estimated biomass in areas 2C and 3B. This downward decline can be attributed to a lower commercial and survey catch per unit of effort (CPUE) in 2005. As a result, more than half of the GOA and BSAI reduction in exploitable biomass can be attributed to Area 3B. Despite the declines in halibut abundance, the overall exploitable biomass has remained at stable sustainable levels in all statistical areas. Moreover, the total CEY is designed to prevent overfishing while providing stable catch levels. Fluctuation in the total CEY are to be expected as the overall abundance of halibut changes, or other policy and statistical needs are met.

Table 4.10. Exploitable biomass for Pacific halibut in the GOA and BSAI. Note that biomass estimates are projected using the pervious year's assessment (e.g., the 2005 biomass is based on the 2004 assessment).

Area	2004		2005		2006	
	Exploitable Biomass	Total CEY	Exploitable Biomass	Total CEY	Exploitable Biomass	Total CEY
2C	80	20.00	66	14.90	61	13.75
3A	146	36.50	146	32.90	143	32.18
3B	65	16.30	56	11.20	45	9.00
4A	21	4.20	20	4.00	19	3.80
4B	15	3.00	10	2.00	9	1.35
4CDE	30	6.00	32	6.40	36	5.40
Total	**357**	**86**	**330**	**71.4**	**313**	**65.48**

PSC and directed fishing amounts for Pacific halibut are controlled by fishery specific PSC limits and quota amounts equal to the Fishery CEY (a subcategory of the total CEY). Between 2003 and 2005, bycatch amounts have remained steady at approximately 11,500,000 pounds. PSC limits are annually set by NMFS and the Council to provide strict control over the amount of fishery specific halibut PSC. These harvest control measures restrict catch to levels at or near the CEY, and thus do not allow the stock of Pacific halibut to be overfished.

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 PSC rates. As discussed in Sections 3.0 and 4.1, the VIPs 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.

Red King Crab

Annual limits of red king crab are based on stock assessment information provided by ADF&G and NMFS scientists. This information takes into account sources of mortality as well as reproduction and recruitment over specific geographic regions and temporal scales. Based on these stock assessments, an annual fishery limit and fishery bycatch limit is set to prevent overfishing. These limits are based on a statistical estimate of the maximum sustainable yield (MSY), which is a calculation of the harvestable surplus that the red king crab stock is able to produce for a given year. Because uncertainty is inherent with the parameters and survey data information required for stock assessments, fishery and bycatch limits are set below the MSY. Thus, for this EA, the benchmark used to determine the significance of effects of the alternatives on the red king crab is whether or not the incidental catch of red king crab would reduce red king crab stocks below MSY.

In addition to Pacific halibut, the VIP was designed to control red king crab PSC rates in the BSAI, including the red king crab savings area. The PSC of red king crab is controlled by NMFS inseason management through PSC limits specified in the annual Harvest Specifications (NMFS 2006). Upon reaching a PSC limit, the target groundfish fishery which attained the PSC limit is closed in the Bycatch Limitation Zone 1. This harvest control measure ensures reasonable bycatch levels are maintained and the incidental mortality of red king crab is controlled. In 2005, the red king crab PSC limit was set by the Council at 182,225 individual crabs allocated across the following four fishery categories: Pacific cod; rock sole, flathead sole, and other flatfish; pollock, Atka mackerel and other species; and yellowfin sole.

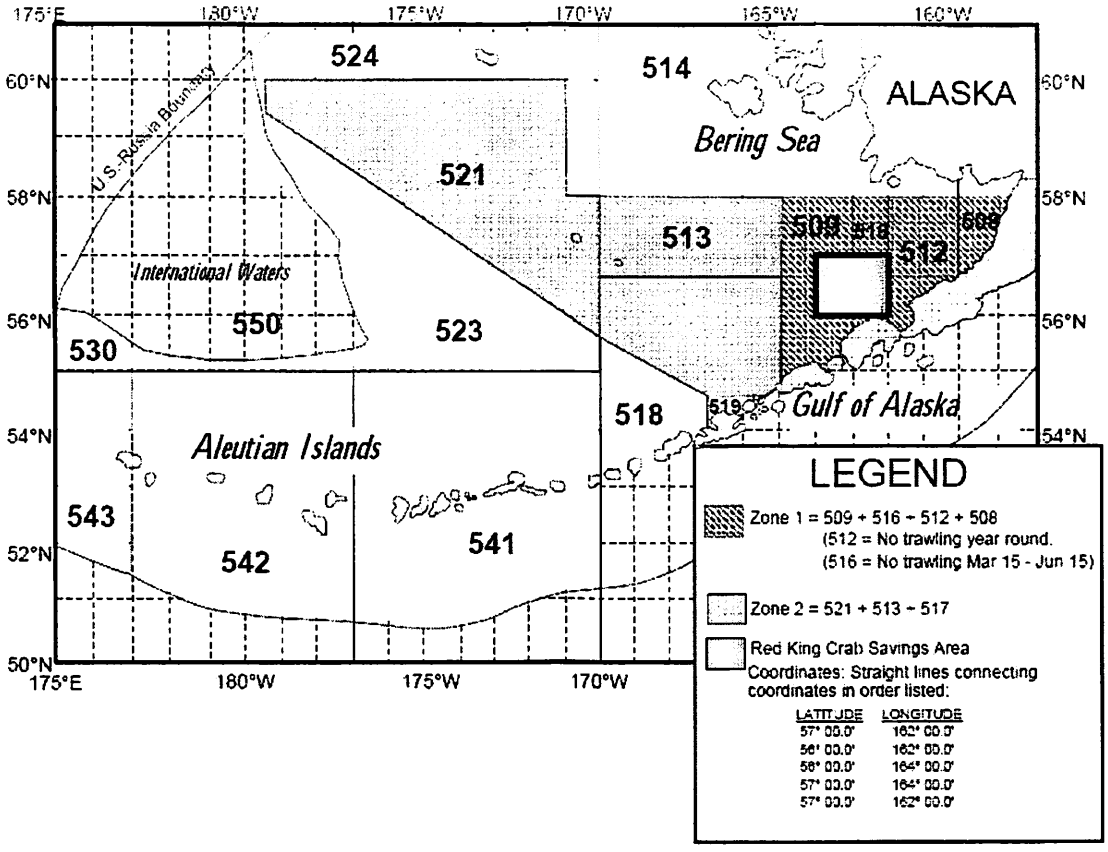

Figure 1. Zone 1, Zone 2, and the Red King Crab Savings Area of the BSAI.

The yellowfin sole fishery in Zone 1 (Figure 1) is the primary the fishery constrained by red king crab PSC limits (Table 4.10). The yellowfin sole fishery exceeded its PSC limit 2003, 2004, and 2005. The annual closure of the yellowfin sole fishery because of reaching its PSC limit in Zone 1 contributes to the inability of the fishing fleet to harvest all of the yellowfin sole TAC. A reduction in PSC rates due to the VIP may decrease the rate at which red king crab is caught in the yellowfin sole fishery. However, this reduction is likely to be small.

None of the alternatives would change 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 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 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.

Table 4.11. Red king crab PSC limits for trawl fisheries in BSAI.

BSAI Target Fishery		Total Catch (number of crab)	Limit (number of crab)	Remaining (number of crab)	Percent of limit caught
Pacific cod	2005	1,832	26,563	24,731	7
	2004	693	26,563	25,870	3
	2003	1,137	13,079	11,942	9
Rock sole, flathead sole, "other flatfish"	2005	46,045	121,413	75,368	38
	2004	33,336	121,413	88,078	27
	2003	50,148	59,782	9,634	84
Pollock, Atka mackerel, "other species"	2005	0	406	406	0
	2004	26	406	380	6
	2003	34	200	166	17
Yellowfin sole	2005	48,846	33,843	-15,003	144
	2004	40,877	33,843	-7,034	121
	2003	22,059	16,664	-5,395	132
Total	2005	96,723	182,225	85,502	53
	2004	74,932	182,225	107,293	41
	2003	73,378	89,725	16,347	82

4.4 Effects on the Social and Economic Environment

The three proposed alternatives may have socioeconomic impacts on the commercial non-pelagic and pelagic trawl fisheries (Table 4.12). Alternatives 1 and 2 may affect the trawl fisheries in three ways: (1) provide an incentive for vessel operators to attempt to distort observer data through pre-sorting; (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. The potential socioeconomic impact from each of these Alternatives is discussed in detail below, and in the RIR (Section 7.0) and IRFA (Section 8.0).

Table 4.12. Number of vessels, by vessel length, participating in specified BSAI and GOA trawl fisheries.

	Target Fishery	Species	2004 Vessel Count		2005 Vessel Count	
			Less than 125'	Greater than 125'	Less than 125'	Greater than 125'
BSAI Trawl	Yellowfin sole	Yellowfin sole	7	20	5	21
	Bottom Pollock	Pollock	27	21	40	31
	Other	Midwater Pollock	60	46	59	45
		Pacific cod	72	25	60	21
		Rockfish/Greenland turbot/sablefish/"other species"	7	12	0	9
		Atka mackerel	5	14	5	14
		Rock sole/other flatfish/flathead sole	7	16	6	16
	Total BSAI Trawl Vessels	**All**	**91**	**62**	**84**	**61**
GOA Trawl	Other	Shallow-water flatfish	27	0	22	0
		Deep water flatfish	7	0	0	0
		Rockfish	34	11	26	9
		Pacific cod	63	3	71	0
		Arrowtooth, "other species", rex sole, flathead sole	28	5	29	5
		Bottom Pollock	45	0	54	0
	Midwater	Pollock	64	0	66	0
	Total GOA Trawl Vessels	**All**	**81**	**12**	**85**	**12**

Alternative 1 and 2 provide an incentive for vessels with observer coverage to pre sort fish. The ramifications of biased observer data could affect inseason management as well as fishery stock assessments. The cost associated with undermining the quality of observer data include inaccurate assessment of stock size, inaccurate assessment of inseason catch information, and potential enforcement issues for existing regulations. These inaccuracies may lead to management error by allowing the under or over harvest of target or PSC species, and biasing bycatch and discard estimates. Vessels over 125 feet would be the primary groups in which observer data might be distorted

Because of limited observer coverage in vessels less than 125 feet length over-all (LOA), enforcement effort would be concentrated on vessels greater than or equal to 125 feet LOA (100 percent observer coverage). Vessels smaller than 125 LOA are required to carry an observer on 30 percent of their trips as chosen by the vessel operator. Thus, a vessel with only 30 percent coverage is able to choose which trips will be observed, and throughout the course of a season, may choose to fish observed trips in areas with low PSC rates. Moreover, vessels with 30 percent observer coverage may have observers on board for short periods of time and may make few hauls per day.

These factors associated with observer coverage reduce sample sizes which in turn makes it difficult, if not impossible, to estimate vessel specific bycatch rates with reasonable 95 percent confidence intervals. Because the enforcement is based on the lower 95 percent confidence interval, the large confidence range caused by the small sample size effectively limits enforcement of the VIP on vessels greater than or equal to 125 feet LOA.

The level of PSC reduction achieved by the VIP is unknown. Increased enforcement as outlined in Alternatives 1 and 2 may increase PSC rate compliance for vessels with adequate observer coverage. A decrease in PSC rates may increase revenue in the previously described fisheries that have underutilized TAC. However, because enforcement of the VIP would be selective to 100 percent observer coverage, vessels with less coverage would not have adequate enforcement for a conviction and would thus have a *de facto* exemption from VIP regulations.

Differing levels of enforcement would create an externality that results in vessels with less observer coverage benefiting from bycatch rates standards being enforced on 100 percent observer coverage vessels. In this situation, vessels without adequate enforcement would be able to catch more target species TAC before PSC limits are reached, or they may fish faster without penalty in an effort to increase TAC utilization. In 2004 and 2005, approximately 60 percent of the vessels operating in the BSAI and 88 percent of the vessels operating in the GOA had less than 100 percent observer coverage (Table 4.11). As a result, the largest portion of the fleet would not be subjected to VIP enforcement.

Overall, operators with vessels under 125 LOA would see the greatest gains in revenue from the VIP. In the GOA, the main fisheries constrained by the TAC are the Pacific cod and flatfish fisheries. In both cases, almost all vessels are smaller than 125 feet LOA. In the BSAI, where larger vessels are common, the majority of vessels in the yellowfin sole and rock sole fisheries are greater than 125 feet LOA, whereas, almost all of the vessels in the Pacific cod fishery are less than 125 feet LOA. As previously discussed, a quantitative estimate of the revenue gain attributed to the VIP is unknown. A detailed analysis of these issues is found in the RIR (Section 7.0) and IRFA (Section 8.0).

The two associated options with Alternative 3 have differing levels of impacts on the socioeconomic environment. Removal of the VIP as described under Alternative 3, Option 1, would not change the current socioeconomic environment in the fishery. However, Alternative 3, Option 2, would require the Council and NMFS to amend the GOA and BSAI FMP if future bycatch incentive programs are provided to individual vessels. Because FMP amendments may take a large amount of time to implement, removal of the current incentive program language may slow down future actions. As a result, costs are incurred to the public through the additional involvement and time requirement before an incentive program is promulgated.

In conclusion, a reinvigorated VIP as described under Alternatives 1 and 2 would likely not result in a substantial increase in groundfish revenue, and would increase administration, enforcement, and Observer Program costs. The Observer Program and management programs relying on observer data may be

especially impacted by the VIP because of data distortion. Conversely, Alternative 3 would not increase administrative and enforcement costs, nor would it provide an incentive for vessel operators to distort observer data.

5.0 Cumulative Effects

Analysis of the potential cumulative effects of a proposed action and its alternatives is a requirement of NEPA. An environmental assessment or environmental impact statement must consider cumulative effects when determining whether an action significantly affects environmental quality. The Council on Environmental Quality (CEQ) regulations for implementing NEPA define cumulative effects as:

> *"the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7)."*

The cumulative effects of the current harvest specifications are discussed in detail in the Harvest Specifications EA (NMFS 2006). The Harvest Specifications EA provides a recent and broad examination of potential cumulative effects for fisheries throughout Alaskan waters. The findings can therefore be applied to the GOA and BSAI groundfish fisheries. The Harvest Specification EA concludes that the foreseeable future actions (ecosystem approaches to management, rationalization, traditional management tools, other government actions and private actions) will all lead to a reduction in the adverse effects of fishing on target species. Harvest from fisheries in subsequent years will put continuing pressure on groundfish stocks. However, these fisheries are expected to be managed in a sustainable manner and are subject to tier-specific OFL and ABC levels. Therefore, the fishery will be conducted under regulations that are substantially the same as those in place today. Future regulations may include ecosystem considerations and bycatch reduction considerations. The EA states that these considerations should be at least as precautionary as regulations in place today. Expansion of State fisheries will most likely result in a reduction in the Federal TAC, or a greater harvest of an existing Federal TAC within State waters. The EA states that an expansion of State of Alaska fisheries would not be expected to result in overfishing. However, predicting the actual impact depends on actions taken by the State.

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.

6.0 Environmental Analysis Conclusions

Three alternatives were presented in this analysis: status quo, annually publication of VIP bycatch rate standards, permanent placement of VIP bycatch rate standards in regulation, and elimination of the VIP through a regulatory amendment and FMP amendment. None of the alternatives presented in this analysis would have additional effects beyond those already identified and analyzed in the Final SEIS (NMFS 2004) and in the 2006-2007 harvest specifications EA (NMFS 2006).

Context: For the proposed alternatives, the setting of the proposed action is the GOA and BSAI groundfish fisheries. The effects of the alternatives on society, within this area, are on individuals directly and indirectly participating in the trawl groundfish fisheries and on those who use the ocean resources. Because this action may reduce halibut PSC rates, resulting in an increase in target species utilization, this action may have regional impacts on society.

Intensity: Listings of considerations to determine intensity of the impacts are in 40 CFR 1508.28(b) and in the NAO 216-6, Section 6. Each consideration is addressed below in order as it appears in the NMFS Instruction 30-124-1 dated July 22, 2005, Guidelines for Preparation of a FONSI.

1. Can the proposed action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action? *No. No significant adverse impacts were identified for any of the Alternatives considered in this analysis.. All catches of groundfish will be subject to the regulatory conditions outlined in the 2007 -2008 DEIS. Moreover, because harvest would remain within OFL, ABC, and TAC limits as outlined in the DEIS, the alternatives would not decrease target groundfish species below benchmark population levels (Section 4.1).*

2. Can the proposed action be reasonably expected to jeopardize the sustainability of any non-target species or prohibited species? *No. Potential effects of the alternatives on non-target/ prohibited species were limited to Pacific halibut and red king crab, and those effects were determined to be non-significant (Section 4.2)*

3. Can the proposed action be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs? *No. No significant adverse impacts were identified for the alternatives. No effects were expected on ocean or coastal habitat or EFH (Section 4.0).*

4. Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety? *No. Public health and safety will not be affected in any way not evaluated under previous actions or disproportionately as a result of the alternatives. The alternatives would not change fishing methods (including gear types), timing of fishing or quota assignments to gear groups, which are based on previously established seasons and allocation formulas in regulations.*

5. Can the proposed action be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species? No. *None of the alternatives would change the total allowable catch of groundfish, total PSC, or seasons which fishing occur. The alternatives would also not change existing Steller sea lion protection measures or other measures designed to protect endangered or threatened species, or their critical habitat (Section 4.0).*

6. Can the proposed action be expected to have a substantial impact on biodiversity and ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)? *No*

significant adverse impacts were identified for the alternative beyond the issues the discussed in the Harvest Specification DEIS. No effects were expected on biodiversity, the ecosystem, or seabirds (EA Section 4.0).

7. Are social or economic impacts interrelated with significant natural or physical environmental effects? *Risks to the human environment by the GOA and BSAI trawl groundfish fisheries are described in detail in the Harvest Specification DEIS. This action is limited in scope and would not impact the human environment in the BSAI and GOA beyond issues discussed in the DEIS. .*

8. To what degree are the effects on the quality of the human environment likely to be highly controversial? *Alternatives 3 would not be controversial because it would essentially create the same conditions currently present in the trawl fishery. The level of controversiality for Alternatives 1 and 2 is not known for certain. These alternatives would reinvigorate the program, thus creating a new level of enforcement and increased demand on the Observer Program.*

9. Can the proposed action be reasonably expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas? *No. This action will have no substantial impacts on districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places, nor cause loss or destruction of significant scientific, cultural, ecological sensitive areas, or historical resources. Because this action is 3 nm to 200 nm at sea, consideration park land, prime farmland, wetlands, wild and scenic river, and historic or cultural resources is not applicable to this action. This action will not occur in ecologically sensitive areas such as habitat areas of particular concern.*

10. To what degree are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks? *The potential effects of the action are well understood because of the fish species, harvest method involved, limited duration, harvest amounts, and area of the activity. The potential impacts of groundfish harvest on other components of the environment also are well understood as described in previous NEPA analysis (Section 3.0).*

11. Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts? *Beyond the cumulative impact analysis in the 2007 and 2008 harvest specifications DEIS, no additional past or present cumulative impact issues have been identified that would accrue from this action.*

12. Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources? *No. This action will have no effect on districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places, nor cause loss or destruction of significant scientific, cultural, or historical resources. Because this action is 3 to 200 nm at sea, this consideration is not applicable to this action. (EA Section 6.0).*

13. Can the proposed action be reasonably expected to result in the introduction or spread of a nonindigenous species? *No. This action will not introduce or spread a nonindigenous specie into the Gulf of Alaska beyond those previously identified because it does not change fishing, processing, or shipping practices that may lead to the introduction of nonindigenous species.*

14. Will the proposed action likely establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration? *No. Future actions related to this action may result in impacts. As described in Section 5.0, future actions depend on the results of the study and future decisions by the Council. For all future actions pursuant to NEPA, appropriate environmental*

analysis documents (EA or EIS) will be prepared to inform the decision makers of potential impacts to the human environment and to implement mitigation measures to avoid significant adverse impacts.

15. Can the proposed action be reasonably expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment? None of the alternatives pose a known violation of Federal, State, or local laws or requirements for the protection of the environment.

16. Can the proposed action be reasonably expected to result in adverse impacts, not otherwise identified and described above? *Beyond the cumulative impact analysis in the Harvest Specification DEIS, no additional past or present cumulative impact issues have been identified that would accrue from the alternatives. These potential social and economic impacts are described above and in Section 5.0 of the EA.*

7.0 Regulatory Impact Review

7.1 Introduction

This Regulatory Impact Review (RIR) evaluates the costs and benefits of a proposed rule to clarify procedures for removing the VIP from Federal regulations, the Bering Sea and Aleutian Island Federal Management Plan (BSAI FMP), and the Gulf of Alaska Federal Management Plan (GOA FMP). This action is a regulatory change to discontinue the VIP.

7.2. What is Regulatory Impact Review

This RIR is required under Presidential Executive Order (E.O.) 12866 (58 *FR* 51735; October 4, 1993). The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

> *In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 further requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant." A "significant regulatory action is one that is likely to:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, local or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

7.2 Statutory Authority

The National Marine Fisheries Service manages the U.S. groundfish fisheries of the Gulf of Alaska management area in the Exclusive Economic Zone under the Fishery Management Plan (FMP) for that area. The North Pacific Fishery Management Council prepared the FMP under the authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations implement the FMPs at 50 CFR part 679. General regulations that also pertain to U.S. fisheries appear at subpart H of 50 CFR part 600.

7.3 Description of the Fishery

As noted earlier in the EA, detailed descriptions of the social and economic backgrounds of the groundfish fisheries may be found in the following reports:

.Alaska Groundfish Fisheries. Programmatic Supplemental Environmental Impact Statement (NMFS, 2004). This report contains detailed fishery descriptions and statistics in Section 3.10, "Social and Economic Conditions," and in Appendix I, "Sector and Regional Profiles of the North Pacific Groundfish Fisheries." "Economic Status of the Groundfish Fisheries off Alaska, 2000" (Hiatt, Felthoven and Terry, 2001), also known as the "2001 Economic SAFE Report." This document is produced by NMFS and updated annually. The 2001 edition contains 49 historical tables summarizing a wide range of fishery information through the year 2000.

Steller Sea Lion Protection Measures Supplemental Environmental Impact Statement (NMFS, 2001). Referred to as "SSL SEIS" in the remainder of this section) contains several sections with useful background information on the groundfish fishery (although the majority of information provided is focused on three important species - pollock, Pacific cod, and Atka mackerel). Section 3.12.2 provides extensive background information on existing social institutions, patterns, and conditions in these fisheries and associated communities, Appendix C provides extensive information on fishery economics, and Appendix D provides extensive background information on groundfish markets.

Environmental Impact Statement for American Fisheries Act Amendments 61/61/13/8 (NMFS 2002) provides a survey of the Bering Sea and Aleutian Islands groundfish fishery paying particular attention to the pollock fishery and the management changes introduced into it following the American Fisheries Act. The information is contained in Section 3.3, "Features of the human environment."

7.4 Problem Statement

The purpose of the proposed action is to modify or eliminate the VIP without adversely impacting other management programs. The VIP was designed to increase the amount of harvested groundfish TAC in the BSAI and GOA groundfish trawl fisheries by reducing PSC rates. However, the program has not performed as intended by the Council because of costs associated with enforcement, potential distortion of observer data, and the relatively small number of vessels impacted by the regulation. Because of these issues, VIP bycatch rate standards have not been published in Federal regulations since 2003. Without bycatch rate standards published in regulation, the program cannot be enforced.

7.5 Description of the Alternatives

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 Federal regulation or the GOA and BSAI FMP. In October 2006 the Council identified Alternative 3, Option 2 as its preferred alternative. 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. NMFS would publish VIP bycatch rate standards bi-annually through notice and comment rulemaking. Bbycatch rate standards have not been published in the Federal Register since the first half of 2003, and no cases

have been prosecuted since the late 1990s. Therefore, the No Action alternative would require rulemaking to establish VIP 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 an annual (Option 1) process or permanently established in regulation through a single rulemaking event (Option 2). Under both options, NMFS would have to increase its enforcement effort, as under Alternative 1. Further description of Options 1 and 2 are as follows:

Option 1: With annual VIP bycatch rate standards publication

Under Alternative 2, Option 1, the VIP would remain in the BSAI and GOA FMPs, and in regulation at 679.21(f). However, regulations implementing the VIP would be revised to accommodate an annual rather than bi-annual process for establishing VIP bycatch rate standards. VIP bycatch rate standards would be established annually through proposed and final rulemaking.

Option 2: With VIP bycatch rate standards placed in regulation

Under Alternative2, Option 2, regulations authorizing the VIP would be retained in the BSAI and GOA FMPs, and in Federal regulation. The current VIP regulations would be amended to establish VIP bycatch rate standards in regulations through a single rulemaking event. A subsequent regulatory amendment through proposed and final rulemaking would be required to make a change in VIP bycatch rate standards.

Alternative 3: VIP Elimination Alternative (Preferred 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. The options for Alternative 3 are as follows:

Option 1: FMP Amendment and regulatory amendment to eliminate the VIP

This option would eliminate the authority for the VIP from the GOA and BSAI FMP, as well as Federal regulation. This alternative would require FMP and regulatory amendments to the GOA and BSAI FMPs and Federal regulation. This option would eliminate FMP authority that allows regulatory incentives for individual vessels to maintain average PSC rates within a performance standard. Option 1 would eliminate the following text in the GOA and BSAI FMPs:

Section 3.6.4 of the GOA FMP ("Bycatch Reduction Programs") provides for regulations that reduce halibut PSC rates:

> *"The Secretary of Commerce, after consultation with the Council, may implement by regulation measures that provide incentives to individual vessels to reduce halibut bycatch rates of halibut for which PSC limits are established under Section 4.2.3.1. The intended effect of such measures is to increase the opportunity to fish groundfish TACs before established PSC limits are reached by encouraging individual vessels to maintain average bycatch rates within acceptable performance standards and discourage fishing practices that result in excessively high bycatch" (Council, January 2005, page 33).*

Section 3.6.4 of the BSAI FMP ("Bycatch Reduction Incentive Programs") provides for regulations that reduce halibut PSC rates:

> *"The Secretary of Commerce, after consultation with the Council, may implement by regulations measures that provide incentives to individual vessels to reduce bycatch rates of prohibited species for which PSC limits are established under Section 2. The intended effect of such measures is to increase the opportunity to harvest groundfish TAC's before established PSC limits are reached (Council, January 2005, page36)."*

Option 2: Regulatory Amendment to eliminate the VIP (Preferred Alternative)

Regulations providing for the VIP are at 50 CFR 679.21(f). The FMP language does not require an incentive program; therefore, it would be possible to eliminate the VIP by deleting this section of the regulations without changing the FMP language.

7.6 Baseline Costs and Benefits: Alternative 3 (Preferred Alternative)

Alternative 3 is the baseline for this analysis because it would not change current fishery conditions in the GOA or BSAI. Current regulations require VIP bycatch rate standards for the GOA and BSAI trawl fishery to be published biannually in the Federal Register. However, bycatch rate standards have not been published by NMFS since 2003 due to concerns about the inability of the program to reduce PSC, the large administration burden on enforcement and NMFS, and the difficulties associated with prosecuting cases. Given these concerns, trawl vessel operators have not been required to follow a halibut bycatch rate standard for several years. As a result, current fishery conditions are represented with this alternative.

The FMP language authorizing the VIP is in Section 2 of this analysis. The FMP language does not require an incentive program. Both the GOA and BSAI FMPs state that the Secretary of Commerce may implement an incentive program for individual vessels to reduce halibut PSC levels. Neither FMP constrains the Secretary to the current VIP or requires the Secretary to implement a VIP. The language in the FMPs is general enough that the Secretary could adopt a VIP with different characteristics than the VIP referred to in this analysis.

The Secretary could eliminate regulations implementing the VIP without an FMP amendment (Option 2). An FMP amendment to remove the VIP would remove the flexibility the Council and Secretary have to reintroduce a new vessel specific incentive program should conditions warrant such a program in future years. The FMP amendment option (Option 1) would also require a more complex rulemaking process and would thus require more resources from NMFS. However, the potential benefit of Option 1 is that the elimination of the FMP language would make the FMP less complicated, which may make the document more transparent to the public.

7.7 Cost and Benefits of the Alternatives

7.7.1 Alternative 1: No Action

Alternative 1 would require increased agency resources to effectively administer the program. Alaska Region staff from the Observer Program, NOAA Enforcement, NOAA General Council, and NMFS Sustainable Fisheries met the request of the Alaska Regional Administrator, to examine the programmatic changes needed to revitalize the VIP. In preparation for this analysis, these programmatic changes were

revisited and considered salient for a new effort to revitalize the VIP. Under Alternative 1, the following steps will be necessary to revitalize the VIP:

- An additional two enforcement agents to purse VIP cases and document violations;
- One part-time paralegal clerk to provide assistance to NOAA GC;
- Two additional debriefers added to the Observer Program to provide information leading to the development of VIP cases in a timely manner;
- One additional resource management specialist for the Observer Program to facilitate calculation of the VIP, prepare observer memos, and assist enforcement and GC AK in selecting cases;
- One additional part time statistician to provide technical support and VIP bycatch rate standards calculation.
- Additional staff time from NMFS Sustainable Fisheries to prepare warning letters, and notice for standard PSC rates.

Because agency resources are strained by current management priorities, revitalization of the VIP can only occur through an increase in resources or reducing resources devoted to current management activities. This inevitably means that, unless additional funding is made available, fewer resources will be devoted to enforcing other regulations or providing management services for other management activities. The discussion below estimates the costs for personnel required to adequately enforce the VIP. However, even with increased interest in revitalizing the VIP, there is no guarantee that this additional funding will be made available. In the absence of additional funding, the true cost of renewing the VIP will be a reduction of effort in other functional management areas.

Table 7.1 Summary of management and enforcement costs for the No Action Alternative

	Program Element	**Cost Estimate (dollars per year)**	**Comments**
NOAA OLE	Develop and document cases to be turned over to NOAA GC	300,000	An estimated two agent FTEs.
NOAA GC	Prosecution of cases	60,000	One part time paralegal aide
Observer Program	Collection of PSC rate data, calculation of PSC rate information, providing technical and witness information to NOAA GC	150,000	One part time statistician and other staff to support NOAA OLE and NOAA GC
Sustainable Fisheries Division	Preparation of warning letters and bycatch rate standards notice	40,000	One part time fishery management specialist.
Costs imposed on defendants	Legal expenses and time associated with defense and appeals process	Unknown	Would likely be case specific
Government court costs	Administrative law judge; appeals could involve NOAA Administrator, Federal district or circuit court judges; witnesses	Unknown	Would likely be case specific

Costs associated with publishing rates

The first step in enforcing the VIP is to identify potential violators from a preliminary screening of observer data. This process involves statistical treatment of data, as well as Observer Program staff time to interface with enforcement in the event potential violations are pursued. Currently, the Observer Program does not have a statistician to conduct routine assessments of observer data for purposes of the VIP, and this expertise must be provided if the VIP is to be enforced. Other Observer Program staff resources would also be required to provide technical support to NOAA OLE and NOAA GC. A full time position would likely not be needed by the Observer Program. The total expected annual cost to the Observer Program would be approximately $150,000.

Enforcement's role is to take the potential violations identified by the Observer Program, investigate, determine which cases should be pursued, and then collect the evidence that would allow NOAA GC to prosecute the cases. The main costs with this activity are those associated with an enforcement agent's time and travel. Estimates from persons within NOAA OLE suggest that two agents are necessary to provide adequate coverage for VIP enforcement. In addition, an agent's FTE would be co-located with the Observer Program in Seattle to help identify potential cases. Given that an agent can conduct approximately three cases a year, and would only work on VIP cases part time, the enforcement requirements are estimated to be two agent FTEs at $150,000 each. Although there would be additional travel times associated with gathering evidence for a case, co-location of an agent in Seattle would permit reductions in travel time currently incurred. On balance, the program would not be expected to increase travel costs.

Legal costs associated with enforcement of the VIP include the devotion of resources by NOAA GC to prosecute cases, time and financial resources for the defendant, and costs related to the legal system. To provide adequate assistance in case prosecution, NOAA GC would need an additional part time paralegal to prepare court briefing documents and assist GC attorneys. The estimated cost for an additional paralegal is $60,000. The costs imposed on defendants and the court system is unknown. The additional costs imposed on the court system include the time required for an administrative law judge to hear the case and prepare a decision, and the time invested in the case by defense council. Legal actions will also require time commitments by defendants, or by officers of defendant companies. Formal observers may be required as witnesses at the administrative judge level, and this will impose additional time and travel expenses.

Tradeoffs

Re-instatement of the VIP would require the use of observer data to make statistical inferences about vessel specific bycatch rates. An in-depth discussion of the procedures used to estimate the bycatch rates is found in Section 1.4 of the EA. As discussed in Section 1.4, statistical estimates of vessel specific bycatch rates cannot be made for vessels under 125 feet LOA because of inadequate observer coverage. Therefore, enforcement of the VIP is effectively limited to vessel with 100 percent observer coverage.

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. Table 7.2 summarizes the ex-vessel value of unharvested TAC for these groundfish species. 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.

Table 7.2 Ex-vessel value of unharvested TAC in 2005 for Pacific cod and flatfish in the GOA and BSAI.

Species Group	Unharvested TAC (mt)	Median 2000-2004 Ex-vessel price (dollars/pound)[1]	Value of Unharvested TAC (dollars)
GOA flatfish	32,100	0.12	8,776,500
GOA Pacific cod	5,700	0.26	3,389,300
BSAI flatfish	1,350	0.14	408,000
BSAI Pacific cod	18,205	0.23	9,391,500

[1] Median ex-vessel price based on 2000-2004 values as described in Table 18 of the 2005 Economic SAFE (NMFS 2005).

An invigorated VIP 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, or to pressure observers to misreport, 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 began to misreport, the activity could affect the reliability of other information provided by the observers. This information includes catch information for groundfish fisheries and enforcement information.

7.7.2 Alternative 2: Notice of Schedule Change

Alternative 2 is bifurcated into two options: under Option 1, VIP bycatch rate standards would be published annually through proposed and final rulemaking; and, Option 2 would amend VIP regulations to establish VIP bycatch rate standards through a single proposed and final rulemaking event. The primary difference between the two options is a reduction in administrative costs associated with the frequency of VIP bycatch rate standards publication, and the inability to quickly change VIP bycatch rate standards.

Under Option 1, publication of VIP bycatch rate standards would be annually published in the Federal regulation through proposed and final rulemaking process. Option 1 would require NMFS Sustainable Fisheries Division staff to prepare bycatch rate information for the Council on an annual basis. The Council would review the VIP bycatch rate information and make recommendations about the coming year's bycatch rate standards to the Secretary.

Rulemaking requires extensive use of NMFS resources to prepare rulemaking packages and associated analysis. Rulemaking packages may require review by supervisory personnel, the regional economist, NOAA GC, NMFS headquarters staff, Department of Commerce GC, and Regulatory Edits. Because of the required analysis and review, NMFS would need to obtain the Council recommendation late in the preceding year to ensure bycatch rate data was available, and VIP bycatch rate standards were published in time for the upcoming year. As a result, the Council would likely discuss bycatch rate standards during its December meeting.

Under Option 2, publication of VIP bycatch rate standards would be amended to establish VIP bycatch rate standards in regulation through a one time proposed and final rulemaking event. In the long run, this option would reduce the burden on NMFS because the review time and analysis preparation required would be reduced. NMFS would no longer need to publish VIP bycatch rate standards in regulation on an annual or bi-annual basis, nor would NMFS be required to prepare analysis documents described under Option 2. In the short run, agency costs would be greater than the No Action alternative because the regulation would go through final and proposed rule making.

Option 2 would not allow the flexibility to change VIP bycatch rate standards on a bi-annual or annual basis because of the time required for proposed and final rulemaking, and associated analysis. If the Council wanted change VIP bycatch rate standards, there would likely be at least a one year time lag before those changes would be promulgated. This may increase costs to the industry if bycatch rate standards are raised. An increase in the bycatch rate standard would allow vessels to fish faster with a decreased regard to PSC amounts. Faster fishing may reduce fixed and variable costs associated with avoiding PSC. However, the level at which PSC avoidance costs would be offset by an increase in the amount of TAC harvested through reduced PSC rates is unknown.

Table 7.3 Summary of the impacts each alternative would have on groundfish target fisheries, enforcement, fishery management, and the Observer Program.

	No Action (Alternative 1)	Rate publication schedule change (Alternative 1)		Eliminate the VIP (Alternative 3)	
		Annual (Option 1)	Rates in regulation (Option 2)	FMP amendment and regulation removal (Option 1)	Regulatory amendment only (Option 2)
Groundfish target fisheries	Fisherman in BSAI flatfish or Pacific cod fisheries, and GOA shallow-water flatfish, deep-water flatfish, and Pacific cod fisheries may be able to catch more fish. Revenue generated from increased harvest will be associated with increased cost. Cost increases will be caused by longer fishing time, and by costs associated with avoiding PSC. Increases in target species harvest may also vary depending on observer coverage rates and enforceability of the VIP.			The level at which the VIP is able to reduce PSC. If the program successfully reduced PSC rates, the benefits outlined under Alternative 1 and 2 would not be achieved.	
Enforcement	Increased expenses (or reduced ability to perform other functions). The monetized estimate for increased enforcement is approximately $300,000 to NOAA OLE and $60,000 to NOAA GC.			This Alternative would eliminate enforcement costs associated with the VIP.	
Fishery Management	Prepare two VIP bycatch rate standard notices a year through comment rulemaking. Would require NMFS staff bi-annually produce VIP bycatch rate standard notices.	One regulatory amendment and then one additional proposed and final rulemaking action annually to prepare notice. Would decrease administrative costs associated with publication of notices.	One regulatory action (proposed and final rulemaking) to incorporate VIP bycatch rate standards in regulation. Would decrease administrative costs over the long run. Does not provide flexibility to change bycatch rate standards on an annual or bi-annual basis. May increase costs to industry if bycatch rate standards cannot be raised quickly.	NMFS would not publish VIP bycatch rate standards. Action would require FMP and regulatory amendments. A new incentive program would also require FMP amendment in addition to APA rulemaking. FMP would be somewhat less complex document. Would eliminate FMP authority to introduce VIPs in the future.	NMFS would no longer publish VIP bycatch rate standards. Action would only require a regulatory amendment. Would not eliminate FMP authority to introduce VIPs in the future.
Observer Program	Would require increased observer resources: estimated cost $150,000			Would not require additional Observer Program resources..	

8.0 Initial Regulatory Flexibility Analysis

8.1 Introduction

This IRFA evaluates the impacts on directly regulated small entities of the proposed action to remove the VIP from Federal regulation or modify the schedule for which bycatch rate standards are published in regulation at 50 C.F.R. 679.21(f). This IRFA meets the statutory requirements of the Regulatory Flexibility Act (RFA) of 1980, as amended by the Small Business Regulatory Flexibility Act (SBREFA) of 1996 (5 U.S.C. 601-612).

8.2 The Purpose of an IRFA

The Regulatory Flexibility Act, first enacted in 1980, was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a Federal regulation. Major goals of the RFA are: (1) to increase agency awareness and understanding of the impact of their regulations on small business, (2) to require that agencies communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and to provide regulatory relief to small entities. The RFA emphasizes predicting impacts on small entities as a group distinct from other entities and on the consideration of alternatives that may minimize the impacts while still achieving the stated objective of the action.

On March 29, 1996, President Clinton signed the Small Business Regulatory Enforcement Fairness Act. Among other things, the new law amended the RFA to allow judicial review of an agency's compliance with the RFA. The 1996 amendments also updated the requirements for a final regulatory flexibility analysis, including a description of the steps an agency must take to minimize the significant (adverse) economic impacts on small entities. Finally, the 1996 amendments expanded the authority of the Chief Counsel for Advocacy of the Small Business Administration (SBA) to file *amicus* briefs in court proceedings involving an agency's alleged violation of the RFA.

In determining the scope, or 'universe', of the entities to be considered in an IRFA, NMFS generally includes only those entities that can reasonably be expected to be directly regulated by the proposed action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this analysis. NMFS interprets the intent of the RFA to address negative economic impacts, not beneficial impacts, and thus such a focus exists in analyses that are designed to address RFA compliance.

Data on cost structure, affiliation, and operational procedures and strategies in the fishing sectors subject to the proposed regulatory action are insufficient, at present, to permit preparation of a "factual basis" upon which to certify that the preferred alternative does not have the potential to result in a "significant economic impacts on a substantial number of small entities" (as those terms are defined under RFA). Because, based on all available information, it is not possible to 'certify' this outcome, should the proposed action be adopted, a formal IRFA has been prepared and is included in this package for Secretarial review.

8.3 What is Required in an IRFA?

Under 5 U.S.C., Section 603(b) of the RFA, each IRFA is required to contain:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply (including a profile of the industry divided into industry segments, if appropriate);
- A description of the projected reporting, record keeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- An identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap or conflict with the proposed rule;
- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the proposed action, consistent with applicable statutes, and that would minimize any significant adverse economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:

    1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;

    2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;

    3. The use of performance rather than design standards;

    4. An exemption from coverage of the rule, or any part thereof, for such small entities.

8.4 What is this Action?

The Preferred Alternative associated with action would eliminate the VIP from Federal regulation. However, other alternatives considered in this analysis would reinvigorate the VIP, modify the schedule for which VIP bycatch rate standards are published, or eliminate the VIP from Federal regulation. This action is described in detail in Section 2.0 of the EA.

Under the preferred Alternative, the VIP would be removed from Federal regulation, without removing the authority for other VIPs from the GOA or BSAI FMP. As a result, VIP bycatch rate standards for Pacific halibut and red king crab PSC would not be published, nor would trawl vessels in the GOA and BSAI be subject to VIP bycatch rate standards. The removal of the VIP from regulations would be permanent unless, through rulemaking, the Council instituted and the Secretary approved a similar program in the future. The VIP could also be removed from regulation as well as the GOA and BSAI FMPs.

The VIP could be reinvigorated under Alternative 1 (No Action) or Alternative 2 (rate schedule change). Under these alternatives, agency resources as described in the RIR would be devoted to enforcing and administering the VIP.

8.5 Reason for Considering the Proposed Action

The reason for considering the proposed action is described in detail in Section 1.0 of the EA and throughout the RIR. In summary, 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.

8.6 Objectives of, and Legal Basis for, the Proposed Action

The objectives of this action are fully described in Section 1.0 of the EA. The objective for this action is to evaluate the effectiveness of the VIP and determine if the program should be modified or eliminated from Federal regulation.

The legal basis for this action falls under the GOA and BSAI FMPs prepared by the Council under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. 1801 et seq., and are implemented by regulations at 50 CFR part 679. General regulations governing the U.S. fisheries in subpart H of 50 CFR part 679. The Northern Pacific Halibut Act of 1982 (16 U.S.C. 773-773k; Pub. L. 97-176, as amended) authorizes the Secretary of Commerce to enforce the terms of the Convention between the United States and Canada for the Preservation of the Halibut Fishery for the North Pacific Ocean and Bering Sea. The Secretary promulgates regulations pursuant to this goal in 50 C.F.R. Part 301. Regulations specific to the VIP may be found at 50 C.F.R. 679.21(f).

8.7 Description and Number of Small Entities to which the Proposed Action would apply

8.7.1 What is a Small Entity?

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) and small government jurisdictions.

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominant in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor...A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust

or cooperative, except that where the firm is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the US including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of $4.0 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the $4.0 million criterion for fish harvesting operations. Finally a wholesale business servicing the fishing industry is a small business if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership when (1) A person is an affiliate of a concern if the person owns or controls, or has the power to control 50 percent or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, or (2) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors or general partners control the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor or subcontractor is treated as a participant in a joint venture if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. RFA defines "small organizations" as any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

Small governmental jurisdictions. RFA defines small governmental jurisdictions as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of fewer than 50,000.

8.7.2 Description of Small Entities to which the Proposed Action would apply

Federal courts and Congress have indicated that a RFA analysis should be limited to small entities subject to the regulation. As such, small entities to which the rule will not apply are not considered in this analysis.

The proposed alternatives would apply to commercial trawl catcher vessels and catcher/processor vessels operating in the GOA and BSAI management areas. There are not any entities that are directly regulated by the proposed action that would qualify as either "small nonprofit" entities, nor "small government jurisdictions."

8.7.3 Estimate of the Number of Small Entities to which the Proposed Actions would apply

The proposed actions would apply to trawl vessels in the GOA and BSAI region. The primary group which the regulatory action would apply under Alternatives 1 and 2 are trawl vessels greater than 125 feet. Because the action may allow more groundfish to be caught if PSC rates are reduced, all trawl vessels may experience and benefit if the VIP performed as intended. However, given the previously discussed issues with the VIP (Section 1.0) the potential increase in groundfish catch is likely to be small. However, for the purpose of this analysis, all trawl vessels are assumed to potentially be impacted by the regulation if PSC rates are reduced. Thus, small entities would only be affected under Alternatives 1 and 2, which would re-invigorate the VIP.

In 2004, a total of 77 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 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.

The number of small entities estimated for the GOA and BSAI trawl fishery is likely over inclusive because of duplicate revenue reporting and other sources of unaccounted vessel revenue. Revenue information was derived from three data sources: ex-vessel value data from CFEC fish tickets; COAR production data; and COAR product prices applied to WPR production data. For each vessel, the maximum revenue from these three sources as that vessel's revenue. For this reason, revenue may be double counted for some vessels. Moreover, other sources of revenue outside of the trawl fishery are not considered for each vessel.

8.8 Adverse Economic Impacts on Directly Regulated Small Entities

Alternatives 1 and 2 would involve a renewed commitment to the VIP. The goal would be to reduce bycatch rates and harvest larger proportions of TACs in certain trawl fisheries. As a practical matter, 100 percent 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. Enforcement efforts are likely to be less successful against smaller trawler with less observer coverage. . Small entities as defined by the SBA could occur among both categories of trawlers, however a large portion of the small entities are vessels smaller than 125 feet which have less than 100 percent observer coverage. These vessel would likely be largely unaffected by a renewed VIP.

In the past, this VIP is not believed to have been very effective. It has been difficult and expensive to make cases. Cases taken to court have taken many years to resolve. The VIP is believed to have created incentives for vessel operators to attempt to distort the information about bycatch collected by observers. The compliance incentive for smaller trawlers is small given the difficulties of collecting sufficient information on bycatch from vessels with less than 100% observer coverage. Under these circumstances, there are real questions about the deterrence effect of enforcement efforts, and the efficacy of this program in reducing PSC bycatch rates. It is not clear that the program could lead to the harvest of a larger proportion of the target species.

8.9 Recordkeeping and Reporting Requirements

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

8.10 Federal Rules that may Duplicate, Overlap, or Conflict with Proposed Action

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

8.11 Comparison of Alternatives

The Preferred Alternative, Alternative 3, Option 2, would not change current enforcement levels, and would have no impact on small entities. Alternatives 1 and 2 would require increased enforcement that would be focused on vessel over 125 feet LOA. Smaller vessels would not experience increased enforcement. Only small entities operating vessel greater than 125 feet LOA would be adversely impacted.

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11.0 References

National Marine Fisheries Service. 2006. Alaska groundfish harvest specifications draft environmental impact statement (DEIS). Dep. of Commer., Juneau, Alaska, September. URL: http://www.fakr.noaa.gov/analyses/specs/eis/default.htm

National Marine Fisheries Service. 2006. 2006 – 2007 harvest specification environmental assessment. Dep. of Commer., Juneau, Alaska, September.

National Marine Fisheries Service. 2005. Final environmental impact statement for essential fish habitat identification and conservation in Alaska (EFH EIS). Dep. of Commer., Juneau, Alaska, April.
URL: http://www.fakr.noaa.gov/habitat/seis/efheis.htm

National Marine Fisheries Service. 2004. Programmatic supplemental environmental impact statement for the Alaska groundfish fisheries implemented under the authority of the fishery management plans for the groundfish fishery in the GOA and BSAI. (PSEIS). Dep. of Commer. , Juneau, Alaska, June.
URL: http://www.fakr.noaa.gov/sustainablefisheries/seis/intro.htm

National Marine Fisheries Service. 2002. Final environmental analysis for American Fisheries Act Amendments 61/61/13/8. Dep. of Commerc., Juneau, Alaska Febuary. URL: http://www.fakr.noaa.gov/sustainablefisheries/afa/final_eis/cover.pdf

National Marine Fisheries Service. 2001. Steller sea lion protection measures final supplemental environmental impact statement. Dep. of Commer., Juneau, Alaska, November. URL: http://www.fakr.noaa.gov/sustainablefisheries/seis/sslpm/default.htm

North Pacific Fisheries Management Council. 2005. Stock assessment and fishery evaluation report for groundfish resources of the Gulf of Alaska. Appendix B to the 2006 – 2007 harvest specification environmental assessment. Dep. of Commer., Juneau, Alaska, September.

Haitt T., Felthoven R., Seung S., and Terry J. 2003. Stock assessment and evaluation report for the groundfish fisheries off Alaska. National Marine Fisheries Service, Alaska Fisheries Science Center., Seattle Wa. 98115.

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