Regulatory Amendment to Repeal the Vessel Incentive Program

Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis

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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 Exclusive Economic Zone (EEZ) off of Alaska. The VIP was designed to reduce the rate at which Pacific halibut and red king crab are incidentally caught in trawl fisheries in the Gulf of Alaska and the Bering Sea and Aleutian Islands management areas. However, the program has not performed as intended because of the costs associated with enforcement and the relatively small number of vessels impacted by the regulation. In December 2006 the North Pacific Fishery Management Council took final action to repeal the program in regulation. 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 Procedure 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
Council	North Pacific Fishery Management Council
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
LOA	Length overall
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

Executive Summary

The actions evaluated in this document

This analysis assesses the potential environmental, economic, 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 areas(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) and NMFS because of costs associated with enforcement, and the relatively small number of vessels impacted by the regulation.

This document analyzes the impacts of 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) action to reduce the frequency with which VIP bycatch rate standards are published; and (3) action to remove the regulatory authority for the VIP from GOA and BSAI Fishery Management Plans (FMPs), and/or Federal regulation. In December 2006 the Council took final action to adopt Alternative 3, Option 2 (only modify regulations, not the FMPs), as its preferred alternative. A detailed description of each alternative 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 bi-annually, and increase enforcement efforts to effectively enforce this program, as it is currently authorized in regulation.

Alternative 2: Notice of schedule

Under this alternative, the schedule under which VIP bycatch rate standards are published would be changed from a bi-annual process. Two options were considered: (1) an annual process or, (2) permanently establish the rates in regulation through a single rulemaking event. Both options would provide sufficient resources to allow NOAA Office of Law Enforcement (OLE) and NOAA General Counsel (GC) to pursue VIP violations.

Alternative 3: VIP Elimination Alternative (Preferred Alternative)

This alternative would eliminate the VIP. Two options were considered: (1) eliminate permissive language from the GOA and BSAI FMPs and repeal the Federal regulation, or (2) remove the VIP from Federal regulations only, leaving the permissive language in the FMPs unchanged (preferred).

Purpose and Need

The purpose of the proposed action is to repeal the ineffective and unenforceable regulations implementing the VIP. In June 2003 the Council initiated an analysis to consider repealing 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

Three potentially affected resource components are identified: groundfish, prohibited species, and social-economic impacts. The effects of the alternatives on the resource components would be caused by possible changes in the harvest of underutilized groundfish species in the GOA and BSAI, and possible lengthening of the fishing season.

No effects are expected on the physical environment, benthic community, non-specified and forage species, marine mammals, or sea birds. No effect is presumed for these components because current fishing practices (e.g., season and gear type regulations), harvest limits, and 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, and areas in which trawling is permitted. None of the alternatives would change methods, seasons, or areas closed to trawling.

Groundfish harvests are constrained by the annual total allowable catches (TACs), acceptable biological catches (ABCs), and overfishing levels (OFLs) as described in the Alaska Groundfish Harvest Specifications Strategy Final Environmental Impact Statement (Harvest Specifications FEIS, NMFS 2007). These harvest specifications are designed to provide for the sustainability of groundfish stocks. 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 other contemporaneous events (i.e., other PSC reduction measures and changes in industry behavior) prevent quantitative evaluation of the VIP's ability to reduce halibut and red crab PSC rates. The VIP impact on PSC rates is likely minimal and its revocation 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 from those described in the Harvest Specifications FEIS. 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 prohibited species are caught, but would likely not change the overall amount of PSC. Alternative 3 would eliminate the VIP; however, under Option 1, a future vessel incentive-like program would require an 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 is expected to decrease the total constant exploitation yield (CEY) of the Pacific halibut stock, or change the time period in which halibut are bycaught. The impact of the alternatives on halibut PSC is expected to be insignificant.

The three proposed alternatives may have economic and socioeconomic impacts on the commercial non-pelagic and pelagic trawl fisheries (Table 4.11). Alternatives 1 or 2 may affect the trawl fisheries in three ways: (1) they may provide an incentive for vessel operators to distort observer data, through pre-sorting and/or manipulating observers; (2) if the VIP successfully reduced PSC rates, they 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) they may increase enforcement efforts against trawl vessels. These impacts are expected to be small.

The cumulative effects of all VIP alternatives will be similar to those described in the Harvest Specifications FEIS for 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 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, for which PSC has historically limited 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 not known with precision. The reductions are believed to be relatively small, since enforcement of the VIP could only be focused on vessels larger than 125 ft length overall (LOA). Thus, significance of potential impacts is limited and the cumulative effects of this action are not likely to be significant.

A re-invigorated VIP 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 given that it is unknown if new funds would be appropriated to support the program, the potential cumulative impact of Alternative 1 or 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 the "status quo" alternative. Under the status quo, the fishery has not been effectively enforced since 2003. Retention of the "status quo" is <u>not</u> an option. Under the "no action" alternative, 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 Counsel. Based on an estimate of the resources necessary to effectively enforce the program, this could cost these divisions more than $550,000 annually. In the absence of additional budget appropriations from Congress, these sums would have to be taken from other enforcement, NOAA GC, Sustainable Fisheries, and Observer Program activities. Defendants and the Court system would also incur additional expenses associated with legal 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 statistical limitations, these benefits may not be realized by vessels held responsible for VIP bycatch rate standards violations. Vessels with limited observer coverage (i.e., less than 100 percent) do not have a VIP related incentive to reduce PSC rates. These smaller vessels may "race" to catch target groundfish species before the fishery PSC limit is attained by all fishery participants, resulting in 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 VIP's 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 whether 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.

A re-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, especially aboard unobserved operations, and thus distort shoreside observer data at off-load, 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.

Under Alternative 3, the VIP would be eliminated, either in regulations and the FMP, or just in regulations. In terms of the functional effect, the impact on the fisheries from either of these options corresponds to the status quo situation in 2006, with no 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 the current incarnation of the program, while the FMP would continue to provide authority for re-instatement. 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, but would substantially increase the cost (e.g., time, staff resources, publication, etc.) should the Council decide, in the future, to initiate an alternative form of VIP.

The Council has chosen Alternative 3, Option 2, as its preferred Alternative.

Final Regulatory Flexibility Analysis

The proposed rule for the repeal of the VIP regulations was published in the Federal Register on November 30, 2007 (72 FR 67692). An Initial Regulatory Flexibility Analysis (IRFA) was prepared for the proposed rule, and described in the classifications section of the preamble to the proposed rule. The public comment period ended on December 31, 2007. No comments were received on the IRFA.

In 2005 a total of 78 catcher vessels and 3 catcher/processor vessels reported gross annual receipts of $4.0 million or less, from fishing groundfish and other species using trawl gear in the GOA (2006 Economic SAFE). Between 2002 and 2005, the total number of trawl vessels generating $4.0 million or less in revenue ranged from a low of 81 in 2004 and 2005, to a high of 112 in 2002. Average gross revenue (from all fishing sources in Alaska) generated by these vessels was approximately $840,000 in 2005, which was an increase from $730,000 in 2004, and $590,000 in 2002. Thus, the proposed alternatives may directly regulate between 81 and 112 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 (2005) estimate of 81 vessels will be used for the analysis. This estimate is almost certainly an overestimate of the number of small entities actually directly regulated by this action, since it does not take account of affiliations among the entities. Data necessary to fully assess such linkages are not currently available.

The BSAI management area has a larger number of trawl vessels considered small entities than the GOA. In 2005, 99 catcher vessels and 2 catcher/processor vessels reported gross annual receipts of $4.0 million or less, from all their fishery production off Alaska. Between 2002 and 2005, the total number of vessels categorized as small entities in these BSAI fisheries ranged from a low of 101 in 2005 to a high of 123 in 2002. Between 2002 and 2003, the average gross revenue (from all Alaskan fishing sources) generated by these vessels ranged from a low of $1.20 million in 2003 to a high of $1.60 million in 2005. Thus, the proposed alternatives may directly regulate, on average, 113 trawl vessels that are considered small entities. This estimate is almost certainly an overestimate of the number of small entities actually directly regulated by this action, since it does not take account of affiliations among the entities. As is the case for the GOA, data necessary to fully assess such linkages are not currently available. Alternatives 1 and 2 would involve a renewed commitment to the VIP. If this were successful, it could 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 ft LOA. Enforcement efforts would be principally directed against this class of trawlers. Small entities, as defined by the Small Business Administration (SBA), could occur among both trawlers greater than 125 ft, and less than or equal to 125 ft LOA.

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

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1.0 Introduction

This analysis assesses the potential environmental, economic, and social impacts of removing the vessel incentive program (VIP) regulations for trawl fisheries operating in the Gulf of Alaska (GOA) and Bering Sea/Aleutian Island (BSAI) management areas (Figure 1). The VIP regulations are 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, concerns about bias in observer data, and the relatively small number of vessels impacted by the program. Thus, action is needed to re-invigorate, 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, as well as their distribution (the RIR), and the impacts of the action on directly regulated small entities (the IRFA). This EA/RIR/IRFA addresses 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 NMFS Alaska Region to provide the analytical background for decision-making.

Purpose and Need

The purpose of the proposed action is to repeal the ineffective and unenforceable regulations implementing the VIP. In June 2003 the Council initiated an analysis to consider repealing 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.

1.1 Background

Prohibited Species Catch (PSC)

Fisheries off Alaska targeting groundfish incidentally catch non-groundfish species. Some of these non-groundfish species are themselves the objects of valuable targeted fisheries. These species include Pacific halibut, Chinook and "Other" 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").

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 accommodates unavoidable incidental catches, but strictly forbids the retention of PSC by the participants in the target fishery. Access to a PSC limit is highly competitive. The PSC limit for a fishery can become an effective limit on the target fishery, preventing the TAC from being completely harvested. This situation sets up perverse economic incentives that encourage individual vessels to "race" to catch their intended target species before the fishery's collective

PSC limit is taken and the fishery closed. This race actually results in excessively rapid catch of PSC and, ironically, the early closure that participants fear.

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 fishes "dirty," that is, an operation that fishes with high rates of associated PSC, seeking only to maximize its target catch rate, obtains a benefit that accrued to it alone: a larger share of the total groundfish catch (i.e., increased catch per unit effort, lower cost per unit catch). But, the operation does so by hastening the closure of the groundfish fishery. If the closure came before the target groundfish TAC was fully caught, society incurs a cost associated with the value of the foregone groundfish (unharvested TAC). The operation that was fishing dirty would bear some small share of this cost, but much of it would be distributed across other operations in the fishery. However, the dirty operation realizes a direct economic benefit from its actions and offsets its share of this cost through its higher catch per unit of effort (CPUE) as compared to clean fishermen in the fleet. By shifting a large part of its "net" bycatch costs to other operations, a dirty operation has no 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, an operator that chose not to control PSC while all others did, would be able to "free ride" on the efforts of those fishermen that incurred the cost of PSC controls. This creates a perverse incentive structure that effectively subverts PSC reduction efforts by any single operation. Without appropriate incentives for an individual operation, a group of fishermen will fail to take actions that would have positive net benefits for them as a group.

At the heart of the "race for fish" is an incentive problem. Individual fishing operations must be forced to "internalize" the costs they impose on other parties when they fish with excessive PSC rates. There are several ways this may 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 proportional to the costs the fishing operation with a high PSC rate 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 Quotas 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 operation could either use its quota or sell it. If it had the ability to fish more cleanly than the fleet-wide average, it might find it profitable to sell the PSC quota to an operation that fished above the fleet's bycatch average rate. The cost of (relatively) dirty fishing would be the

[1] The technical economic term for this is "common property externality" (imposing costs on others that one does not fully account for in one's decision making) and results from the public good aspect of open-access management, wherein no one in a defined group can be excluded from enjoying the benefits of the good.

revenues forgone by not being able to sell one's quota and, for the dirtiest operations, having to buy quota in the market place to cover bycatch.

- **Corporations** could be formed that combine fishing operations in a fishery into a single entity. In this case, all vessels would effectively be operated by a single party, so all the costs created by any one vessel would be "internalized" and borne by that 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 would then impose a cost on dirty operations.

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

- BSAI Amendment 37 (61 *FR* 47108; *61 FR* 65985): 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.
- BSAI Amendment 50 (63 *FR* 32144; 66 *FR* 53122): Donation of incidentally caught halibut to food banks.
- GOA Amendment 59 (65 *FR* 30559; 65 *FR* 67305; 66 *FR* 8372): Prohibited fishing in important fish habitat areas.
- GOA Amendment 60 (67 *FR* 34424; 67 *FR* 70859): Prohibited the use of trawl gear in Cook Inlet.
- GOA Amendment 68 (71 FR 27984; 71 *FR* 67210): Central GOA Rockfish pilot program PSC limit.
- BSAI Amendment 79 (71 *FR* 17362): Established a minimum groundfish retention standard and required all non-American Fisheries Act (AFA) trawl vessels greater than or equal to 125 ft LOA to use flow scales and carry two observers.
- Proposed BSAI Amendment 80 (72 *FR* 21198; 72 *FR* 30052): Would allocate specified target species and PSC catch limits to non-AFA catcher trawl processors and facilitate the formation of 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 to assist enforcement of numerous regulatory measures.
- 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 economic loss estimated to be in the tens of millions of dollars in groundfish fishing revenues, based on the amount of groundfish TAC that remained unutilized.

In June 1990 the Council addressed this incentive problem by adopting Amendments 21 and 16 to the FMPs for the GOA and BSAI, respectively. 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).

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 have been 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 failed 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 Procedure Act. This Act requires that regulations be reasonable and effective. The observer data were 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).

On November 9, 1990, the Secretary approved the management measures in Amendments 16 and 21, except for the penalty box program. The Secretary published a final rule implementing these measures on January 24, 1991 (56 *FR* 2700). Following the Secretary's rejection of the penalty box program, the Council adopted the VIP in a special teleconference meeting in November 1990. The Secretary issued an interim final rule implementing the VIP on May 10, 1991 (56 *FR* 21619).

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 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: 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 species composition of its groundfish catch. 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 679.21(f)(2)(iii)).

Publication of the VIP Bycatch Rate Standards and Calculation of Vessel Rates

Regulations require the Regional Administrator to publish bycatch rate standards for covered fisheries prior to each January 1 and each June 1. The standards are to be based on the previous years' average observed bycatch rates for the fisheries, the immediately preceding season's average observed bycatch rates for the fisheries, the bycatch allowances and associated fishery closures, anticipated groundfish harvests for the fisheries, anticipated seasonal distribution of fishing effort for groundfish, and other information and criteria deemed relevant by the Regional Administrator.

Calculation of VIP bycatch rates 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 groundfish catch, total round weight of halibut PSC, and number of red king crab PSC. 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 are reported to NMFS through the Observer Program and are used for inseason management, among other things.

Using observer data, robust 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 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 confidence bound. 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 actual data collection process: (1) observer coverage on vessels greater than 60 ft but smaller than 125 ft are not randomly selected; (2) avoiding a bias against large or infrequently occurring fish 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 potential to fail in achieving a 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*, under the VIP regulations. 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 679.21(e)(1)(ii)). 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 679.21(f)(9)).

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 required to be published bi-annually, the "Regional Administrator may adjust bycatch rate standards as frequently as he or she considers appropriate" (50 CFR 679.21(f)(3)(ii)).

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 Procedure 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 had been 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 calculates 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)).

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 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 a new interpretation of Administrative Procedures Act requirements. In October 2003 the Council reviewed a NMFS discussion paper and made a preliminary identification of alternatives for analysis. 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 and scheduled an initial review of the draft for its April 2004 meeting.

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. In December 2006 the Council took final action, adopting Alternative 3, Option 2.

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.
2006	Dec	Council takes final action, adopting Alternative 3, Option 2.

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 Fishery 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 FEIS provides details on the laws and executive orders directing this analysis (NMFS 2007).

1.6 Statutory Authority

NMFS 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, 2006b) and the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Island Management Area (Council, 2006a). 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 2004a)
- Essential Fish Habitat Environmental Impact Statement (EIS) (NMFS 2005)
- The Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (Harvest Specifications FEIS)(NMFS 2007)
- Steller Sea Lion (SSL) Protection Measures Supplemental Environmental Impact Statement (SEIS)(NMFS 2001)
- American Fisheries Act Amendments 61/61/13/8 EIS (NMFS 2002)

Further information about these documents can be found on the NMFS Alaska Region web page at www.fakr.noaa.gov.

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2.0 Descriptions of Alternatives

Three alternatives are reviewed in this chapter: (Alt. 1) No regulatory action to change or abolish the program; (Alt. 2) modify the program to reduce the frequency of rate publication; (Alt. 3) remove the regulatory authority for the VIP. Alternative 2 has options allowing annual or one time publication of rates. Alternative 3 has options to remove the authority from the FMP and regulations, and simply from regulations. In October 2006 the Council identified Alternative 3, with the option to remove the authority from the regulations only (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 an increase in 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 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 follow:

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 50 CFR 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 established 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 to the VIP bycatch rate standards.

Alternative 3: VIP elimination (Preferred Alternative)

This alternative has two options: (1) eliminate the VIP from the GOA and BSAI FMPs and Federal regulation, or (2) remove the VIP from Federal regulations, 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 FMPs, 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 2006b).*

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 TACs before established PSC limits are reached (Council 2006a)."*

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

Regulations providing for the VIP are at 50 CFR 679.21(f). The FMP language does not specifically 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 levels (OFL) (NMFS 2004a). The PSEIS is available at http://www.fakr.noaa.gov/sustainablefisheries/seis/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 3.5.1 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.

Alaska Groundfish Harvest Specification FEIS. The FEIS analyzed alternative strategies for setting OFL, ABC, and TAC levels for target groundfish species. (NMFS 2007). The FEIS contains summaries and references recent studies and information applicable to understanding and interpreting the criteria used to evaluate significance of impacts that will result from alternative harvest quotas. Appendices A, B, C, and D include (by reference) the GOA and BSAI Stock Assessment and Fishery Evaluation (SAFE) reports and the ecosystems and economic chapters of the SAFE. This FEIS can be found at http://www.fakr.noaa.gov/analyses/specs/eis/default.htm .

Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska. This EIS examines the effects of fishing on EFH in waters off Alaska, presents a range of alternatives for identifying EFH, 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 BSAI and GOA. 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 impacts 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 (Final PSEIS). 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 fisheries. 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 fisheries. For more information see http://www.fakr.noaa.gov/sustainablefisheries/seis/sslpm/default.htm.

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 3.2 and 3.3 in the Final PSEIS (NMFS 2004a) and the Harvest Specifications FEIS (NMFS 2007).

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 BSAI see Sections 3.2 and 3.3 in the Final PSEIS (NMFS 2004a) and the Harvest Specifications FEIS (NMFS 2007).

For those groundfish stocks where information is available, none is considered overfished or approaching an overfished condition and all are managed within the 2007-2008 annual harvest specifications. The ABC, OFL, and TAC amounts for each target species or species group in the GOA and BSAI for 2007 and 2008 is specified in the *Federal Register* (GOA at 72 FR 9676, March 5, 2007; BSAI at 72 FR 9451, March 2, 2007). 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 (Council 2006c). 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.

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 potential effects of the alternatives on the resource components could 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 seabird components of the environment. No effect is presumed for these components because current fishing regulations (e.g., season and gear types), harvest limits, and 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 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. Because the changes in operations are expected to be limited, this action is not expected to increase the likelihood of the introduction of invasive species into the action area or affect the safety or health of persons active in Alaska's fisheries.

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 incidental takes 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 2004a).

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 1508.8). 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. 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, such as 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 addressed; however, the basic "perspective" or "reference point" differs depending on the resource, species, or issue under discussion. 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, and 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 when there is insufficient information or data to assess the impacts on the resource or species.

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 Magnuson-Stevens Act (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 specify 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 summarizes 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	Groundfish harvest above the OFL level and thus the alternative is 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 of 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
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
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
8/17/2005	BSAI trawl	Yellowfin sole		Halibut
8/17/2005	BSAI trawl	Pacific cod		Halibut
8/17/2005	BSAI trawl	Rock sole, flathead sole, and "other flatfish"		Halibut
7/21/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut
4/7/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut
3/23/2005	GOA trawl deep-water complex	Rockfish, deep-water flatfish, rex sole, arrowtooth flounder, and sablefish		Halibut
3/14/2005	BSAI trawl Zone 1	Yellowfin sole		Red king crab

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."

None of the alternatives is expected to affect the ability of managers to maintain target fish harvests within OFL levels as specified in the annual harvest specifications process 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 would not change 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 50 CFR 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 ft LOA and the following factors: (1) the lack of implementation since 2003 prevents an assessment of recent VIP activity; (2) other PSC reduction measures such as gear, area, and seasonal restrictions and industry cooperative agreements that may reduce PSC rates in certain fisheries through hotspot avoidance techniques make it difficult to separate VIP impacts from the impacts of other programs.

Assuming that an implemented and 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 from 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 from 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	4,763	4,758	100	19,530	24
	2004	3,094	3,080	100	19,530	16
	2003	4,649	4,627	100	18,660	24
Deep-water flatfish	2005	409	404	99	5,790	7
	2004	676	663	98	5,160	13
	2003	982	970	99	3,730	26
Rex sole	2005	2,177	2,178	100	10,360	21
	2004	1,463	1,464	100	10,360	14
	2003	3,650	3,650	100	8,420	43
Flathead sole	2005	2,543	2,527	100	9,900	26
	2004	2,394	2,389	100	10,430	23
	2003	2,530	2,538	100	10,000	25

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

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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 moderately constrained by Pacific halibut closures on an annual basis (Table 4.7). 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, 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 before PSC limits are reached (Table 4.8). 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 reserve their available PSC for targeting of flatfish rather than expend it 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 by current regulations. 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's effectiveness is uncertain, because it is not currently enforced, and because bycatch rate standards are not published, the program is effectively latent. It is therefore unlikely that Alternative 3 would 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.

Alternatives 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 under Alternative 2, Option 2, would reduce the Council's ability to make annual or biannual adjustments to bycatch rate standards. Annual (Alternative 2, Option 1) 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, 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, any potential increase in groundfish harvest would be restricted by the annual TACs, ABCs, and OFLs as specified in the annual harvest specifications and as restricted by current regulations limiting 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 not expected to 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

Fishermen are not permitted to retain prohibited species (unless specifically provided for in regulation). Fisheries are often subject to PSC limits and to restrictions on fishing activity when these limits are triggered. These thresholds and restrictions are provided for in the GOA and BSAI FMPs in Section 3.6.2 and in regulations at 50 CFR 679.21.

These PSC limits and their associated measures were implemented under amendments to the FMPs and through regulatory amendments. EAs were prepared for these actions. These EAs determined that these groundfish fisheries restrictions would have insignificant impacts on the human environment, including PSC species. These conclusions are contained in the EAs and accompanying findings of no significant impact (FONSIs).

For these reasons, the potential for this action to change NMFS's ability to manage fisheries to maintain PSC below PSC limits is a consideration in the evaluation of the significance of this action. The significance criteria are summarized in Table 4.9. These criteria are used to evaluate significance with respect to red king crab and Pacific halibut. These criteria were used to evaluate the impacts of the 2006-2007 groundfish harvest specifications on PSC species (NMFS, 2006).

Table 4.9 Criteria used to estimate the significance of impacts on incidental catch of prohibited species

No impact	No incidental take of the prohibited species in question.
Adverse impact	There are incidental takes of the prohibited species in question.
Beneficial impact	Natural at-sea mortality of the prohibited species in question would be reduced – perhaps by the harvest of a predator or by the harvest of a species that competes for prey.
Significantly adverse impact	Fisheries are subject to operational constraints under PSC management measures. Groundfish fisheries without the PSC management measures would be a significantly adverse effect.
Significantly beneficial impact	No benchmarks are available for significantly beneficial impact of the groundfish fishery on the prohibited species, and significantly beneficial impacts are not defined for these species.
Unknown impact	Not applicable.

4.3.1 Effects on Prohibited Species

Pacific Halibut

None of the alternatives is expected to have significant impacts on Pacific halibut PSC. Halibut 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, in combination with additional limits on directed catches in halibut target fisheries, restrict catch to prevent the halibut stock from being overfished. PSC limits are apportioned among trawl fisheries and other gear types in the annual specifications. The objective of NMFS in-season managers is not to minimize halibut PSC, but to conduct trawl target fisheries so that PSC does not fall below, or above, the PSC limit. The BSAI and GOA trawl fishery halibut PSC limits for the years 2003 to 2007 (up to August 2007) are shown in Table 4.10 below. Table 4.10 also shows the halibut PSC and the percent of overall trawl halibut PSC taken by trawlers greater than or equal to 125 feet LOA. These vessels are the only ones with 100 percent observer coverage and, as noted earlier, because of the data quality demands placed on the observer-provided bycatch data required in the VIP, these are the only vessels that would be effectively subject to the VIP.

Table 4.10. Halibut PSC catch limits and catches for trawl fisheries in the BSAI and GOA.

Region	Year	Halibut Trawl PSC (mt)	Halibut PSC Limit (mt)	PSC as a Percent of the Limit	PSC by vessels >=125 ft (mt)	% of PSC by vessels >=125 ft
BSAI	2003	3,699	3,400	109	2,488	67
	2004	3,314	3,400	97	2,194	66
	2005	3,503	3,400	103	2,337	67
	2006	3,436	3,400	101	2,249	65
	2007*	3,195	3,400	94	2,411	75
GOA	2003	2,170	2,000	109	582	29
	2004	2,291	2,000	115	194	8
	2005	2,105	2,000	105	290	14
	2006	1,996	2,000	100	232	12
	2007*	1,222	2,000	61	147	12
*preliminary estimates through August 4, 2007. Source: AKR Catch Accounting System on August 4, 2007; AKR Web site.						

Overall trawl halibut PSC in the BSAI has been very close to the PSC limit throughout this period (considering only the years 2002-2006 because only partial data is reported for 2007). The highest ratio of PSC to the limit came in 2003, when PSC was 109 percent of the limit. Thereafter, PSC ranged between 94 and 103 percent of the limit. In the GOA, the proportion caught was somewhat higher in 2004 (115 percent), but otherwise, the PSC has been close to the PSC limit. In the GOA, the VIP coverage of halibut PSC is considerably lower than in the BSAI. Two-thirds of the BSAI halibut is taken by vessels 125 feet LOA and over, with 100 percent observer coverage, whereas the highest year for trawlers in the GOA was 29 percent in 2003. From 2004 to 2007, large vessels accounted for only between 8 and 14 percent of the halibut PSC. Thus, even if it worked effectively, the VIP in the GOA is likely to have a small impact on the halibut bycatch rate because only a small proportion of the halibut PSC would be covered.

None of the alternatives is expected to have a significant effect on the ability of managers to maintain halibut PSC catch below the PSC limits. Data limitations and other factors (i.e., other PSC reduction measures and changes in industry behavior) prevent quantitative evaluation of the VIP's ability to reduce PSC rates. Even if the VIP reduced PSC rates, NMFS managers would likely respond by allowing additional directed groundfish trawling until the PSC limits had been reached. Alternatives 1 and 2 would mean enhanced enforcement efforts and possible reductions in PSC rates, but these are not known to have had a meaningful impact on PSC rates in the past, and even if they did, are unlikely to have an impact on overall PSC levels. Alternative 3, the preferred alternative, would be unlikely to result in a change in recent halibut PSC rates since it removes a program that has likely had a small, if any, effect up to the present. Thus, none of the alternatives is expected to change PSC amounts or the time period in which PSC would occur. None of the alternatives would affect the determination of PSC levels for trawl fisheries or affect the other management measures taken to manage fisheries to control PSC.

Red King Crab

None of the alternatives is expected to have significant impacts on red king crab. Annual PSC limits of red king crab are based on stock assessment information provided by ADF&G and NMFS scientists. PSC limits depend on red king crab abundance. The limit is 33,000 crabs if estimated abundance is below 14.5 million pounds of effective spawning biomass (ESB), 97,000 crab between 14.5 and 55 million pounds of ESB, and 197,000 crab above 55 million pounds of ESB. In 2005, the ESB was 68 million pounds (Council, 2006d). This information takes into account sources of mortality as well as reproduction and recruitment over specific geographic regions and temporal scales. The Final BSAI and GOA Crab Environmental Impact Statement (Crab FEIS; NMFS 2004b) notes that, because PSC mortality in the trawl fisheries is currently considered to be minor relative to other sources of mortality for crab, temporal

and spatial closures are thought to be more effective than PSC limits in reducing impacts of trawling on crab stocks (NMFS, 2004b).

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 PSC levels are maintained and the incidental mortality of red king crab is controlled. In 2005 the trawl fishery red king crab PSC limit was set by the Council at 182,225 individual crabs (the CDQ limit allocation was 14,775 crabs) allocated across the following four trawl fishery categories: Pacific cod; rock sole, flathead sole, and other flatfish; pollock, Atka mackerel and other species; and yellowfin sole. The PSC of red king crab is controlled by NMFS inseason management through PSC limits specified in the annual harvest specifications (NMFS 2006).

Trawl fishery red king crab PSC in the BSAI has fallen well below the trawl fishery PSC limit in recent years (Table 4.11). The PSC was about 82 percent of the PSC limit in 2003, but fell to 40 percent and 53 percent in 2004 and 2005, respectively, after a substantial increase in the PSC limit.

The yellowfin sole fishery in Zone 1 (Figure 1) is the primary the fishery constrained by red king crab PSC limits (Table 4.11). The yellowfin sole fishery exceeded its PSC limit in 2003 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 is expected to have a significant effect on the ability of managers to maintain red king crab PSC below the PSC limits. None of these alternatives would change the PSC levels. Red king crab PSC has been well below recent PSC limits. None of the alternatives under consideration is expected to have a large impact on PSC rates or overall PSC under this action. Alternatives 1 and 2 would mean enhanced enforcement efforts and possible reductions in PSC rates, but these are not known to have had a meaningful impact on PSC rates in the past, and even if they did, may have no impact on overall PSC levels. Alternative 3, the preferred alternative would be unlikely to result in a change in recent red king crab PSC rates since it removes a program that has likely had a small or no effect on those rates.

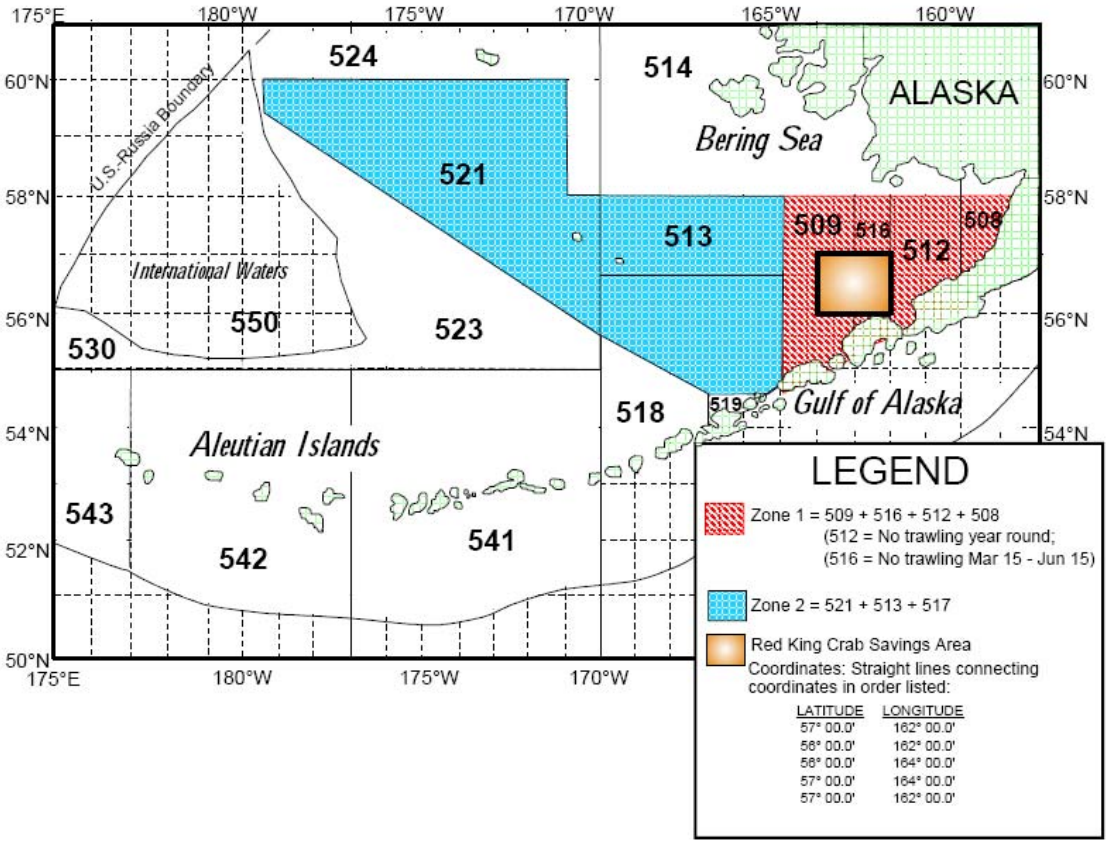

Figure 1. Zone 1, Zone 2, and the Red King Crab Savings Area of the BSAI.

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)	Catch as a Percent of the limit
Pacific cod	2003	985	13,079	12,094	8
	2004	693	26,563	25,870	3
	2005	1,678	26,563	24,885	6
	2006	5,942	26,563	20,621	22
	2007*	1,551	26,563	25,012	6
Rock sole, flathead sole, “other flatfish”	2003	55,548	59,782	4,234	93
	2004	40,967	121,413	80,446	34
	2005	45,786	121,413	75,627	38
	2006	54,206	121,413	67,207	45
	2007*	71,844	121,413	49,569	59
Pollock, Atka mackerel, “other species”	2003	34	200	166	17
	2004	26	406	380	6
	2005	0	406	406	0
	2006	201	406	205	50
	2007*	9	406	397	2
Yellowfin sole	2003	22,869	16,664	-6,205	137
	2004	33,336	33,843	507	99
	2005	48,828	33,843	-14,985	144
	2006	10,173	33,843	23,670	30
	2007*	9,306	33,843	24,537	27
Community Development Quota (CDQ) Crab allocation	2003	1,883	7,275	5,392	26
	2004	175	14,775	14,600	1
	2005	107	14,775	14,668	1
	2006	5,566	14,775	9,209	38
	2007*	2,589	14,775	12,186	18

Total	2003	81,319	97,000	15,681	84
	2004	75,197	197,000	121,803	38
	2005	96,399	197,000	100,601	49
	2006	76,088	197,000	120,912	39
	2007*	85,299	197,000	111,701	43
*preliminary estimates through August 10, 2007. Source: AKR Catch Accounting System; AKR Web site.					

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 fisheries, 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 options associated with Alternatives 2 and 3 are not expected to result in dramatically different socioeconomic impacts within those alternatives. The potential socioeconomic impact from each of these alternatives is discussed in detail below, 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**

Alternatives 1 and 2 provide an incentive for vessels with observer coverage to pre-sort fish thereby skewing the data. Biased observer data could affect inseason management as well as fishery stock assessments. The costs 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 errors by allowing the under- or over-harvest of target or PSC species, and biasing bycatch and discard estimates. Vessels over 125 ft LOA would be the primary groups in which observer data might be distorted.

Because of limited observer coverage in vessels less than 125 ft LOA, enforcement efforts would be concentrated on vessels greater than or equal to 125 ft LOA (100 percent observer coverage). Vessels smaller than 125 ft 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.

Limited observer coverage reduced sample sizes, making it difficult to estimate vessel specific bycatch rates with acceptable confidence intervals. The large confidence range caused by the small sample size has a tendency to limit enforcement of the VIP to vessels greater than or equal to 125 ft LOA.

The precise level of PSC reduction achieved by the VIP is unknown. Implementation and 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, the challenges of enforcing the requirements on vessels under 125 feet may limit the efficacy of the program for vessels of this class.

Differing levels of enforcement would create an externality that results in vessels with less observer coverage benefiting from bycatch rates standards. In this situation, vessels with less observer coverage 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 4.12).

Overall, operators with vessels under 125 ft LOA would see the greatest gains in revenue from a reinvigorated 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 ft 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 ft LOA, whereas, almost all of the vessels in the Pacific cod fishery are less than 125 ft LOA. As previously discussed, a quantitative estimate of the revenue gain attributed to the VIP is unknown.

The two options associated with Alternative 3 have differing levels of impacts on the socioeconomic environment. Removal of the VIP as described under Alternative 3, Option 2 would not change the current socioeconomic environment in the fishery. However, Alternative 3, Option 1 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 would be incurred to the public from the additional involvement and time expended while 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 non-Federal) or person undertakes such other actions. Cumulative impacts 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 strategy are discussed in detail in the Harvest Specifications FEIS (NMFS 2007). The Harvest Specifications FEIS 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 FEIS 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 FEIS 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 FEIS 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 FEIS, particularly in its target species, prohibited species, and socioeconomic effects sections. 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 ft LOA. 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 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 Alternatives 1 and 2 would likely not be significant. There are no past or present actions that are likely to have cumulative impacts.

6.0 Environmental Analysis Conclusions

Three alternatives were presented in this analysis: no action; annual publication of VIP bycatch rate standards or permanent placement of VIP bycatch rate standards in regulation; and elimination of the VIP through a regulatory amendment, an FMP amendment, or both. None of the alternatives presented in this analysis would have additional effects beyond those already identified and analyzed in the FPEIS (NMFS 2004a) and in the groundfish Harvest Specifications FEIS (NMFS 2007).

One of the purposes of an environmental assessment is to provide the evidence and analysis necessary to decide whether an agency must prepare an environmental impact statement (EIS). The Finding of No Significant Impact (FONSI) is the decision maker's determination that the action will not result in significant impacts to the human environment, and therefore, further analysis in an EIS is not needed. The Council on Environmental Quality regulations at 40 CFR 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." An action must be evaluated at different spatial scales and settings to determine the context of the action. Intensity is evaluated with respect to the nature of impacts and the resources or environmental components affected by the action. NOAA Administrative Order (NAO) 216-6 provides guidance on the National Environmental Policy Act (NEPA) specifically to line agencies within NOAA. It specifies the definition of significance in the fishery management context by listing criteria that should be used to test the significance of fishery management actions (NAO 216-6 §§ 6.01 and 6.02). These factors form the basis of the analysis presented in Chapters 4.0, 5.0, 6.0, 7.0, and 8.0 of the attached Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA). The results of that analysis are summarized here for those criteria.

Context: For this action, the setting is the groundfish trawl fisheries of the BSAI and GOA. Any effects of this action are limited to these areas. The effects of this action on society within these areas are on individuals directly and indirectly participating in these fisheries and on those who use the ocean resources. Because this action concerns the use of a present and future resource, this action may have impacts on society as a whole or regionally.

Intensity: Considerations to determine intensity of the impacts are set forth in 40 CFR 1508.27(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. The sections of the EA that address the considerations are identified.

1) Can the proposed action reasonably be 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 Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (FEIS). Moreover, because harvest would be constrained by the overfishing level (OFL), acceptable biological catch (ABC), and total allowable catch (TAC) limits as outlined in the FEIS, the alternatives would not decrease target groundfish species below benchmark population levels. (EA Section 4.2)

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target 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. This action

does not modify prohibited species catch (PSC) limits or the management response when limits are reached. It is not expected to lead to increases in PSC. (EA Section 4.3)

3) Can the proposed action reasonably be 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 the fishery management plans (FMPs)? No. No significant adverse impacts were identified for the alternatives. No effects were expected on ocean or coastal habitat or essential fish habitat (EFH). (EA Section 4.1)

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 adversely affected as a result of the action. This action does not implicate public health and safety issues. The action will not change fishing methods (including gear types), timing or location of fishing, or quota assignments to gear groups, which are based on previously established seasons and allocation formulas in regulations. (EA Sections 4.1 and 4.4)

5) Can the proposed action reasonably be 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 in which fishing occurs. 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. (EA Section 4.1)

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or 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 discussed in the FEIS. No effects are expected on biodiversity or the ecosystem. (EA Section 4.1)

7) Are significant social or economic impacts interrelated with natural or physical environmental effects? Risks to the human environment by the GOA and BSAI trawl groundfish fisheries are described in detail in the Alaska Groundfish Harvest Specifications FEIS. This action is limited in scope and would not impact the human environment in the BSAI and GOA beyond issues discussed in the FEIS. (EA/RIR/IRFA Sections 4.1 and 4.3, and Chapters 7.0 and 8.0)

8) Are the effects on the quality of the human environment likely to be highly controversial? Preferred Alternative 3 would not be controversial because it would essentially create the same conditions currently present in the trawl fishery. The level of controversy 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 reasonably be 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 of 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. (EA Section 4.1)

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks? This action repeals the VIP designed to reduce bycatch. The effects to the environment are not uncertain and there are no unique or unknown risks because there are other measures in place that reduce bycatch. The potential impacts of groundfish harvest on other components of the environment also are well understood as described in previous NEPA analyses.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts? No additional past or present cumulative impacts have been identified that would accrue from this action. (EA Chapter 5.0)

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.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species? No. This action will not introduce or spread a nonindigenous species into the BSAI or GOA because it does not change fishing, processing, or shipping practices that may lead to the introduction of nonindigenous species. (EA Section 4.3)

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration? 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 reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment? None of the alternatives poses a known violation of Federal, State, or local laws or requirements for the protection of the environment.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species? Beyond the cumulative impacts analysis in the Alaska Groundfish Harvest Specifications FEIS, no additional past or present cumulative impacts have been identified that would accrue from the alternatives. (EA Chapter 5.0)

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7.0 Regulatory Impact Review

7.1 Introduction

This Regulatory Impact Review (RIR) evaluates the costs and benefits of a proposed rule to remove the VIP from Federal regulations, the Bering Sea and Aleutian Island Fishery Management Plan (BSAI FMP), and the Gulf of Alaska Fishery Management Plan (GOA FMP).

7.2. What is a Regulatory Impact Review

This RIR is required under Presidential Executive Order (E.O.) 12866 (58 *FR* 51735, September 30, 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 Fisheries

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. Final Programmatic Supplemental Environmental Impact Statement (NMFS, 2004). This report contains detailed fishery descriptions and statistics in Section 3.9, "Social and Economic Conditions."

Economic Status of the Groundfish Fisheries Off Alaska (NMFS 2006c). This annual publication is prepared and updated each year by the social science staff at the Alaska Fisheries Science Center as a component of the annual SAFE reports.

Steller Sea Lion Protection Measures Supplemental Environmental Impact Statement (NMFS, 2001) This report contains several sections with useful background information on the groundfish fisheries (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 fisheries 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 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. The purpose of the proposed action is to modify or eliminate the VIP without adversely impacting other management programs.

7.5 Description of the Alternatives

Three alternatives are under consideration; two of these alternatives each have 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 and/or the GOA and BSAI FMP. In December 2006 the Council took final action to select Alternative 3, Option 2 (remove the VIP from regulations only) as its preferred alternative. A detailed description of each alternative 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. Bycatch 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 bi-annually and an increase in enforcement effort.

Alternative 2: Notice of schedule

Under this alternative, the schedule for which VIP bycatch rate standards are published would be changed. Under both options, NMFS would have to increase its enforcement effort, as under Alternative 1. There are two options:

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 50 CFR 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 through proposed and final rulemaking.

Option 2: VIP bycatch rate standards established 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 through proposed and final rulemaking would be required to make any subsequent change to the VIP bycatch rate standards.

Alternative 3: VIP Elimination Alternative (Preferred Alternative)

This alternative would eliminate the VIP. Two options are under consideration:

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 FMPs, as well as Federal regulation. This alternative would require amendments to the GOA and BSAI FMPs and to 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 TACs 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 specifically 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. 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 fisheries to be published bi-annually 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 does not require an incentive program or limit the Secretary to the current form of the 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 and NOAA GC. However, the potential benefit of Option 1 is that the elimination of the FMP language would make the FMP less complicated.

7.7 Costs and Benefits of the Alternatives to the baseline case (Alternative 3)

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 Counsel, and NMFS Sustainable Fisheries have identified the following programmatic changes needed to revitalize the VIP. Under Alternative 1, the following steps will be necessary to revitalize the VIP:

- An additional two enforcement agents to pursue 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 Alaska Region in selecting cases;
- One additional part time statistician to provide technical support and calculate VIP bycatch rate standards.
- Additional staff time from NMFS Sustainable Fisheries to prepare warning letters and notice for standard PSC rates.

The costs of taking these steps are summarized in Table 7.1. Because agency resources are strained by current management priorities, revitalization of the VIP can only occur through an increase in resources or by reducing resources devoted to other, current management activities. This inevitably means that, unless additional resources are made available, fewer resources will be devoted to enforcing other regulations and 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 full time equivalents (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

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 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, a full time agent 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 full-time agents at $150,000 each. Although there would be additional travel time associated with gathering evidence for a case, co-location of an agent in Seattle could reduce travel time. On balance, the program would not be expected to increase travel costs.

Legal costs associated with enforcement of the VIP include the commitment of resources by NOAA GC to the prosecution of 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 counsel. Legal actions will also require time commitments by defendants or officers of defendant companies. Observers may be required as witnesses at administrative hearings, and this will impose additional time and travel costs.

Tradeoffs

Re-instatement of the VIP would require the use of observer data to make statistical inferences about vessel specific bycatch rates. A discussion of the procedures used to estimate the bycatch rates is found in Section 1.3 of the EA. As discussed in Section 1.3, statistical estimates of vessel specific bycatch rates cannot be made for vessels under 125 ft LOA because of inadequate observer coverage. Therefore, enforcement of the VIP is effectively limited to vessels with 100 percent observer coverage.

The impacts of any subsequently reinvigorated 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 the "common property" nature of the fishery management structure. The lack of enforcement on smaller vessels means the VIP has no effect on the rate of 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 VIP's ability to reduce PSC rates is further complicated by data limitations and non-VIP PSC reduction measures in the GOA and BSAI fisheries that are currently in place. 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 allow the fleet to recover some of the value lost in target groundfish fisheries, due to premature attainment of 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 (Council 2005). Estimates assume that demand is perfectly elastic, so that increased production is not associated with price decreases.*

A re-invigorated VIP may decrease the quality of data collected by the Observer Program. If renewed enforcement of the VIP creates additional incentives for unobserved fishing operations to pre-sort catch before delivery, or for observed vessels 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 would require the same recommitment of resources to program enforcement as Alternative 1. Therefore, the costs identified for Alternative 1 in Table 7.1 are also relevant for Alternative 2. However, Alternative 2 modifies the process for planning the bycatch rate standards in regulation that reduces the regulatory costs of the action.

Alternative 2 has two options: under Option 1, VIP bycatch rate standards would be published annually through proposed and final rulemaking. Option 2 would amend VIP regulations to establish fixed 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.

Option 1 would require NMFS Sustainable Fisheries Division staff to prepare bycatch rate information for Council consideration 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 well in advance of the desired effective date. This would be an annual process.

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 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 analytical documents described under Option 1. In the short run, agency costs would be greater than the No Action alternative because the regulation would go through final and proposed rulemaking.

Option 2 would not allow the flexibility to change VIP bycatch rate standards on a regular periodic basis because of the time required for proposed and final rulemaking and associated analysis. If the Council wanted to change VIP bycatch rate standards there would likely be at least a one year time lag before those changes could 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 7.2, which follows, summarizes the costs and benefits for each of the alternatives under consideration.

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)	Change in the frequency of rate of publication (Alternative 2)		Eliminate the VIP (Alternative 3)	
		Annual (Option 1)	Rates in regulation (Option 2)	FMP amendment and regulation removal (Option 1)	Remove regulation only (Option 2)
Groundfish target fisheries	Because of enforcement concerns, it is unclear whether or not this program will be effective and allow the industry to increase target species harvests. If effective, fishermen 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 groundfish. If they are able to do so, revenues and costs may increase. Cost increases would be caused by longer fishing time and measures implemented to avoid PSC. Increased enforcement efforts may also increase pre-sorting of catch and thus distort observer reports of catch composition.			Because few observer, enforcement, or prosecution resources have been directed to enforcing this program in recent years, this option approximates the status quo, and has no impact on the groundfish target fisheries. The current FMP would be a somewhat less complex document, potentially benefiting all users.	Because few observer, enforcement, or prosecution resources have been directed to enforcing this program in recent years, this option approximates the status quo, and has no impact on the groundfish target fisheries.
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. Even then, the fundamental character of the fishery, fleets, and procedures may preclude successful monitoring and enforcement.			Because few observer, enforcement, or prosecution resources have been directed to enforcing this program in recent years, there would be little change in enforcement costs associated with this alternative. Past efforts are not known to have produced significant offsetting benefits, anticipated to be realized through better compliance with PSC bycatch rates and extended target fishing with fuller utilization of TAC. Therefore, avoidance of these costs will result in no discernable reduction in net benefits from the fisheries.	
Fishery Management	Incur costs of preparing two VIP bycatch rate standard notices a year through comment rulemaking. Estimated to be $40,000.	Incur costs of preparing 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, as compared to No Action.	Incur costs of preparing one regulatory action (proposed and final rulemaking) to incorporate VIP bycatch rate standards in regulation. Would decrease administrative costs compared to the No Action alternative, and to Option 1 of Alternative 2. 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 appropriately adjusted relatively quickly.	NMFS would revoke authority for any vessel incentive program, which would require preparation of both an FMP and regulatory amendment. Any subsequent incentive program in these fisheries would require an FMP amendment in addition to APA rulemaking.	NMFS would no longer publish VIP bycatch rate standards. Action would only require a regulatory amendment and would thus be somewhat less costly administratively than Option 1 of this alternative. Would not eliminate FMP authority to introduce VIPs in the future.
Observer Program	Would require increased observer resources: estimated cost $150,000. This program raised concerns about potential distortion of observer data due to presorting by fishermen.			Would not require additional Observer Program resources.	
Total costs	Administrative cost estimates reported above are described in detail in Table 7.1. The total is $550,000/year.				

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8.0 Final Regulatory Flexibility Analysis

8.1 Introduction

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

8.2 The Purpose of a FRFA

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 each agency's awareness and understanding of the impact of its regulations on small business, (2) to require agencies to communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and provide regulatory relief to small entities. The RFA emphasizes predicting impacts on small entities as a group distinct from other entities and considering 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 a FRFA, 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 "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 FRFA has been prepared and is included in this package for Secretarial review.

8.3 What is Required in a FRFA?

Under the RFA (5 U.S.C. § 604(a)), each FRFA is required to contain the following:

> (1) a succinct statement of the need for, and objectives of, the rule;
>
> (2) a summary of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;
>
> (3) a description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;
>
> (4) a description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record; and
>
> (5) a description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

8.4 What is this Action?

The Preferred Alternative associated with this action would eliminate the VIP from Federal regulation. Other alternatives considered in this analysis would re-invigorate the VIP, modify the schedule upon which VIP bycatch rate standards are published, or eliminate the VIP from federal regulation and the FMPs for the Groundfish Fisheries of the GOA and of the BSAI. This action and its alternatives are 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 possible VIP programs from the GOA or BSAI FMPs. As a result, VIP bycatch rate standards for Pacific halibut and red king crab PSC would not be published, and trawl vessels in the GOA and BSAI would not be subject to VIP bycatch rate standards. The removal of the VIP from regulations would be permanent. Any subsequent VIP program would require a new regulatory action, but would not require NMFS to amend the associated FMP(s).

The VIP could be re-invigorated under Alternative 1 (No Action) or Alternative 2 (rate schedule publication change). Under these alternatives, substantial increases in 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 of concerns about the

effectiveness of the current program and the potential for an additional administrative burden due to increased legal standards. The VIP has had enforcement problems for many years: relatively few violations have been prosecuted and, in two cases, defendants prolonged litigation 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 could 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 pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. 1801 et seq., and implemented by regulations at 50 CFR part 679. Further, 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 of the Northern Pacific Ocean and Bering Sea. The Secretary promulgates regulations pursuant to this goal at 50 CFR Part 300. Regulations specific to the VIP may be found at 50 CFR 679.21(f).

8.7 Public Comment

The proposed rule for the repeal of the VIP regulations was published in the Federal Register on November 30, 2007 (72 FR 67692). An Initial Regulatory Flexibility Analysis (IRFA) was prepared for the proposed rule, and described in the classifications section of the preamble to the proposed rule. The public comment period ended on December 31, 2007. No comments were received on the IRFA.

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

8.8.1 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 Title 5 of the USC 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 U.S., 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 (i.e., a catcher-processor) 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 also may be based on stock ownership: (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.

8.8.2 Description of Small Entities Directly Regulated by the Proposed Action

Federal courts and Congress have indicated that a RFA analysis should be limited to small entities directly regulated by the proposed action. As such, small entities to which the rule does 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 no entities that are directly regulated by the proposed action that would qualify as either "small nonprofit" entities or "small government jurisdictions."

8.8.3 Estimate of the Number of Small Entities Directly Regulated by the Proposed Action

Trawl vessels greater than 125 ft LOA are the primary group to which the regulatory action would apply under Alternatives 1 or 2. Because the action may allow more groundfish to be caught, if PSC rates are reduced, all trawl vessels may experience benefits if the VIP performs 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. Nonetheless, for the purpose of this analysis, all trawl vessels are assumed to have the potential to be beneficially affected by the regulation, if PSC rates are reduced under a re-invigorated VIP pursuant to Alternative 1 or 2.

In the GOA, in 2005, a total of 78 catcher vessels and 3 catcher/processor vessels reported total gross receipts of $4.0 million or less from groundfish and other species, caught using trawl gear (2006 Economic SAFE). Between 2002 and 2005, the total number of trawl vessels generating $4.0 million dollars or less in revenue has ranged from a low of 81 in 2004 and 2005, to a high of 112 in 2002. Average revenue (from all fishing sources in Alaska) generated by these vessels was approximately $840,000 in 2005, which was an increase from $730,000 in 2004, and $590,000 in 2003. Thus, the proposed alternatives may directly regulate 81 to 112 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 2005 estimate of 81 vessels will be used for the analysis. This estimate is an overestimate of the number of small entities actually affected by this action, since it does not take account of affiliations among the entities.

The BSAI management area has a larger number of trawl vessels considered to be small entities, than does the GOA. In 2005, 99 catcher vessels and 2 catcher/processor vessels recorded total gross receipts of less than $4.0 million from groundfish and other species, caught using trawl gear in the BSAI. Between 2002 and 2005, the total number of vessels categorized as small entities has ranged from a low of 101 in 2005 to a high of 123 in 2002. Between 2002 and 2003, the average revenue (from all Alaskan fishing sources) generated from these vessels has ranged from a low of $1.20 million in 2003 to a high of $1.60 million in 2005. Thus, the proposed alternatives may directly regulate, on average, 113 trawl vessels that are considered small entities. This estimate is an overestimate of the number of small entities actually in this category since it does not take account of affiliations among the entities.

8.9 Recordkeeping and Reporting Requirements

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

8.10 Comparison of Alternatives

A FRFA must include a description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect small entities was rejected.

The Preferred Alternative (Alternative 3, Option 2) would not change current enforcement levels and would impose no adverse economic impacts on small entities directly regulated by the proposed action. Alternatives 1 and 2 would require increased costs of management, enforcement, and prosecution, without significant expectation of offsetting benefits from the VIP. The re-invigorated VIP would, by necessity, be focused on vessels over 125 ft LOA. Smaller vessels would not be expected to experience increased enforcement, regulation, or other compliance costs. Therefore, only small entities operating a vessel greater than 125 ft LOA would likely be adversely affected under Alternatives 1 or 2. Nonetheless, the preferred alternative would result in a reduction in potential adverse impacts on small entities, as compared to Alternatives 1 or 2, because it would remove all attributable impacts of a VIP from all trawl operations, large and small.

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includes regional economist, NEPA, and editorial review comments. muse 22aug07; includes GC comments muse 28sep07; FRFA prepared bmuse 02jan08

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