2.0 DESCRIPTION OF ALTERNATIVES

This analysis is focused on alternative measures to minimize Chinook salmon bycatch in the Bering Sea pollock fishery. This chapter provides a detailed description of the following five alternatives:

Alternative 1: Status Quo (No Action)

Alternative 2: Hard cap

Alternative 3: Triggered closures

Alternative 4: Hard caps with an intercooperative agreement

Alternative 5: Preferred Alternative - Hard caps with incentive plan agreements and a performance standard

The alternatives analyzed in this EIS and the RIR represent a complex suite of components, options, and suboptions. However, each of the alternatives involves a limit or "cap" on the number of Chinook salmon that may be caught in the Bering Sea pollock fishery and closure of all or a part of the Bering Sea to pollock fishing once the cap is reached. These closures would occur when a Chinook salmon bycatch cap was reached even if a portion of the pollock total allowable catch (TAC) has not yet been harvested. Alternatives 2, 4, and 5 represent a change in management of the pollock fishery because if the Chinook salmon bycatch allocations are reached before the full harvest of the pollock quota, then pollock fishing must stop. Under Alternative 3, like Alternative 1, reaching the cap closes specific areas important to pollock fishing.

To best present the alternatives in comparative form, this chapter is organized into sections that describe in detail each alternative's components, options, and suboptions. To avoid unnecessary repetition, many aspects of the alternatives are presented in this chapter only, and cross-referenced later in the document as applicable.

For each alternative, the specific Chinook salmon bycatch caps under consideration for each component and option are listed in this chapter. Alternatives 2 and 3 contain eight different cap options, ranging from 29,323 to 87,500 Chinook salmon. For Alternatives 2 and 3, a subset of caps are used as the basis for the impact analysis in Chapters 4 through 8 and in the RIR. Alternatives 4 and 5 contain three different cap levels. Each of the alternatives to status quo include options that would allocate Chinook salmon bycatch caps among the sectors, inshore cooperatives, and CDQ groups participating in the pollock fishery. The use of transferable Chinook salmon bycatch allocations is a new aspect of managing the pollock fishery and represents the largest challenge for management and enforcement.

This chapter also describes how management of the pollock fishery would change under each of the alternatives and how Chinook salmon bycatch would be monitored. Estimated costs and the impacts of these changes on the pollock fishery are discussed in RIR Chapter 6.

2.1 Alternative 1: Status Quo (No Action)

Alternative 1 retains the current program of Chinook Salmon Savings Area (SSA) closures in the BS triggered by separate non-CDQ and CDQ Chinook salmon prohibited species catch limits (PSC), along with the exemption to these closures by pollock vessels participating in the Voluntary Rolling Hot Spot intercooperative agreement (VRHS ICA). The VRHS ICA regulations were implemented in 2007 through Amendment 84 to the BSAI FMP. Closure of the SSAs is designed to reduce the total amount of Chinook incidentally caught by closing areas with historically high levels of salmon bycatch. The VRHS ICA operates in lieu of regulatory closures of the SSA and requires industry to identify and close areas of high salmon bycatch and move to other areas. Only vessels directed fishing for pollock are subject to the SSA closures and ICA regulations.

2.1.1 Chinook Salmon Savings Areas

Alternative 1 would keep the existing Chinook SSA closures in effect (Fig. 2-1). The Chinook salmon PSC limit in the Bering Sea is 29,000 Chinook salmon. This PSC limit is allocated among the non-CDQ pollock fisheries (92.5% or 26,825 salmon) and the CDQ Program (7.5% or 2,175 salmon). In the absence of an approved VRHS ICA described in Section 2.1.2, NMFS closes the two Chinook SSAs to directed fishing for pollock if the non-CDQ portion of the Chinook salmon PSC limit is triggered by vessels directed fishing for pollock in the Bering Sea. The timing of the closure depends upon when the Chinook salmon limit is reached:

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

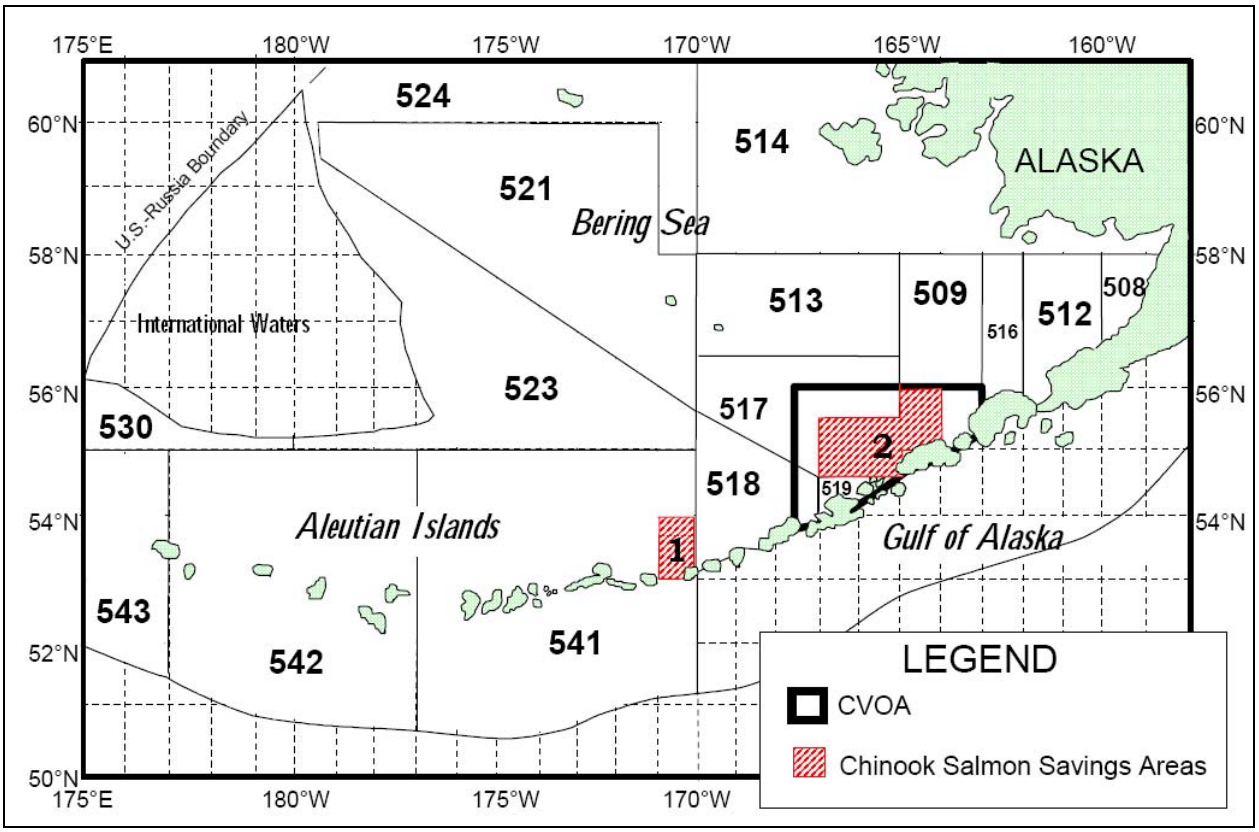

Fig. 2-1 Bering Sea and Aleutian Islands Chinook Salmon Savings Areas.

2.1.1.1 PSC limits for the CDQ Program

Under the status quo, the CDQ Program receives allocations of 7.5 % of the BS and AI Chinook salmon PSC limits as prohibited species quota (PSQ) reserves. A portion of the PSC limit (7.5%, or 2,175 Chinook salmon) is allocated to the CDQ Program as a PSQ reserve[22], while the remaining 26,825 Chinook salmon are available to the non-CDQ pollock fishery. NMFS further allocates the PSQ reserves among the six CDQ groups based on percentage allocations approved by NMFS on August 8, 2005. For Chinook salmon, the percentage allocations of the PSQ reserve among the CDQ groups are as follows:

- Aleutian Pribilof Island Community Development Association (APICDA) 14%
- Bristol Bay Economic Development Corporation (BBEDC) 21%
- Central Bering Sea Fishermen's Association (CBSFA) 5%
- Coastal Villages Region Fund (CVRF) 24%
- Norton Sound Economic Development Corporation (NSEDC) 22%
- Yukon Delta Fishery Development Corporation (YDFDC) 14%

Unless exempted because of participation in the VRHS ICA, a CDQ group is prohibited from directed fishing for pollock in the Chinook salmon savings areas when that group's Chinook salmon PSQ is reached. NMFS does not issue fishery closures through rulemaking for the CDQ groups. All CDQ groups are participating in the VRHS ICA approved in 2008, so they currently are exempt from closure of the Chinook salmon savings area.

[22] See 50 CFR 679.21(e)(3)(i)(A)(3)(i) .

2.1.2 Voluntary Rolling Hotspot System Intercooperative Agreement

Regulations implemented under Amendment 84 to the BSAI FMP exempt vessels directed fishing for pollock from closures of both the Chum and Chinook salmon savings areas if they participate in a VRHS ICA approved by NMFS (NPFMC 2005). The fleet voluntarily started the VRHS program in 2001 for chum salmon and in 2002 for Chinook salmon. The exemption to regulatory area closures for vessels that participated in the VRHS was implemented in 2006 and 2007 through an exempted fishing permit. The Council developed Amendment 84 to attempt to resolve the bycatch problem through the AFA pollock cooperatives. These regulations were implemented in 2007. A VRHS ICA was approved by NMFS in January 2008. All vessels and CDQ groups that have participated in the BS pollock fishery since 2008, except one vessel, have participated in this ICA.

The VHRS provides real-time salmon bycatch information so that the fleet can avoid areas of high chum or Chinook salmon bycatch rates. Using a system of base bycatch rates, the ICA assigns vessels to certain tiers, based on bycatch rates relative to the base rate, and implements area closures for vessels in certain tiers. Monitoring and enforcement are carried out through private contractual arrangements.

Parties to the current VRHS ICA include the AFA cooperatives, the CDQ groups, a third-party salmon bycatch data manager, and other entities with interests in Bering Sea salmon bycatch reduction. Inshore cooperatives choose to participate in the ICA, rather than offering this election to individual vessels within a cooperative. Thus, a single vessel in an inshore cooperative cannot elect to opt out of the ICA. Doing so would mean that the cooperative to which they were affiliated would be charged with a contractual violation each time the single vessel fished in a closed area (Karl Haflinger, Sea State, personal communication, April 14, 2008).

Federal regulations require the ICA to describe measures that parties to the agreement will take to monitor salmon bycatch and redirect fishing effort away from areas in which salmon bycatch rates are relatively high. It also must include intra-cooperative enforcement measures and various other regulatory conditions. The ICA data manager monitors salmon bycatch in the pollock fisheries and announces area closures for areas with relatively high salmon bycatch rates. The efficacy of voluntary closures and bycatch reduction measures must be reported to the Council annually. Additional information about the VRHS ICA is provided in RIR Chapter 2.

2.1.3 Managing and Monitoring Alternative 1

NMFS monitors numerous annual catch limits, seasonal limits, sector allocations, and quotas for many different BSAI groundfish fisheries. NMFS currently uses a combination of vessel monitoring system (VMS) data, industry reported catch information, and observer data to monitor vessel activities in the Chinook Salmon Savings Areas. These data sources are used by NMFS on a daily basis to monitor fishery limits. Information from VMS is useful for determining vessel location in relation to closure areas, but it may not conclusively indicate whether a vessel is fishing, transiting through a closed area, or targeting a particular species.

As part of this monitoring effort, NMFS may detect what appear to be regulatory violations, such as quota overages or closed area incursions. Such incidents are forwarded to the NOAA Office for Law Enforcement (OLE) for subsequent investigation. Depending on its findings for each particular case, NOAA OLE may forward cases to NOAA General Counsel (GC) for prosecution. The investigation and disposition of regulatory infractions requires considerable staff time from the Alaska Fishery Science Center's (AFSC's) Fisheries Monitoring and Analysis Division, NOAA GC and NOAA OLE.

NMFS's Catch Accounting System (CAS) was developed to receive catch reports from multiple sources, evaluate data for duplication or errors, estimate the total catch by species or species category, and determine the appropriate "bin" or account to attribute the catch. The AFSC's Fisheries Monitoring and Analysis Division provides observer data about groundfish catch and salmon bycatch, including expanded information to NMFS. NMFS estimates salmon bycatch for unobserved catcher vessels using algorithms implemented in its CAS. The haul-specific observer information is used by the CAS to create salmon bycatch rates from observed vessels that are applied to total groundfish catch in each delivery (trip level) by an unobserved vessel. The rate is calculated using the observed salmon bycatch divided by the groundfish weight, which results in a measure of salmon per metric ton of groundfish caught. Salmon bycatch rates are calculated separately for Chinook salmon and non-Chinook salmon. Additional information about observer sampling methods and the CAS is in Section 3.1.

On-board observers monitor catch of pollock and bycatch in the pollock fishery. Observer requirements differ based on the type of vessel and its operation. Catcher/processors and motherships are required to carry two NMFS-certified observers during each fishing day. These vessels must also have an observer sampling station and a motion-compensated flow scale, which is used to weigh all catch in each haul. The observer sampling station is required to include a table, motion compensated platform scale, and other monitoring tools to assist observers in sampling. Each observer covers a 12 hour shift and all hauls are observed unless an observer is unable to sample (*e.g.,* due to illness or injury).

Catcher vessels deliver unsorted catch to the three motherships that participate in the AFA pollock fisheries. NMFS does not require these catcher vessels to carry observers because catch is not removed from the trawl's codend (the detachable end of the trawl net where catch accumulates) prior to it being transferred to the mothership. Observer sampling occurs on the mothership following the same estimation processes and monitoring protocols that are described above for catcher/processors.

Catcher vessels in the inshore sector are required to carry observers based on vessel length.

Catcher vessels 125 feet in length or greater are required to carry an observer during all of their fishing days (100 percent coverage).

Catcher vessels greater than 60 feet in length and up to 125 feet in length are required to carry an observer at least 30 percent of their fishing days in each calendar quarter, and during at least one fishing trip in each target fishery category (30 percent coverage).

Catcher vessels less than 60 feet in length are not required to carry an observer. One AFA permitted vessel is less than 60 feet, however, currently this vessel does not actively participate in the pollock fishery.

AFA inshore processors are required to provide an observer for each 12 consecutive hour period of each calendar day during which the processor takes delivery of, or processes, groundfish harvested by a vessel directed fishing for pollock in the Bering Sea. NMFS regulates plant monitoring through a permitting process. Each plant that receives AFA pollock is required to develop and operate under a NMFS-approved catch monitoring and control plan (CMCP). Monitoring standards for CMCP are described in regulation at 50 CFR 679.28(g). Additional information about monitoring for salmon bycatch at the shoreside processing plants is in Section 3.1.

2.1.4 2007 and 2008 pollock catch and Chinook salmon bycatch by vessel category

Vessel-specific salmon bycatch information currently exists for catcher/processors, motherships, and observed catcher vessels in the inshore sector. However, vessels in the 30 percent observer coverage category are a significant component of the inshore sector. When these vessels are not observed, salmon bycatch rates from other observed vessels are used to estimate the salmon bycatch associated with the pollock catch by the unobserved vessels (as discussed in Section 3.1).

Table 2-1 shows the estimated pollock catch and salmon bycatch in the AFA pollock fisheries in the Bering Sea in 2007, by fishery sector and vessel length class. Fifty-six of the 82 vessels participating in the inshore sector in 2007 were in the 30 percent observer coverage category. These vessels caught approximately 20 percent of the pollock catch and an estimated 27 percent of the Chinook salmon bycatch.

Table 2-1 Number of vessels that participated in the 2007 AFA pollock fisheries, pollock catch, and estimated Chinook salmon bycatch, by vessel category.

Vessel category	Number of Vessels	Pollock (mt)	Percent of Pollock Catch	Number of Chinook salmon	Percent of Chinook Salmon
Catcher/processor	16	488,528	41%	32,212	28%
Motherships	3	121,514	10%	6,663	6%
CV 60 ft.-125 ft.	56	240,546	20%	31,381	27%
CV ≥ 125 ft.	26	332,081	28%	45,937	40%
Total	101	1,182,669	100%	116,193	100%

Number of vessels does not include 7 catcher vessels that deliver only unsorted codends to motherhips and do not require an observer.

Table 2-2 shows the estimated pollock catch and salmon bycatch in the AFA pollock fisheries in the Bering Sea in 2008, by fishery sector and vessel length class. Fifty-four of the 80 vessels participating in the inshore sector in 2008 were in the 30 percent observer coverage category. These vessels caught approximately 21 percent of the pollock catch and an estimated 25 percent of the Chinook salmon bycatch.

Table 2-2 Number of vessels that participated in the 2008 AFA pollock fisheries, pollock catch, and estimated Chinook salmon bycatch, by vessel category.

Vessel category	Number of Vessels	Pollock (mt)	Percent of Pollock Catch	Number of Chinook salmon	Percent of Chinook Salmon
Catcher/processor	17	346,998	40%	4,467	23%
Motherships	3	85,364	10%	1,301	7%
CV 60 ft.-125 ft.	56	177,156	21%	4,948	25%
CV ≥ 125 ft.	24	250,585	29%	8,742	45%
Total	100	860,103	100%	19,458	100%

Number of vessels does not include 9 catcher vessels that deliver only unsorted codends to motherhips and do not require an observer.

2.2 Alternative 2: Hard Cap

Alternative 2 would establish a hard cap to limit Chinook salmon bycatch in the pollock fishery. When the hard cap is reached all directed pollock fishing must cease. Only those Chinook salmon caught by vessels participating in the directed pollock fishery would accrue towards the cap, and fishery closures upon attainment of the cap would apply only to directed fishing for pollock. Several different options as to the scale of management for the hard cap are provided under this alternative: at the fishery level (separate hard caps for the CDQ Program and the remaining three AFA sectors combined); at the sector level (each of the 4 sectors including the CDQ sector receive a sector level cap with the CDQ sector level cap allocated to the individual CDQ groups); and at the cooperative level (the inshore CV sector level cap is further subdivided and managed at the individual cooperative level) (Table 2-3).

Under this alternative, Component 1 requires selecting the hard cap. As described below and shown in Table 2-3, hard caps would be divided by season according to one of the options in Component 1 (Options 1-1 through 1-4). If the hard cap is apportioned by sector (under Component 2), options are provided for the subdivision. Options for sector transfer or rollovers are included in Component 3. Further subdivision of an inshore sector cap to individual inshore cooperatives is discussed under Component 4 (cooperative provisions).

If none of the options under the Components 2-4 are selected, the Alternative 2 hard cap would apply at the fishery level and would be divided between the CDQ and non-CDQ fisheries. The CDQ sector would receive an allocation of 7.5% of a fishery level hard cap. The CDQ allocation would be further allocated among the six CDQ groups based on percentage allocations currently in effect. Each CDQ group would be prohibited from exceeding its Chinook salmon allocation. This prohibition would require the CDQ group to stop directed fishing for pollock once its cap was reached because further directed fishing for pollock would likely result in exceeding the cap.

The remaining 92.5% of a fishery level hard cap would be apportioned to the non-CDQ sectors (inshore CV sector, offshore CP sector, and mothership sector) combined. The inshore CV sector contains up to seven cooperatives, each composed of multiple fishing vessels associated with a specific inshore processor. There also is a possibility than an inshore open access sector could form, if one or more catcher vessels do not join an inshore cooperative. All bycatch of Chinook salmon by any vessel in any of these three AFA sectors would accrue against the fishery level hard cap, and once the cap was reached, NMFS would simultaneously prohibit directed fishing for pollock by all three of these sectors.

Under Alternative 2, existing regulations related to the Chinook salmon prohibited species catch limit of 29,000 salmon and triggered closures of the Chinook salmon savings areas in the Bering Sea would be removed from 50 CFR part 679.21. The 700 Chinook salmon trigger cap and Chinook Salmon savings area in the Aleutian Islands would remain in effect. Additionally, the current VRHS ICA regulations would be revised to remove all reference to Chinook salmon. Regulations associated with the non-Chinook salmon elements of the VRHS ICA would remain in regulations.

Per Council direction (February 2008), the impact of implementing specific cap levels for Alternative 2 was analyzed based on a subset of the range of cap levels, as indicated in the tables under each component and option.

Table 2-3 Alternative 2 components, options, and suboptions.

Setting the hard cap (Component 1)	Option 1: Select from a range of numbers	i) 87,500 ii) 68,392 iii) 57,333 iv) 47,591 v) 43,328 vi) 38,891 vii) 32,482 viii) 29,323			
		Suboption adjust periodically based on updated bycatch information			
	Divide cap between A and B season	Option 1-1: 70/30 (A season/B season) Option 1-2: 58/42 (A season/B season) Option 1-3: 55/45 (A season/B season) Option 1-4: 50/50 (A season/B season)			
		Suboption rollover unused salmon from the A season to the B season, with in a sector and calendar year.			
Allocating the hard cap to sectors (Component 2)		CDQ	Inshore CV	Mothership	Offshore CP
	No allocation	7.5%; allocated and managed at the CDQ group level	92.5%; managed at the combined fishery-level for all three sectors		
	Option 1 (AFA)	10%	45%	9%	36%
	Option 2a (hist. avg. 04-06)	3%	70%	6%	21%
	Option 2b (hist. avg. 02-06)	4%	65%	7%	25%
	Option 2c (hist. avg. 97-06)	4%	62%	9%	25%
	Option 2d (midpoint)	6.5%	57.5%	7.5%	28.5%
Sector transfers (Component 3)	No transfers				
	Option 1	Caps are transferable among sectors in a fishing season.			
		Suboption: Maximum amount of transfer limited to:		a	50%
				b	70%
				c	90%
	Option 2	NMFS rolls over unused salmon bycatch to sectors still fishing in a season, based on proportion of pollock remaining to be harvested.			
Allocating the hard cap to cooperatives (Component 4)	No allocation	Allocation managed at the inshore CV sector level.			
	Allocation	Allocate cap to each cooperative based on that cooperative's proportion of pollock allocation.			
	Cooperative Transfers	Option 1	Lease pollock among cooperatives in a season or a year		
		Option 2	Transfer salmon bycatch		
		Suboption Maximum amount of transfer limited to the following percentage of salmon remaining:		a	50%
				b	70%
				c	90%

2.2.1 Component 1: Setting the Hard Cap

Component 1 would establish the annual hard cap number based upon averages of historical numbers and other considerations, as noted below. Component 1 sets the overall cap; this could be either applied at the pollock fishery level to the CDQ and non-CDQ fisheries (not allocated by sector within the non-CDQ sectors), or may be subdivided by sector (Component 2) and the inshore sector allocation further allocated among the inshore cooperatives (Component 4). All annual hard caps would be apportioned by season.

2.2.1.1 Range of numbers for a hard cap

Table 2-4 lists the range of numbers considered for the overall Chinook salmon hard caps, in numerical order, highest to lowest. As listed here, the CDQ allocation of the fishery level cap would be 7.5%, with the remainder apportioned to the combined non-CDQ fishery.

Table 2-4 Range of suboptions for Chinook salmon hard caps, in numbers of fish, with breakout for CDQ allocation (7.5 %) and remainder for non-CDQ fleet

Suboption	Overall fishery level cap	CDQ allocation	Non-CDQ cap (all sectors combined)
i)	87,500	6,563	80,938
ii)	68,392	5,129	63,263
iii)	57,333	4,300	53,033
iv)	47,591	3,569	44,022
v)	43,328	3,250	40,078
vi)	38,891	2,917	35,974
vii)	32,482	2,436	30,046
viii)	29,323	2,199	27,124

The following provides the rationale (by suboption number) for each hard cap listed in Table 2-4. Suboption i, a hard cap of 87,500 Chinook salmon, represents the upper end of the recent range of observed bycatch included in the BSAI groundfish fishery Incidental Take Statement (ITS; NMFS 1-11-07 supplemental Biological Opinion). This amount is related to the ESA consultation on the incidental catch of ESA-listed salmonids in the BSAI groundfish trawl fisheries. An ITS specifies the expected take of an ESA-listed species for the activity consulted on. The ESA-listed salmonids originate in the U.S. Pacific Northwest; none are from Alaska or western Alaska stocks. Additional information on the listed stocks, their relative contribution to the overall bycatch of Chinook salmon in the BSAI groundfish fisheries, and the ESA consultation, are covered in Section 5.2.8.

Suboptions ii-vi refer to average bycatch numbers by the Bering Sea pollock trawl fishery over a range of historical year combinations, from 1997 through 2006.

- Suboption ii is the 3-year average from 2004 to 2006.
- Suboption iii is the 5-year average from 2002 to 2006.
- Suboption iv is the 10-year average from 1997 to 2006, with the lowest year (2000) dropped prior to averaging because an injunction on the fishery altered normal fishing patterns in that year.[23]
- Suboption v is the straight 10-year average including all years from 1997 to 2006.
- Suboption vi is the 10-year average from 1997 to 2006, but with the highest year of bycatch (2006) dropped prior to averaging to provide contrast with suboption iv.
- Suboption vii is the 10-year average from 1992 to 2001.
- Suboption viii is the 5-year average from 1997 to 2001.

[23] In connection with an ESA lawsuit pertaining to Steller sea lions, a U.S. Federal Court injunction on the fishery altered normal fishing patterns in that year.

Suboptions vii and viii include year combinations that consider bycatch levels prior to accession to the Yukon River Agreement (signed in 2002). Additional information on the Yukon River Agreement and the Pacific Salmon Treaty are contained in section 1.7.14.

For analytical purposes only, a subset of the cap numbers included in the eight suboptions were used in this document to assess the impacts of operating under a given hard cap. This subset approximates the upper and lower endpoints of the suboption range, and two equidistant midpoints (Table 2-5).

Table 2-5 Range of Chinook salmon hard caps, in numbers of fish, for use in the analysis of impacts

	Chinook	CDQ	Non-CDQ
i)	87,500	6,563	80,938
ii)	68,100	5,108	62,993
iii)	48,700	3,653	45,048
iv)	29,300	2,198	27,103

Suboption: Periodic adjustments to cap based on updated bycatch information.

Under this suboption, the updated salmon bycatch information would be reassessed after a certain number of years to determine whether adjustments to the hard cap are needed. Any revisions to the salmon bycatch management measures would require additional analysis and rulemaking. As a general rule, the Council may reassess any management measure at any time and does not need to specify a particular timeframe for reassessment of the Chinook salmon bycatch management measures.

2.2.1.2 Seasonal distribution of caps

Any hard cap shall be divided between the pollock A and B seasons, according to one of the following seasonal distribution options (A/B season):

Option 1-1 70/30

Option 1-2 58/42 (based on the 2000-2007 average distributional ratio of salmon bycatch between A and B seasons)

Option 1-3 55/45

Option 1-4 50/50

Suboption Unused salmon from the A season would be made available to the recipient of the salmon bycatch hard cap in the B season, within each management year.

The options and suboption for the seasonal division of sector level caps and transferable allocations available under Components 1, 2, 3, and 4 and would be applied at the same seasonal division as the overall hard caps.

Table 2-6 illustrates the intersection of the seasonal distribution of caps, under Options 1-1 through 1-4, using the range of overall fishery hard caps for analytical purposes (from Table 2-5). An annual hard cap with seasonal apportionments means that directed fishing for pollock would close once the A-season apportionment of the annual hard cap was reached. For the analysis, in order to avoid further confusion regarding ranges under consideration, seasonal distribution options are only shown applied to the analytical subset of caps rather than the full range of caps in the eight suboptions. In analyzing Alternative 2, Option 1-3 (55/45) is not evaluated in detail as the effects of this seasonal distribution are similar to 58/42 split. This option would not provide much contrast compared to the other seasonal distribution options.

Table 2-6 Seasonal distribution options as applied to the analytical subset of fishery level Chinook salmon hard caps, in numbers of fish, for CDQ and non-CDQ.

Fishery level cap	Option for A/B distribution	A season cap	B season cap	A season Non-CDQ	A season CDQ	B season Non-CDQ	B season CDQ
87,500	1-1: 70/30	61,250	26,250	56,656	4,594	24,281	1,969
	1-2: 58/42	50,750	36,750	46,944	3,806	33,994	2,756
	1-3: 55/45	48,125	39,375	44,516	3,609	36,422	2,953
	1-4: 50/50	43,750	43,750	40,469	3,281	40,469	3,281
68,100	1-1: 70/30	47,670	20,430	44,095	3,575	18,898	1,532
	1-2: 58/42	39,498	28,602	36,536	2,962	26,457	2,145
	1-3: 55/45	37,455	30,645	34,646	2,809	28,347	2,298
	1-4: 50/50	34,050	34,050	31,496	2,554	31,496	2,554
48,700	1-1: 70/30	34,090	14,610	31,533	2,557	13,514	1,096
	1-2: 58/42	28,246	20,454	26,128	2,118	18,920	1,534
	1-3: 55/45	26,785	21,915	24,776	2,009	20,271	1,644
	1-4: 50/50	24,350	24,350	22,524	1,826	22,524	1,826
29,300	1-1: 70/30	20,510	8,790	18,972	1,538	8,131	659
	1-2: 58/42	16,994	12,306	15,719	1,275	11,383	923
	1-3: 55/45	16,115	13,185	14,906	1,209	12,196	989
	1-4: 50/50	14,650	14,650	13,551	1,099	13,551	1,099

Note: CDQ receives 7.5% of the overall fishery-level cap.

2.2.2 Component 2: Sector Allocation

If this component is selected, the hard cap would be apportioned to the sector level. This would result in separate sector level caps for the CDQ sector, the inshore catcher vessel (CV) sector, the mothership sector, and the offshore catcher processor (CP) sector.

The bycatch of Chinook salmon would be tabulated on a sector level basis. If the total salmon bycatch in a non-CDQ sector reaches the cap specified for that sector, NMFS would close directed fishing for pollock by that sector for the remainder of the season. The remaining sectors may continue to fish until they reach their specific sector level cap. The CDQ allocations would continue to be managed as they are under the status quo, with further allocation of the CDQ salmon bycatch cap among the six CDQ groups, transferable allocations within the CDQ Program, and a prohibition against a CDQ group exceeding its salmon bycatch allocation.

For analytical purposes, a subset of the sector allocation options which provides the greatest contrast will be used for detailed analysis. Option 1, Option 2a, and Option 2d encompass the range of impacts (high, medium, and low) for each sector and therefore are analyzed.

2.2.2.1 Option 1: Sector allocation based on pollock allocation under AFA

Option 1) 10% of the cap to the CDQ sector, and the remaining allocated as follows: 50% inshore CV fleet; 10% for the mothership fleet; and 40% for the offshore CP fleet. This results in allocations of 45% inshore CV, 9% mothership and 36% offshore CP.

This option would set the sector level hard caps based the percentage allocations established for pollock allocations under the AFA. Application of these percentages results in the following range of sector level caps, based upon the range of caps in Component 1, Option 1 (Table 2-7). Note that here the CDQ allocation of salmon is higher than under status quo (10% rather than 7.5%).

Table 2-7 Annual sector level Chinook salmon hard caps, in numbers of fish, resulting from Option 1, percentage allocation - 10% CDQ and the remaining 90% divided 50% inshore CV fleet; 10% for the mothership fleet; and 40% for the offshore CP fleet

Suboption	Overall fishery cap	CDQ	Inshore CV	Mothership	Offshore CP
i)	87,500	8,750	39,375	7,875	31,500
ii)	68,392	6,839	30,776	6,155	24,621
iii)	57,333	5,733	25,800	5,160	20,640
iv)	47,591	4,759	21,416	4,283	17,133
v)	43,328	4,333	19,498	3,900	15,598
vi)	38,891	3,889	17,501	3,500	14,001
vii)	32,482	3,248	14,617	2,923	11,694
viii)	29,323	2,932	13,195	2,639	10,556

Table 2-8 lists the range of sector cap levels under Option 1 for the A season (applying the seasonal allocation options listed in Table 2-6), and Table 2-9 for the B season, which will be utilized to evaluate the impacts of Component 2, Option 1. As noted above, the sector level hard caps in the shaded rows are not analyzed.

Table 2-8 A-season sector level Chinook salmon hard caps, in numbers of fish, under Option 1, percentage allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	A season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	61,250	6,125	27,563	5,513	22,050
	1-2: 58/42	50,750	5,075	22,838	4,568	18,270
	1-3: 55/45	48,125	4,813	21,656	4,331	17,325
	1-4: 50/50	43,750	4,375	19,688	3,938	15,750
68,100	1-1: 70/30	47,670	4,767	21,452	4,290	17,161
	1-2: 58/42	39,498	3,950	17,774	3,555	14,219
	1-3: 55/45	37,455	3,746	16,855	3,371	13,484
	1-4: 50/50	34,050	3,405	15,323	3,065	12,258
48,700	1-1: 70/30	34,090	3,409	15,341	3,068	12,272
	1-2: 58/42	28,246	2,825	12,711	2,542	10,169
	1-3: 55/45	26,785	2,679	12,053	2,411	9,643
	1-4: 50/50	24,350	2,435	10,958	2,192	8,766
29,300	1-1: 70/30	20,510	2,051	9,230	1,846	7,384
	1-2: 58/42	16,994	1,699	7,647	1,529	6,118
	1-3: 55/45	16,115	1,612	7,252	1,450	5,801
	1-4: 50/50	14,650	1,465	6,593	1,319	5,274

Table 2-9 B-season sector level Chinook salmon hard caps, in numbers of fish, under Option 1, percentage allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	B season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	26,250	2,625	11,813	2,363	9,450
	1-2: 58/42	36,750	3,675	16,538	3,308	13,230
	1-3: 55/45	39,375	3,938	17,719	3,544	14,175
	1-4: 50/50	43,750	4,375	19,688	3,938	15,750
68,100	1-1: 70/30	20,430	2,043	9,194	1,839	7,355
	1-2: 58/42	28,602	2,860	12,871	2,574	10,297
	1-3: 55/45	30,645	3,065	13,790	2,758	11,032
	1-4: 50/50	34,050	3,405	15,323	3,065	12,258
48,700	1-1: 70/30	14,610	1,461	6,575	1,315	5,260
	1-2: 58/42	20,454	2,045	9,204	1,841	7,363
	1-3: 55/45	21,915	2,192	9,862	1,972	7,889
	1-4: 50/50	24,350	2,435	10,958	2,192	8,766
29,300	1-1: 70/30	8,790	879	3,956	791	3,164
	1-2: 58/42	12,306	1,231	5,538	1,108	4,430
	1-3: 55/45	13,185	1,319	5,933	1,187	4,747
	1-4: 50/50	14,650	1,465	6,593	1,319	5,274

2.2.2.2 Option 2: Historical average of Chinook salmon bycatch by sector

Under Option 2, sector level caps would be set for each sector based on historical average percent bycatch, by sector, over 3-, 5-, and 10-year time periods, and using a mid-point between these ranges and those under Option 1. Similar to the years included to set the overall cap, the historical years do not consider the most recent (and historical high) year of 2007.

Option 2) Historical average of percent bycatch by sector, based on:

a) 3-year (2004–2006) average: CDQ 3%; inshore CV fleet 70%; mothership fleet 6%; offshore CP fleet 21%.

b) 5-year (2002–2006) average: CDQ 4%; inshore CV fleet 65%; mothership fleet 7%; offshore CP fleet 24%.

c) 10-year (1997–2006) average: CDQ 4%; inshore CV fleet 62%; mothership fleet 9%; offshore CP fleet 25%.

d) Midpoints of the ranges provided by Option 1 and Options 2(a-c) by sector: CDQ 6.5%; inshore CV fleet 57.5%; mothership fleet 7.5%; offshore CP fleet 28.5%

Option 2a uses the historical averages of percent bycatch by sector from 2004 through 2006. This results in the following average percentages by sector: CDQ 3%; inshore CV fleet 70%; mothership fleet 6%; offshore CP fleet 21%. Those percentages are applied to the range of caps under consideration in Component 1, Option 1 (Table 2-10).

Table 2-10 Annual sector level Chinook salmon hard caps, in numbers of fish, resulting from Option 2a, average historical bycatch by sector from 2004-2006

Suboption	Overall fishery cap	CDQ 3%	Inshore CV 70%	Mothership 6%	Offshore CP 21%
i)	87,500	2,625	61,250	5,250	18,375
ii)	68,392	2,052	47,874	4,104	14,362
iii)	57,333	1,720	40,133	3,440	12,040
iv)	47,591	1,428	33,314	2,855	9,994
v)	43,328	1,300	30,330	2,600	9,099
vi)	38,891	1,167	27,224	2,333	8,167
vii)	32,482	974	22,737	1,949	6,821
viii)	29,323	880	20,526	1,759	6,158

Option 2b considers the historical averages of percent bycatch by sector from the 5 year time period from 2002 to 2006. This results in the following average percentages by sector: CDQ 4%; inshore CV fleet 65%; mothership fleet 7%; offshore CP fleet 24%. Those percentages are applied to the range of caps under consideration in Component 1, Option 1 (Table 2-11).

Table 2-11 Annual sector level Chinook salmon hard caps, in numbers of fish, resulting from Option 2b, average historical bycatch by sector from 2002-2006

Suboption	Overall fishery cap	CDQ 4%	Inshore CV 65%	Mothership 7%	Offshore CP 24%
i)	87,500	3,500	56,875	6,125	21,000
ii)	68,392	2,736	44,455	4,787	16,414
iii)	57,333	2,293	37,266	4,013	13,760
iv)	47,591	1,904	30,934	3,331	11,422
v)	43,328	1,733	28,163	3,033	10,399
vi)	38,891	1,556	25,279	2,722	9,334
vii)	32,482	1,299	21,113	2,274	7,796
viii)	29,323	1,173	19,060	2,053	7,038

Option 2c considers the historical averages of percent bycatch by sector from the 10 year time period from 1997 to 2006. This results in the following average percentages by sector: CDQ 4%; inshore CV fleet 62%; mothership fleet 9%; offshore CP fleet 25%. Those percentages are applied to the range of caps under consideration in Component 1, Option 1 (Table 2-12).

Table 2-12 Annual sector level Chinook salmon hard caps, in numbers of fish, resulting from Option 2c, average historical bycatch by sector from 1997-2006

Suboption	Overall fishery cap	CDQ 4%	Inshore CV 62%	Mothership 9%	Offshore CP 25%
i)	87,500	3,500	54,250	7,875	21,875
ii)	68,392	2,736	42,403	6,155	17,098
iii)	57,333	2,293	35,546	5,160	14,333
iv)	47,591	1,904	29,506	4,283	11,898
v)	43,328	1,733	26,863	3,900	10,832
vi)	38,891	1,556	24,112	3,500	9,723
vii)	32,482	1,299	20,139	2,923	8,121
viii)	29,323	1,173	18,180	2,639	7,331

Option 2d considers the midpoint of the ranges for each sector under consideration in Option 1 and Options 2a-c as listed previously. This results in the following average percentages by sector: CDQ 6.5%; inshore CV fleet 57.5%; mothership fleet 7.5%; offshore CP fleet 28.5%. Those percentages are applied to the range of caps under consideration in Component 1, Option 1 (Table 2-13).

Table 2-13 Annual sector level Chinook salmon hard caps, in numbers of fish, resulting from Option 2d, midpoints of sector ranges

Suboption	Overall fishery cap	CDQ 6.5%	Inshore CV 57.5%	Mothership 7.5%	Offshore CP 28.5%
i)	87,500	5,688	50,313	6,563	24,938
ii)	68,392	4,445	39,325	5,129	19,492
iii)	57,333	3,727	32,966	4,300	16,340
iv)	47,591	3,093	27,365	3,569	13,563
v)	43,328	2,816	24,914	3,250	12,348
vi)	38,891	2,528	22,362	2,917	11,084
vii)	32,482	2,111	18,677	2,436	9,257
viii)	29,323	1,906	16,861	2,199	8,357

Table 2-14 - Table 2-17 list the range of sector cap levels for the A season under Options 2a-2d (applying the seasonal allocation options listed in Table 2-6), which will be utilized to evaluate the impacts of Component 2. Shaded rows are omitted from detailed impact analysis.

Table 2-14 A-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2a, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B division	A season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	61,250	1,838	42,875	3,675	12,863
	1-2: 58/42	50,750	1,523	35,525	3,045	10,658
	1-3: 55/45	48,125	1,444	33,688	2,888	10,106
	1-4: 50/50	43,750	1,313	30,625	2,625	9,188
68,100	1-1: 70/30	47,670	1,430	33,369	2,860	10,011
	1-2: 58/42	39,498	1,185	27,649	2,370	8,295
	1-3: 55/45	37,455	1,124	26,219	2,247	7,866
	1-4: 50/50	34,050	1,022	23,835	2,043	7,151
48,700	1-1: 70/30	34,090	1,023	23,863	2,045	7,159
	1-2: 58/42	28,246	847	19,772	1,695	5,932
	1-3: 55/45	26,785	804	18,750	1,607	5,625
	1-4: 50/50	24,350	731	17,045	1,461	5,114
29,300	1-1: 70/30	20,510	615	14,357	1,231	4,307
	1-2: 58/42	16,994	510	11,896	1,020	3,569
	1-3: 55/45	16,115	483	11,281	967	3,384
	1-4: 50/50	14,650	440	10,255	879	3,077

Table 2-15 A-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2b, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B division	A season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	61,250	2,450	39,813	4,288	14,700
	1-2: 58/42	50,750	2,030	32,988	3,553	12,180
	1-3: 55/45	48,125	1,925	31,281	3,369	11,550
	1-4: 50/50	43,750	1,750	28,438	3,063	10,500
68,100	1-1: 70/30	47,670	1,907	30,986	3,337	11,441
	1-2: 58/42	39,498	1,580	25,674	2,765	9,480
	1-3: 55/45	37,455	1,498	24,346	2,622	8,989
	1-4: 50/50	34,050	1,362	22,133	2,384	8,172
48,700	1-1: 70/30	34,090	1,364	22,159	2,386	8,182
	1-2: 58/42	28,246	1,130	18,360	1,977	6,779
	1-3: 55/45	26,785	1,071	17,410	1,875	6,428
	1-4: 50/50	24,350	974	15,828	1,705	5,844
29,300	1-1: 70/30	20,510	820	13,332	1,436	4,922
	1-2: 58/42	16,994	680	11,046	1,190	4,079
	1-3: 55/45	16,115	645	10,475	1,128	3,868
	1-4: 50/50	14,650	586	9,523	1,026	3,516

Table 2-16 A-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2c, sector allocation, using seasonal division options

Fishery level cap	Option for A/B division	A season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	61,250	2,450	37,975	5,513	15,313
	1-2: 58/42	50,750	2,030	31,465	4,568	12,688
	1-3: 55/45	48,125	1,925	29,838	4,331	12,031
	1-4: 50/50	43,750	1,750	27,125	3,938	10,938
68,100	1-1: 70/30	47,670	1,907	29,555	4,290	11,918
	1-2: 58/42	39,498	1,580	24,489	3,555	9,875
	1-3: 55/45	37,455	1,498	23,222	3,371	9,364
	1-4: 50/50	34,050	1,362	21,111	3,065	8,513
48,700	1-1: 70/30	34,090	1,364	21,136	3,068	8,523
	1-2: 58/42	28,246	1,130	17,513	2,542	7,062
	1-3: 55/45	26,785	1,071	16,607	2,411	6,696
	1-4: 50/50	24,350	974	15,097	2,192	6,088
29,300	1-1: 70/30	20,510	820	12,716	1,846	5,128
	1-2: 58/42	16,994	680	10,536	1,529	4,249
	1-3: 55/45	16,115	645	9,991	1,450	4,029
	1-4: 50/50	14,650	586	9,083	1,319	3,663

Table 2-17 A-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2d, sector allocation, using seasonal division options

Fishery level cap	Option for A/B division	A season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	61,250	3,981	35,219	4,594	17,456
	1-2: 58/42	50,750	3,299	29,181	3,806	14,464
	1-3: 55/45	48,125	3,128	27,672	3,609	13,716
	1-4: 50/50	43,750	2,844	25,156	3,281	12,469
68,100	1-1: 70/30	47,670	3,099	27,410	3,575	13,586
	1-2: 58/42	39,498	2,567	22,711	2,962	11,257
	1-3: 55/45	37,455	2,435	21,537	2,809	10,675
	1-4: 50/50	34,050	2,213	19,579	2,554	9,704
48,700	1-1: 70/30	34,090	2,216	19,602	2,557	9,716
	1-2: 58/42	28,246	1,836	16,241	2,118	8,050
	1-3: 55/45	26,785	1,741	15,401	2,009	7,634
	1-4: 50/50	24,350	1,583	14,001	1,826	6,940
29,300	1-1: 70/30	20,510	1,333	11,793	1,538	5,845
	1-2: 58/42	16,994	1,105	9,772	1,275	4,843
	1-3: 55/45	16,115	1,047	9,266	1,209	4,593
	1-4: 50/50	14,650	952	8,424	1,099	4,175

Table 2-18 through Table 2-21 list the range of sector cap levels for the B season under Options 2a-2d (applying the seasonal allocation options listed in Table 2-6), which were utilized to evaluate the impacts of Component 2. Shaded rows were omitted from detailed impact analysis.

Table 2-18 B-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2a, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	B season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	26,250	788	18,375	1,575	5,513
	1-2: 58/42	36,750	1,103	25,725	2,205	7,718
	1-3: 55/45	39,375	1,181	27,563	2,363	8,269
	1-4: 50/50	43,750	1,313	30,625	2,625	9,188
68,100	1-1: 70/30	20,430	613	14,301	1,226	4,290
	1-2: 58/42	28,602	858	20,021	1,716	6,006
	1-3: 55/45	30,645	919	21,452	1,839	6,435
	1-4: 50/50	34,050	1,022	23,835	2,043	7,151
48,700	1-1: 70/30	14,610	438	10,227	877	3,068
	1-2: 58/42	20,454	614	14,318	1,227	4,295
	1-3: 55/45	21,915	657	15,341	1,315	4,602
	1-4: 50/50	24,350	731	17,045	1,461	5,114
29,300	1-1: 70/30	8,790	264	6,153	527	1,846
	1-2: 58/42	12,306	369	8,614	738	2,584
	1-3: 55/45	13,185	396	9,230	791	2,769
	1-4: 50/50	14,650	440	10,255	879	3,077

Table 2-19 B-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2b, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	B season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	26,250	1,050	17,063	1,838	6,300
	1-2: 58/42	36,750	1,470	23,888	2,573	8,820
	1-3: 55/45	39,375	1,575	25,594	2,756	9,450
	1-4: 50/50	43,750	1,750	28,438	3,063	10,500
68,100	1-1: 70/30	20,430	817	13,280	1,430	4,903
	1-2: 58/42	28,602	1,144	18,591	2,002	6,864
	1-3: 55/45	30,645	1,226	19,919	2,145	7,355
	1-4: 50/50	34,050	1,362	22,133	2,384	8,172
48,700	1-1: 70/30	14,610	584	9,497	1,023	3,506
	1-2: 58/42	20,454	818	13,295	1,432	4,909
	1-3: 55/45	21,915	877	14,245	1,534	5,260
	1-4: 50/50	24,350	974	15,828	1,705	5,844
29,300	1-1: 70/30	8,790	352	5,714	615	2,110
	1-2: 58/42	12,306	492	7,999	861	2,953
	1-3: 55/45	13,185	527	8,570	923	3,164
	1-4: 50/50	14,650	586	9,523	1,026	3,516

Table 2-20 B-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2c, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	B season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	26,250	1,050	16,275	2,363	6,563
	1-2: 58/42	36,750	1,470	22,785	3,308	9,188
	1-3: 55/45	39,375	1,575	24,413	3,544	9,844
	1-4: 50/50	43,750	1,750	27,125	3,938	10,938
68,100	1-1: 70/30	20,430	817	12,667	1,839	5,108
	1-2: 58/42	28,602	1,144	17,733	2,574	7,151
	1-3: 55/45	30,645	1,226	19,000	2,758	7,661
	1-4: 50/50	34,050	1,362	21,111	3,065	8,513
48,700	1-1: 70/30	14,610	584	9,058	1,315	3,653
	1-2: 58/42	20,454	818	12,681	1,841	5,114
	1-3: 55/45	21,915	877	13,587	1,972	5,479
	1-4: 50/50	24,350	974	15,097	2,192	6,088
29,300	1-1: 70/30	8,790	352	5,450	791	2,198
	1-2: 58/42	12,306	492	7,630	1,108	3,077
	1-3: 55/45	13,185	527	8,175	1,187	3,296
	1-4: 50/50	14,650	586	9,083	1,319	3,663

Table 2-21 B-season sector level Chinook salmon hard caps, in numbers of fish, under Option 2d, sector allocation, using seasonal distribution options

Fishery level cap	Option for A/B distribution	B season overall cap	CDQ	Inshore CV	Mothership	Offshore CP
87,500	1-1: 70/30	26,250	1,706	15,094	1,969	7,481
	1-2: 58/42	36,750	2,389	21,131	2,756	10,474
	1-3: 55/45	39,375	2,559	22,641	2,953	11,222
	1-4: 50/50	43,750	2,844	25,156	3,281	12,469
68,100	1-1: 70/30	20,430	1,328	11,747	1,532	5,823
	1-2: 58/42	28,602	1,859	16,446	2,145	8,152
	1-3: 55/45	30,645	1,992	17,621	2,298	8,734
	1-4: 50/50	34,050	2,213	19,579	2,554	9,704
48,700	1-1: 70/30	14,610	950	8,401	1,096	4,164
	1-2: 58/42	20,454	1,330	11,761	1,534	5,829
	1-3: 55/45	21,915	1,424	12,601	1,644	6,246
	1-4: 50/50	24,350	1,583	14,001	1,826	6,940
29,300	1-1: 70/30	8,790	571	5,054	659	2,505
	1-2: 58/42	12,306	800	7,076	923	3,507
	1-3: 55/45	13,185	857	7,581	989	3,758
	1-4: 50/50	14,650	952	8,424	1,099	4,175

2.2.3 Component 3: Sector Transfer

The two options under this component may be selected only if the hard cap is apportioned among the sectors under Component 2. Options 1 and 2 are mutually exclusive, which means that either Option 1 to allow sector level transferable allocations or Option 2 to require NMFS to reapportion salmon bycatch from one sector to the other sectors in a season could be selected.

If sector level caps under Component 2 are selected, but not select Option 1 (transfers) or Option 2 (rollovers) under Component 3, the sector level cap would not change during the year and NMFS would close directed fishing for pollock once each sector reached its sector level cap. Because the CDQ sector level cap would allocated to the CDQ groups, the CDQ allocations would continue to be managed as they are under status quo, with further allocation of the salmon bycatch cap among the six CDQ groups, transferable allocations within the CDQ Program, and a prohibition against a CDQ group exceeding is salmon bycatch allocation.

2.2.3.1 Option 1: Transferable salmon bycatch caps

Option 1) Allocate salmon bycatch caps to each sector and allow the entity representing each non-CDQ sector and the CDQ groups to transfer salmon bycatch among the sectors and CDQ groups.

To provide sectors and cooperatives more opportunity to fully use their pollock allocations, the ability to transfer sector allocations could be implemented as part of Alternative 2. If sector are issued transferable allocations, then these entities could request NMFS to move a specific amount of a salmon bycatch allocation from one entity's account to another entity's account during a fishing season. Transferable allocations would not constitute a "use privilege" and, under the suboptions, only a portion of the residual salmon bycatch may be transferred.

Suboption: Limit transfers to the following percentage of salmon that is available to the transferring entity at the time of transfer:

a) 50%
b) 70%
c) 90%

If a transferring entity had harvested all of its pollock without attaining it Chinook salmon bycatch allocation, it could only transfer up to a specified percent of that salmon bycatch allocation to another entity with pollock still remaining for harvest in that season. Under this circumstance, this transfer provision would mean that not all salmon bycatch allocated would be available for use by entities other than the original recipient of the allocation.

Transfers are voluntary requests to NMFS, initiated by the entity receiving a salmon bycatch cap, for NMFS to move a specific amount of a salmon bycatch allocation from one entity's account to another entity's account.

Option 1 would require that each sector receiving a transferable salmon bycatch cap be represented by an entity that could:

- represent all vessels eligible to participate in the particular AFA sector and receive allocations for a specific amount of Chinook salmon bycatch on behalf of those vessels,
- be authorized by all members of the sector to transfer all or a portion of the sector's Chinook salmon bycatch cap to another sector or to receive a Chinook salmon bycatch transfer from another sector on behalf of the members of the sector,
- be responsible for any penalties assessed for exceeding the sector's Chinook salmon bycatch cap (i.e., have an agent for service of process with respect to all owners and operators of vessels that are members of the entity).

More information about the entities necessary to receive transferable Chinook salmon bycatch allocations is in Section 2.2.5.4

Once sector level salmon bycatch hard caps are allocated to an entity representing an AFA sector or to a CDQ group, each entity receiving a transferable allocation would be prohibited from exceeding that allocation. NMFS would report any overages of the allocation to NOAA OLE for enforcement action.

Transfers to cover overages of target species allocations ("after-the-fact" or "post delivery" transfers) are allowed under other programs authorized by the Council, including the CDQ Program, Amendment 80, and the GOA Rockfish Program. In addition, the Council recommended transfers to cover overages of halibut prohibited species quota allocations under the CDQ Program, although NMFS has not yet published a proposed rule for this regulatory amendment. The Council did not recommend transfers to cover overages of Chinook salmon bycatch allocations as an option under Alternatives 2, 3 or 4. However, when the Council developed its preferred alternative (Alternative 5) in April 2009, it included a recommendation for transfers to cover overages.

2.2.3.2 Option 2: Rollover unused salmon bycatch to other sectors

Option 2) NMFS manages the sector level caps for the non-CDQ sectors and would rollover unused salmon bycatch to other sectors still fishing in a fishing season based on the proportion of pollock remaining for harvest.

A "rollover" is a management action taken by NMFS to "reapportion" or move salmon bycatch from one sector to the remaining sectors through a notice in the *Federal Register*. Rollovers are an alternative to transferable allocations that allow one sector to voluntarily transfer unused salmon bycatch allocation to another sector.

Under this option, if a non-CDQ AFA sector has completed harvest of its pollock allocation without attaining its sector level cap, and sufficient salmon bycatch remains to be reapportioned, NMFS would reapportion the unused amount of salmon bycatch to other AFA sectors, including CDQ groups. Any reapportionment of salmon bycatch by NMFS would be based on the proportion each sector represented of the total amount of pollock remaining for harvest by all sectors through the end of the season. Successive reapportionment actions would occur as each non-CDQ sector completes harvest of its pollock allocation.

The CDQ groups could receive rollovers of salmon bycatch from other sectors. However, because the CDQ groups will each receive a specific, transferable allocation of salmon bycatch (as occurs under status quo), unused salmon bycatch would not be reapportioned from an individual CDQ group to other CDQ groups or other AFA sectors. CDQ groups with unused salmon bycatch could transfer it to another CDQ group, as is currently allowed in the CDQ Program.

2.2.4 Component 4: Cooperative provisions

Options under this component may be selected only if sector level caps are set under Component 2. Component 4 would further subdivide the inshore CV sector level cap to the inshore cooperatives and the inshore open access fishery (if the inshore open access fishery exists in a particular year). Each inshore cooperative would manage its allocation and would be required to stop fishing for pollock once the cooperative allocation is reached. NMFS would close the inshore open access fishery once that fishery's cap is reached.

The allocation of salmon to a cooperative within the inshore CV fleet or to the inshore open access fishery would be based upon the proportion of total sector pollock catch associated with the vessels in the cooperative or inshore open access fishery, respectively. The annual pollock quota for this sector is allocated by applying a formula which allocates catch to a cooperative, or the inshore open access fishery, according to the specific sum of the catch history for the vessels in the cooperative or the inshore open access fishery, respectively. Under 50 CFR 679.62(e)(1), the individual catch history of each vessel is equal to the sum of inshore pollock landings from the vessel's best 2 out of 3 years from 1995 through 1997, and includes landings to catcher/processors for vessels that made landings of 500 mt or more in 1995, 1996, or 1997.

Each year, NMFS issues fishing permits to cooperatives based on the cooperative's permit application which lists the vessels added or subtracted. Fishing in the inshore open access fishery is possible should a vessel leave its cooperative, and the inshore CV quota allocation is partitioned to allow for an allocation to an inshore open access fishery under these circumstances.

The range of cooperative level allocations in this analysis is based upon the 2008 pollock quota allocations, and the options for the range of sector splits for the inshore CV fleet based upon Component 2, Options 1 and 2 applied to Component 1 Options 1 and 2 (Table 2-7, Table 2-10 to Table 2-13). The cooperative level allocations are listed in Table 2-22 through Table 2-26. All inshore sector catcher vessels have been part of a cooperative since 2005. However, if this component is selected, regulations would accommodate allocations of an appropriate portion of the salmon bycatch cap to the inshore open access fishery, if, in the future, a vessel or vessels did not join a cooperative.

The range of cooperative allocations analyzed is a subset of the full range under consideration, as indicated previously. Cooperative allocations as shown in Table 2-22 to Table 2-26 are based upon annual sector level cap suboptions only. However, these annual allocations would be further apportioned by season according to Options 1-1 through 1-4 (Table 2-6). The range of inshore cooperative and inshore

open access fishery level allocations resulting from application of the sector level cap options to the range of seasonal apportionments for the subset of caps for analysis are shown in Table 2-27 through Table 2-31.

Table 2-22 Annual inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, resulting from application of Component 2, Option 1 allocation to the inshore CV fleet (50% of allocation after 10% to CDQ)

			Inshore cooperative allocation:							
Suboption	**Overall fishery cap**	**Resulting inshore CV sector allocation ***	**31.145%**	**1.146%**	**9.481%**	**2.876%**	**12.191%**	**24.256%**	**18.906%**	**0.000%**
			Akutan CV Assoc	**Arctic Enterprise Assoc**	**Northern Victor Fleet co-op**	**Peter Pan Fleet co-op**	**Unalaska co-op**	**Unisea Fleet co-op**	**Westward Fleet co-op**	**open access AFA vessels**
i)	87,500	39,375	12,263	451	3,733	1,132	4,800	9,551	7,444	0
ii)	68,392	30,776	9,585	353	2,918	885	3,752	7,465	5,819	0
iii)	57,333	25,800	8,035	296	2,446	742	3,145	6,258	4,878	0
iv)	47,591	21,416	6,670	245	2,030	616	2,611	5,195	4,049	0
v)	43,328	19,498	6,073	223	1,849	561	2,377	4,729	3,686	0
vi)	38,891	17,501	5,451	201	1,659	503	2,134	4,245	3,309	0
vii)	32,482	14,617	4,552	168	1,386	420	1,782	3,545	2,763	0
viii)	29,323	13,195	4,110	151	1,251	379	1,609	3,201	2,495	0

*(50% inshore CV sector, after CDQ)

Table 2-23 Annual inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, resulting from application of Component 2, Option 2a allocation to the inshore CV fleet (average historical bycatch from 2004-2006)

			Inshore cooperative allocation:							
Suboption	**Overall fishery cap**	**Resulting inshore sector allocation***	**31.145%**	**1.146%**	**9.481%**	**2.876%**	**12.191%**	**24.256%**	**18.906%**	**0.000%**
			Akutan CV Assoc	**Arctic Enterprise Assoc**	**Northern Victor Fleet co-op**	**Peter Pan Fleet co-op**	**Unalaska co-op**	**Unisea Fleet co-op**	**Westward Fleet co-op**	**open access AFA vessels**
i)	87,500	61,250	19,076	702	5,807	1,762	7,467	14,857	11,580	0
ii)	68,392	47,874	14,910	549	4,539	1,377	5,836	11,612	9,051	0
iii)	57,333	40,133	12,499	460	3,805	1,154	4,893	9,735	7,588	0
iv)	47,591	33,314	10,376	382	3,158	958	4,061	8,081	6,298	0
v)	43,328	30,330	9,446	348	2,876	872	3,697	7,357	5,734	0
vi)	38,891	27,224	8,479	312	2,581	783	3,319	6,603	5,147	0
vii)	32,482	22,737	7,082	261	2,156	654	2,772	5,515	4,299	0
viii)	29,323	20,526	6,393	235	1,946	590	2,502	4,979	3,881	0

*(70% based on 3 year average 2004-2006)

Table 2-24 Annual inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, resulting from application of Component 2, Option 2b allocation to the inshore CV fleet (average historical bycatch from 2002-2006)

			Inshore cooperative allocation:							
Suboption	**Overall fishery cap**	**Resulting inshore sector allocation***	**31.145% Akutan CV Assoc**	**1.146% Arctic Enterprise Assoc**	**9.481% Northern Victor Fleet co-op**	**2.876% Peter Pan Fleet co-op**	**12.191% Unalaska co-op**	**24.256% UniSea Fleet co-op**	**18.906% Westward Fleet co-op**	**0.000% open access AFA vessels**
i)	87,500	56,875	17,714	652	5,392	1,636	6,934	13,796	10,753	0
ii)	68,392	44,455	13,845	509	4,215	1,279	5,419	10,783	8,405	0
iii)	57,333	37,266	11,607	427	3,533	1,072	4,543	9,039	7,046	0
iv)	47,591	30,934	9,634	355	2,933	890	3,771	7,503	5,848	0
v)	43,328	28,163	8,771	323	2,670	810	3,433	6,831	5,325	0
vi)	38,891	25,279	7,873	290	2,397	727	3,082	6,132	4,779	0
vii)	32,482	21,113	6,576	242	2,002	607	2,574	5,121	3,992	0
viii)	29,323	19,060	5,936	218	1,807	548	2,324	4,623	3,603	0

*(65% based on 5 year average 2002-2006)

Table 2-25 Annual inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, resulting from application of Component 2, Option 2c allocation to the inshore CV fleet (average historical bycatch from 1997-2006)

			Inshore cooperative allocation:							
Suboption	**Overall fishery cap**	**Resulting inshore sector allocation***	**31.145% Akutan CV Assoc**	**1.146% Arctic Enterprise Assoc**	**9.481% Northern Victor Fleet Co-op**	**2.876% Peter Pan Fleet Co-op**	**12.191% Unalaska Co-op**	**24.256% UniSea Fleet Co-op**	**18.906% Westward Fleet Co-op**	**0.000% open access AFA vessels**
i)	87,500	54,250	16,896	622	5,143	1,560	6,614	13,159	10,257	0
ii)	68,392	42,403	13,206	486	4,020	1,220	5,169	10,285	8,017	0
iii)	57,333	35,546	11,071	407	3,370	1,022	4,333	8,622	6,720	0
iv)	47,591	29,506	9,190	338	2,798	849	3,597	7,157	5,578	0
v)	43,328	26,863	8,367	308	2,547	773	3,275	6,516	5,079	0
vi)	38,891	24,112	7,510	276	2,286	693	2,940	5,849	4,559	0
vii)	32,482	20,139	6,272	231	1,909	579	2,455	4,885	3,807	0
viii)	29,323	18,180	5,662	208	1,724	523	2,216	4,410	3,437	0

*(62% based on 10 year average 1997-2006)

Table 2-26 Annual inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, resulting from application of Component 2, Option 2d allocation to the inshore CV fleet (midpoint of Option 1 and 2 ranges, resulting in 57.5% allocation to inshore CV fleet)

			Inshore cooperative allocation:							
Suboption	**Overall fishery cap**	**Resulting inshore sector allocation***	**31.145% Akutan CV Assoc**	**1.146% Arctic Enterprise Assoc**	**9.481% Northern Victor Fleet Co-op**	**2.876% Peter Pan Fleet Co-op**	**12.191% Unalaska Co-op**	**24.256% Unisea Fleet Co-op**	**18.906% Westward Fleet Co-op**	**0.000% open access AFA vessels**
i)	87,500	50,313	15,670	577	4,770	1,447	6,134	12,204	9,512	0
ii)	68,392	39,325	12,248	451	3,728	1,131	4,794	9,539	7,435	0
iii)	57,333	32,966	10,267	378	3,126	948	4,019	7,996	6,233	0
iv)	47,591	27,365	8,523	314	2,594	787	3,336	6,638	5,174	0
v)	43,328	24,914	7,759	286	2,362	717	3,037	6,043	4,710	0
vi)	38,891	22,362	6,965	256	2,120	643	2,726	5,424	4,228	0
vii)	32,482	18,677	5,817	214	1,771	537	2,277	4,530	3,531	0
viii)	29,323	16,861	5,251	193	1,599	485	2,056	4,090	3,188	0

*(57.5% to the inshore CV fleet)

Table 2-27 Seasonal inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, using Component 2, Option 1, and seasonal distribution options

			Inshore cooperative allocation:							
Sector and seasonal allocation options	Overall fishery cap level Chinook	Resulting Inshore sector allocation *	31.145% Akutan CV Assoc	1.146% Arctic Enterprise Assoc	9.481% Northern Victor Fleet Co-op	2.876% Peter Pan Fleet Co-op	12.191% Unalaska Co-op	24.256% UniSea Fleet Co-op	18.906% Westward Fleet Co-op	0.000% open access AFA vessels
Option 1: 70/30 A	87,500	27,563	8,584	316	2,613	793	3,360	6,686	5,211	0
	68,100	21,452	6,681	246	2,034	617	2,615	5,203	4,056	0
	48,700	15,341	4,778	176	1,454	441	1,870	3,721	2,900	0
	29,300	9,230	2,875	106	875	265	1,125	2,239	1,745	0
Option 1: 70/30 B	87,500	11,813	3,679	135	1,120	340	1,440	2,865	2,233	0
	68,100	9,194	2,863	105	872	264	1,121	2,230	1,738	0
	48,700	6,575	2,048	75	623	189	801	1,595	1,243	0
	29,300	3,956	1,232	45	375	114	482	959	748	0
Option 1: 58/42A	87,500	22,838	7,113	262	2,165	657	2,784	5,539	4,318	0
	68,100	17,774	5,536	204	1,685	511	2,167	4,311	3,360	0
	48,700	12,711	3,959	146	1,205	366	1,550	3,083	2,403	0
	29,300	7,647	2,382	88	725	220	932	1,855	1,446	0
Option 1: 58/42B	87,500	16,538	5,151	190	1,568	476	2,016	4,011	3,127	0
	68,100	12,871	4,009	148	1,220	370	1,569	3,122	2,433	0
	48,700	9,204	2,867	105	873	265	1,122	2,233	1,740	0
	29,300	5,538	1,725	63	525	159	675	1,343	1,047	0
Option 1: 50/50 (A and B)	87,500	19,688	6,132	226	1,867	566	2,400	4,775	3,722	0
	68,100	15,323	4,772	176	1,453	441	1,868	3,717	2,897	0
	48,700	10,958	3,413	126	1,039	315	1,336	2,658	2,072	0
	29,300	6,593	2,053	76	625	190	804	1,599	1,246	0

Table 2-28 Seasonal inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, using Component 2, Option 2a, and seasonal distribution options

			Inshore cooperative allocation:							
Cap Suboption and seasonal allocation	Overall fishery cap level Chinook	Resulting Inshore sector allocation*	31.145% Akutan CV Assoc	1.146% Arctic Enterprise Assoc	9.481% Northern Victor Fleet Co-op	2.876% Peter Pan Fleet Co-op	12.191% Unalaska Co-op	24.256% UniSea Fleet Co-op	18.906% Westward Fleet Co-op	0.000% open access AFA vessels
	87,500	42,875	13,353	491	4,065	1,233	5,227	10,400	8,106	0
	68,100	33,369	10,393	382	3,164	960	4,068	8,094	6,309	0
Option 2a:	48,700	23,863	7,432	273	2,262	686	2,909	5,788	4,512	0
70/30 A	29,300	14,357	4,471	165	1,361	413	1,750	3,482	2,714	0
	87,500	18,375	5,723	211	1,742	528	2,240	4,457	3,474	0
	68,100	14,301	4,454	164	1,356	411	1,743	3,469	2,704	0
Option 2a :	48,700	10,227	3,185	117	970	294	1,247	2,481	1,934	0
70/30 B	29,300	6,153	1,916	71	583	177	750	1,492	1,163	0
	87,500	35,525	11,064	407	3,368	1,022	4,331	8,617	6,716	0
	68,100	27,649	8,611	317	2,621	795	3,371	6,706	5,227	0
Option 2a :	48,700	19,772	6,158	227	1,875	569	2,410	4,796	3,738	0
58/42A	29,300	11,896	3,705	136	1,128	342	1,450	2,885	2,249	0
	87,500	25,725	8,012	295	2,439	740	3,136	6,240	4,864	0
	68,100	20,021	6,236	229	1,898	576	2,441	4,856	3,785	0
Option 2a :	48,700	14,318	4,459	164	1,357	412	1,745	3,473	2,707	0
58/42B	29,300	8,614	2,683	99	817	248	1,050	2,089	1,629	0
	87,500	30,625	9,538	351	2,904	881	3,733	7,428	5,790	0
Option 2a :	68,100	23,835	7,423	273	2,260	685	2,906	5,781	4,506	0
50/50 (A	48,700	17,045	5,309	195	1,616	490	2,078	4,134	3,223	0
and B)	29,300	10,255	3,194	118	972	295	1,250	2,487	1,939	0

Table 2-29 Seasonal inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, using Component 2, Option 2b, and seasonal distribution options

			Inshore cooperative allocation:							
Cap Suboption and seasonal allocation	Overall fishery cap level Chinook	Resulting Inshore sector allocation*	31.145% Akutan CV Assoc	1.146% Arctic Enterprise Assoc	9.481% Northern Victor Fleet Co-op	2.876% Peter Pan Fleet Co-op	12.191% Unalaska Co-op	24.256% UniSea Fleet Co-op	18.906% Westward Fleet Co-op	0.000% open access AFA vessels
Option 2b: 70/30 A	87,500	39,813	12,400	456	3,775	1,145	4,854	9,657	7,527	0
	68,100	30,986	9,650	355	2,938	891	3,777	7,516	5,858	0
	48,700	22,159	4,152	254	2,101	637	2,701	5,375	4,189	0
	29,300	13,332	4,152	153	1,264	383	1,625	3,234	2,520	0
Option 2b : 70/30 B	87,500	54250	5,314	196	1,618	491	2,080	4,139	3,226	0
	68,100	42222	4,136	152	1,259	382	1,619	3,221	2,511	0
	48,700	30194	1,779	109	900	273	1,158	2,303	1,795	0
	29,300	18166	1,779	65	542	164	697	1,386	1,080	0
Option 2b : 58/42A	87,500	32,988	10,274	378	3,128	949	4,022	8,001	6,237	0
	68,100	25,674	7,996	294	2,434	738	3,130	6,227	4,854	0
	48,700	18,360	3,440	210	1,741	528	2,238	4,453	3,471	0
	29,300	11,046	3,440	127	1,047	318	1,347	2,679	2,088	0
Option 2b : 58/42B	87,500	23,888	7,440	274	2,265	687	2,912	5,794	4,516	0
	68,100	18,591	5,790	213	1,763	535	2,266	4,510	3,515	0
	48,700	13,295	2,491	152	1,261	382	1,621	3,225	2,514	0
	29,300	7,999	2,491	92	758	230	975	1,940	1,512	0
Option 2b : 50/50 (A and B)	87,500	28,438	8,857	326	2,696	818	3,467	6,898	5,376	0
	68,100	22,133	6,893	254	2,098	637	2,698	5,368	4,184	0
	48,700	15,828	2,966	181	1,501	455	1,930	3,839	2,992	0
	29,300	9,523	2,966	109	903	274	1,161	2,310	1,800	0

Table 2-30 Seasonal inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, using Component 2, Option 2c, and seasonal distribution options

			Inshore cooperative allocation:							
Cap Suboption and seasonal allocation	Overall fishery cap level Chinook	Resulting Inshore sector allocation*	31.145% Akutan CV Assoc	1.146% Arctic Enterprise Assoc	9.481% Northern Victor Fleet Co-op	2.876% Peter Pan Fleet Co-op	12.191% Unalaska Co-op	24.256% UniSea Fleet Co-op	18.906% Westward Fleet Co-op	0.000% open access AFA vessels
	87,500	37,975	11,827	435	3,600	1,092	4,630	9,211	7,180	0
	68,100	29,555	9,205	339	2,802	850	3,603	7,169	5,588	0
Option 2c:	48,700	21,136	3,960	242	2,004	608	2,577	5,127	3,996	0
70/30 A	29,300	12,716	3,960	146	1,206	366	1,550	3,084	2,404	0
	87,500	16,275	5,069	187	1,543	468	1,984	3,948	3,077	0
	68,100	12,667	3,945	145	1,201	364	1,544	3,072	2,395	0
Option 2c :	48,700	9,058	1,697	104	859	261	1,104	2,197	1,713	0
70/30 B	29,300	5,450	1,697	62	517	157	664	1,322	1,030	0
	87,500	31,465	9,800	361	2,983	905	3,836	7,632	5,949	0
	68,100	24,489	7,627	281	2,322	704	2,985	5,940	4,630	0
Option 2c :	48,700	17,513	3,282	201	1,660	504	2,135	4,248	3,311	0
58/42A	29,300	10,536	3,282	121	999	303	1,284	2,556	1,992	0
	87,500	22,785	7,096	261	2,160	655	2,778	5,527	4,308	0
	68,100	17,733	5,523	203	1,681	510	2,162	4,301	3,353	0
Option 2c :	48,700	12,681	2,376	145	1,202	365	1,546	3,076	2,398	0
58/42B	29,300	7,630	2,376	87	723	219	930	1,851	1,442	0
	87,500	27,125	8,448	311	2,572	780	3,307	6,579	5,128	0
Option 2c :	68,100	21,111	6,575	242	2,002	607	2,574	5,121	3,991	0
50/50	48,700	15,097	2,829	173	1,431	434	1,840	3,662	2,854	0
(A and B)	29,300	9,083	2,829	104	861	261	1,107	2,203	1,717	0

Table 2-31 Seasonal inshore cooperative allocations of Chinook salmon hard caps, in numbers of fish, using Component 2d, Option 1, and seasonal distribution options

			Inshore cooperative allocation:							
Cap Suboption and seasonal allocation	Overall fishery cap level Chinook	Resulting Inshore sector allocation*	31.145% Akutan CV Assoc	1.146% Arctic Enterprise Assoc	9.481% Northern Victor Fleet Co-op	2.876% Peter Pan Fleet Co-op	12.191% Unalaska Co-op	24.256% UniSea Fleet Co-op	18.906% Westward Fleet Co-op	0.000% open access AFA vessels
	87,500	35,219	10,969	404	3,339	1,013	4,294	8,543	6,658	0
	68,100	27,410	8,537	314	2,599	788	3,342	6,649	5,182	0
Option 2d:	48,700	19,602	6,105	225	1,858	564	2,390	4,755	3,706	0
70/30 A	29,300	11,793	3,673	135	1,118	339	1,438	2,861	2,230	0
	87,500	15,094	4,701	173	1,431	434	1,840	3,661	2,854	0
	68,100	11,747	3,659	135	1,114	338	1,432	2,849	2,221	0
Option 2d :	48,700	8,401	2,616	96	796	242	1,024	2,038	1,588	0
70/30 B	29,300	5,054	1,574	58	479	145	616	1,226	956	0
	87,500	29,181	9,089	334	2,767	839	3,557	7,078	5,517	0
	68,100	22,711	7,073	260	2,153	653	2,769	5,509	4,294	0
Option 2d :	48,700	16,241	5,058	186	1,540	467	1,980	3,940	3,071	0
58/42A	29,300	9,772	3,043	112	926	281	1,191	2,370	1,847	0
	87,500	21,131	6,581	242	2,003	608	2,576	5,126	3,995	0
	68,100	16,446	5,122	188	1,559	473	2,005	3,989	3,109	0
Option 2d :	48,700	11,761	3,663	135	1,115	338	1,434	2,853	2,224	0
58/42B	29,300	7,076	2,204	81	671	204	863	1,716	1,338	0
	87,500	25,156	7,835	288	2,385	723	3,067	6,102	4,756	0
Option 2d :	68,100	19,579	6,098	224	1,856	563	2,387	4,749	3,702	0
50/50	48,700	14,001	4,361	160	1,327	403	1,707	3,396	2,647	0
(A and B)	29,300	8,424	2,624	97	799	242	1,027	2,043	1,593	0

2.2.4.1 Cooperative transfer options

These options would only apply if the sector level caps under Component 2 and the inshore CV sector level cap is further allocated among the cooperatives and the inshore open access fishery (if the inshore open access fishery existed in a particular year) under Component 4. Option 1 or Option 2 or both could be selected.

When a salmon cooperative cap is reached, the cooperative must stop fishing for pollock and may:

Option 1) Transfer (lease) its remaining pollock to another inshore cooperative for the remainder of the season or year. Allow inter-cooperative transfers of pollock to the degree currently authorized by the AFA.

Option 2) Transfer salmon bycatch from other inshore cooperatives (industry initiated)

Suboption: Limit transfers to the following percentage of salmon that is available to the transferring entity at the time of transfer:

a) 50%
b) 70%
c) 90%

2.2.5 Managing and Monitoring Alternative 2

Under Alternative 2, the term "hard cap" refers to an amount of Chinook salmon that, once caught, would require entities regulated under the cap to stop directed fishing for pollock in the Bering Sea. The implementation of salmon bycatch hard caps in the Bering Sea pollock fishery would require various changes to federal regulations and NMFS management practices, when compared to the status quo. Depending on the components and options selected, these regulatory changes would include changes to monitoring requirements, inseason management, and enforcement responsibilities.

This action proposes several levels of salmon bycatch hard caps, applied to different fishing industry sectors:

- **Component 1.** Separate hard cap allocations could be made to the CDQ and the non-CDQ fisheries. The CDQ sector level cap would be further allocated among the CDQ groups.
- **Component 2.** The hard cap allocations to the non-CDQ sector could be further subdivided, by sector, into sector level caps or transferable allocations for motherships, catcher/processors, and the inshore sector.
- **Component 4.** The inshore sector cap could be further subdivided among inshore cooperatives and, potentially, to an inshore open access fishery for catcher vessels not participating in an inshore cooperative.

Note: Component 3 is omitted from this list because it is associated with transfers of salmon cap allocations, not allocations to, and among, sectors.

2.2.5.1 Managing hard caps

Component 1 would allocate the salmon hard cap into two hard caps: one for the non-CDQ AFA sectors combined (catcher/processors, motherships, and inshore) and one for the CDQ Program. The annual CDQ salmon hard cap would be further subdivided to each of the six CDQ groups. In addition, under

Component 1, salmon bycatch hard caps would be apportioned between the A and B seasons. This would result in 14 separate Chinook salmon bycatch hard caps: two caps in the non-CDQ AFA fisheries and 12 caps in the CDQ Program, as shown in Table 2-32.

Table 2-32 Number of Chinook salmon bycatch salmon caps under Component 1, assuming no further allocation to the non-CDQ sectors or inshore cooperatives.

Season	Number of hard caps, non-CDQ fishery	Number of hard caps, CDQ fishery	Total hard caps
A season	1	6	7
B season	1	6	7
Annual Total	2	12	14

Non-CDQ fishery salmon bycatch management a hard cap
Management of hard caps would be the same for all proposed hard cap levels under Component 1. When salmon bycatch by all vessels fishing for any of the three non-CDQ sectors (the offshore CP sector, the mothership sector, and the inshore CV sector) reached the seasonal Chinook salmon bycatch cap, NMFS would close directed fishing for pollock for all three of the sectors combined. The brief time lag between when observer data is available and when NMFS publishes a closure notice may result in more Chinook salmon being caught than the A season hard cap. In this case, NMFS would subtract the A season overage, likely a relatively small amount of salmon, from the B season hard cap. NMFS would issue a second closure notice once the B season hard cap was reached.

Without seasonal rollover option: If the A season pollock allocation was fully harvested by the non-CDQ AFA sectors before the A season salmon bycatch cap was reached, unused Chinook salmon bycatch would be not be added to the B season hard cap.

With seasonal rollover option: If the A season pollock allocation was harvested by the non-CDQ AFA sectors before the A season salmon bycatch cap was reached, NMFS would add the unused Chinook salmon bycatch to B season hard cap.

Under the status quo, NMFS may have to issue one fishery closure associated with the Chinook salmon bycatch limit each year. If the Chinook salmon bycatch limit is reached, NMFS closes the Chinook Salmon Savings Area to all non-CDQ AFA participants not participating in the ICA. Hard caps create the potential for NMFS to have to issue two fishery closures each year for the non-CDQ fisheries. The first closure would occur if the A season Chinook salmon bycatch cap was reached before all of the A season pollock allocation was harvested. The second closure would occur if the B season Chinook salmon bycatch cap was reached before all of the B season pollock allocation was harvested. This is not a significant increase in the number of fishery closures that NMFS would need to issue.

Under Component 1 alone, no changes to the observer requirements for the non-CDQ participants are needed to monitor seasonal salmon bycatch hard caps allocated to the non-CDQ sectors as a whole. Some changes to NMFS's CAS would be needed to track the additional seasonal salmon bycatch caps. The addition of salmon bycatch hard caps has the potential to add significant constraints to the pollock fisheries. However, as long as NMFS is managing a single hard cap for all of the non-CDQ AFA sectors combined, the current levels of observer coverage and data available to estimate salmon bycatch by the fishery as a whole are adequate to support NMFS issuing fishery closures that apply to all of the non-CDQ AFA sectors at the same time.

CDQ Program salmon bycatch management under a hard cap
Under the status quo, salmon bycatch allocations to the CDQ groups are made to specific entities (the individual CDQ groups) and are transferable across groups within the CDQ Program. Allocations of hard caps of either target species or prohibited catch species are not managed by NMFS with directed fishing closures, primarily because most of these allocations are so small that NMFS could not obtain accurate catch data fast enough to have the appropriate lead time to issue closures notices in time for catch in the fisheries to stay within allocated amounts. Instead of using fishery closures initiated by NMFS, CDQ allocations are managed with a regulatory prohibition against the CDQ group catching in excess of the allocated amount. To avoid such an overage in the present context, the CDQ group would have to stop directed fishing for pollock, unless they were certain that such fishing could continue to occur with no additional salmon bycatch.

To effectively enforce seasonal salmon bycatch allocations in the CDQ fisheries, each CDQ group would be prohibited from exceeding its A season salmon bycatch allocation. If an overage of a group's A season salmon bycatch hard cap occurred, NMFS would provide this information to NOAA OLE as a potential regulatory violation, subject to subsequent enforcement action. Any overage of an A season hard cap would not be subtracted from a CDQ group's B season hard cap.

If CDQ groups stayed within their A season Chinook salmon cap allocations, different scenarios could exist for how residual amounts of these caps could be used.

Without seasonal Chinook rollover option: If a CDQ group fully harvested its A season pollock allocation before it reached its A season salmon bycatch cap, the CDQ group could transfer all remaining A season salmon bycatch allocation to another CDQ group. This transfer provision follows current practices in the CDQ Program that allow transfers of target species and prohibited species allocations among the CDQ groups. However, if the seasonal rollover suboption was not selected, analysts interpret that a CDQ group could not transfer its unused A season salmon bycatch cap to its own or any other CDQ group's B season salmon bycatch limit.

With seasonal Chinook rollover option: Unused salmon from the A season salmon cap could be transferred to another CDQ group during that same A season or it could be added to the CDQ group's B season salmon cap.

2.2.5.2 Sector Allocations

Under Alternative 2, Component 2, the non-CDQ salmon hard cap would be apportioned among the three non-CDQ AFA sectors as sector level caps. These sector level caps would not be transferable allocations, unless Component 3, option 1, is chosen. In combination with a seasonal allowance of each annual cap, this would result in 18 separate salmon caps for the CP, mothership, inshore CV, and CDQ sectors. This results in four more caps than considered under Component 1 alone. NMFS would close directed fishing for pollock for each non-CDQ sector once it reached its seasonal sector level cap. If the Component 1 rollover suboption was chosen, NMFS would add a sector's unused salmon bycatch from the A season to that sector's B season sector level cap.

Table 2-33 Number of sector level salmon caps

Season split	Number of caps, non-CDQ fishery			Number of CDQ caps	Total number of caps
	Catcher/processor	Mothership	Inshore CV		
A season	1	1	1	6	9
B season	1	1	1	6	9
Annual total	2	2	2	12	18

The increase in the number of salmon hard caps under seasonal allowances would result in increased complexity in NMFS's management responsibilities. Multiple salmon bycatch caps for the three different non-CDQ AFA sectors would increase NMFS's involvement with allocating bycatch caps, monitoring salmon bycatch, closing directed fishing for pollock when a sector's salmon cap was reached, and, perhaps, implementing seasonal rollovers. Each CDQ group would continue to manage each of its seasonal and annual Chinook salmon caps.

2.2.5.3 Sector Transfers

Component 3 includes options to allow sector level caps either to be transferred from one sector to another (Option 1) or rolled over (Option 2) from one sector to another. If Option 1 is chosen, the sector level caps would be issued to entities representing each sector as transferable allocations. Chinook salmon transfers would be industry-initiated, whereas for rollovers NMFS would move a quantity of a sector level cap from the sector that has stopped fishing to the sectors still fishing in a season. Both of these options have associated management implications; each of them are discussed below. Option 1 would put more of the burden of managing and accounting for Chinook salmon bycatch on the recipients of the transferable allocation. Option1 would require each sector to have an entity to receive the allocation and make the transfers and it would require changes to monitoring requirements for inshore catcher vessels and shoreside processors. Option 2 would increase NMFS's monitoring and management role associated with salmon bycatch caps (see Section 2.2.5.6). The transfer and/or rollover options considered under Component 3 would require NMFS to administer the movement of salmon among sectors in a season.

If neither Option 1 or Option 2 were selected, *i.e.*, if Component 3 was not selected, each sector would have to stop directed fishing for pollock once its seasonal sector level cap was reached. There could be no movement of salmon bycatch between the catcher/processor, mothership, inshore sector, or the CDQ sectors. Without transfers or rollovers, prior to each sector's specific cap being reached, NMFS would close fishing for that sector with an inseason closure notice. The short delay associated with inseason closures would require NMFS to closely monitor pollock catch and salmon bycatch in order to project when a sector might reach its salmon hard cap. NMFS would rely on existing observer coverage levels and monitoring requirements to determine the amount of salmon bycatch made by each sector. Thus, as with Component 1, bycatch information from observed fishing vessels would be applied to non-observed fishing vessels.

Under Option 1, transfers of Chinook salmon bycatch allocations could occur between the catcher/processor sector, mothership sector, inshore sector, and CDQ groups. Chinook salmon could be transferred between any of these sectors or the CDQ groups. Participants would need to apply to NMFS to formally transfer all or a portion of their Chinook salmon bycatch allocation. Selection of this option would require NMFS to process and approve Chinook salmon bycatch allocation transfer applications. The burden on the agency would increase proportionally with the number of inter-sector transfers that industry chose to request during a given season. Participants in the pollock fishery would face additional costs associated with preparing and submitting Chinook salmon bycatch allocation transfer applications to NMFS.

Option 1 contains a suboption to limit transfers to 50 percent, 70 percent, or 90 percent of the amount of salmon available to a sector at the time of transfer. If such a level were adopted, NMFS would implement it by incorporating the appropriate limit into the business rules that would be developed to modify the CAS changes.

2.2.5.4 Entities necessary to receive transferable allocations

Transferable allocations must be issued to an entity that represents all members of the group eligible to receive the transferable allocation. The entity performs the following functions with NMFS:

- receives an allocation of a specific amount of salmon bycatch on behalf of all members of the entity,
- is authorized to transfer all or a portion of the entity's salmon bycatch allocation to another entity or receive a transfer from another entity (authorized to sign transfer request forms), and
- is responsible for any penalties assessed for exceeding the entity's salmon bycatch allocation (i.e., the entity must have an agent for service of process with respect to all owners and operators of vessels that are members of the entity).

The entity would have to be created by a contract among the group of eligible AFA participants in that sector who are receiving the transferable salmon bycatch allocation.

Some pollock fishery participants already are recognized as entities by NMFS:

- Inshore cooperatives are entities recognized by NMFS through the pollock permitting process. They file contracts with NMFS and are issued permits for specific amounts of pollock. 50 CFR 679.7(k)(5)(ii) prohibits an inshore cooperative from exceeding its annual allocation of pollock.
- CDQ groups are entities recognized by NMFS to receive groundfish, halibut, crab, and PSQ reserves. 50 CFR 679.7(d)(5) prohibits a CDQ group from exceeding its groundfish, crab, and halibut PSC allocations. If a CDQ group receives a transferable salmon bycatch allocation, that allocation would be added to this list of prohibitions.

AFA sectors are not recognized as entities by NMFS in the same sense as inshore cooperatives or CDQ groups because there has been no reason to require these groups to be entities to receive pollock allocations. These include the:

- AFA catcher/processor sector (which includes all members of the Pollock Conservation Cooperative (PCC), the seven catcher vessels named in the AFA, and the catcher/processor Ocean Peace). Non-transferable allocations of pollock are made to this sector are required by the AFA and are made by NMFS through the annual groundfish specifications process. This fishery can be closed by NMFS through a *Federal Register* notice if the sector exceeds its pollock allocation. In practice, the sector manages its pollock catch within allocations and NMFS has not had to issue pollock fishery closures.
- AFA mothership sector. This includes the three motherships named in the AFA: Excellence, Ocean Phoenix, and Golden Alaska and the catcher vessels permitted to deliver to these motherships. Non-transferable allocations of pollock are made to this sector as required by the AFA and made by NMFS through the annual groundfish specifications process. This fishery can be closed by NMFS through a *Federal Register* notice if the sector exceeds its pollock allocation. In practice, the sector manages its pollock catch within allocations and NMFS has not had to issue pollock fishery closures.
- Inshore CV sector. While NMFS recognizes cooperatives as entities, the sector as whole does not have an entity. Chinook salmon bycatch allocations would not be issued to the inshore

cooperatives under Component 3 alone, so the inshore cooperatives and any catcher vessels not in a cooperative would have to create an umbrella entity that represented all participants in the inshore sector, if Component 4, cooperative allocations, is not chosen.

Existing contracts forming the PCC, the High Seas Catcher Vessel Cooperative, and the Mothership Cooperative could be modified to create the entities required to receive transferable bycatch allocations from NMFS or new entities (contracts) could be formed by the owners of these same vessels to address only NMFS's requirements to receive and transfer Chinook salmon bycatch allocations.

Each of the three sectors in the non-CDQ pollock fishery would incur some costs associated with establishing and maintaining the entity necessary for the sector as a whole to conduct salmon transfers, although this cost cannot be estimated at this time.

If members of the catcher/processor, mothership, or inshore sectors are unable to form their respective entities to accept their share of the transferable salmon bycatch allocations, then these sectors would fish under a sector level cap. NMFS would manage the sector level caps with directed fishery closures that would apply to all members of the sector once the sector's Chinook salmon sector level cap was reached.

2.2.5.5 Conducting transfers

A Chinook salmon bycatch allocation transfer between different entities in the pollock fishery would require NMFS approval before the transaction could be completed. Per existing agency practice with other fishery programs with transferrable allocations, NMFS would review the transferring entities catch record to ensure sufficient salmon was available to transfer. The time required to complete a Chinook salmon bycatch allocation transfer would depend on a variety of factors, including staff workload, the number of transfers being requested, and the accounting system developed to oversee the transfer process (i.e., electronic and/or paper). Note that under Alternative 2, the Council did not include the ability for sectors or CDQ groups to conduct post delivery transfers.

The Chinook salmon cap that is allocated to the CDQ sector would continue to be subdivided into CDQ group allocations. Each CDQ group allocation may be transferred between CDQ groups as well as between the other three AFA sectors under Component 3. NMFS regulations describe the process to transfer allocations between CDQ groups. This process requires each group involved in the transfer to complete a transfer request and submit it to NMFS for review. If the remaining salmon cap is sufficient, NMFS debits the transferring CDQ group's salmon account and credits the receiving group's salmon account, per the amount requested.

Option 1 increases the complexity of the changes that would be required to be made to NMFS's CAS, since it involves both sector level caps and transferable allocations. Transfer provisions would require accounts to be established for entities that receive salmon allocations, including designing accounts that enable NMFS to track and archive transfers and changes in cooperative structure. Transfers between entities would require receipt of transfer information and readjustment of accounts for the transferor and transferee.

NMFS has developed the internal processes that allow quota share and allocation holders in various Alaska fisheries to conduct transfers through the internet. Such a process would be extended to transferable Chinook salmon bycatch allocations. The transfer process would be automated through an online system that allows entities to log onto a secure NMFS website and make a salmon bycatch allocation transfer. Online transfers probably would reduce the amount of oversight required by NMFS. The costs for an online system would depend on the system developed, but could be shared with other fishery management programs. Another advantage to the online system is that transfers are almost

instantaneous. By contrast, paper-based transfers take up to 3 business days to process. The cost of preparing transfer requests could be shared by the transferring entities, since each party to a transfer would have some cost associated with a transfer transaction.

2.2.5.6 NMFS rollovers of sector level caps

Rollovers under Option 2 would be selected if a hard cap or a trigger cap for salmon bycatch is allocated among the AFA sectors, but either:

- salmon bycatch caps are not transferable among the sectors, or
- the non-CDQ sectors cannot form the entity necessary to allow transferability of salmon bycatch among the sectors.

Under Component 3 (sector transfers), either Option 1 (to allow transferable salmon bycatch caps) or Option 2 (to have NMFS manage reapportionments or rollovers of unused salmon bycatch among the sectors, inshore cooperatives, or CDQ groups) could be selected.

Rollovers refer to an action that NMFS would take to reapportion salmon bycatch that remained in a season after a sector had reached its pollock allocation to another AFA sector, the CDQ Program, or the inshore open access fishery. For example, if the catcher/processor sector harvested its entire pollock allocation, but still had some remaining salmon bycatch, and if the mothership sector, inshore sector, and CDQ sector had remaining pollock, NMFS would rollover the catcher/processor sector's remaining salmon bycatch to the other pollock sectors. This is portrayed in the following table, in which there are 1,000 salmon remaining in the catcher/processor sector level cap.

Table 2-34 Example of a salmon bycatch sector level cap rollover to remaining sectors from catcher/processor sector level cap.

Sector	Pollock remaining	Percent of total pollock remaining	Reallocation of 1,000 salmon
Inshore	20,000 mt	77	770
Mothership	5,000 mt	20	200
CDQ Program	1,000 mt	3	30
Total	26,000 mt	100	1,000

Rollovers of salmon caps among AFA sectors could include the CDQ sector as a recipient of rollovers. Any salmon bycatch reapportioned to the CDQ sector during a year would be further allocated among the CDQ groups, based on each group's percentage allocation of salmon bycatch. However, rollovers from the CDQ sector to other AFA sectors are not practicable under the current allocative structure of CDQ Program. A percentage of the current salmon PSC limits currently are allocated to the CDQ Program. These PSC allocations are then further allocated among the six CDQ groups as transferable salmon PSQ. Therefore, once allocated among the CDQ groups, NMFS could not reallocate salmon bycatch away from one or more CDQ groups through a rollover.

Regulatory guidelines would be needed to allow NMFS to conduct salmon bycatch rollovers. For example, the following process could be used for guiding the rollover process:

> *If, during a fishing season, the Regional Administrator determines that a non-CDQ AFA sector has completed harvest of its pollock allocation without reaching its sector level cap and sufficient salmon bycatch remains to be reapportioned, the Regional Administrator would reapportion the projected unused amount of salmon bycatch to other AFA sectors (including CDQ), through notification in the Federal Register. Any reapportionment of salmon bycatch by the Regional Administrator would be*

based on the proportion each sector represents of the total amount of pollock remaining for harvest by all sectors through the end of the season. Successive reapportionments actions would occur as each sector completes harvest of its pollock allocation.

Regulations could also specify that any remaining sector level cap in the A season would be added to the same sector's B season sector level cap under Component 1, seasonal rollover suboption. NMFS would make these inter-sector salmon rollovers through the inseason action process.

Chinook salmon bycatch rollovers from the A season to the B season could complicate the rollovers within a season considered under this option. A given sector might prefer that its remaining A season salmon bycatch not be reapportioned to other sectors during the A season, but rather be rolled over to the sector's B season salmon bycatch cap. Therefore, NMFS recommends that inter-sector salmon rollovers or reapportionments only be allowed in the B season. If a sector still had a portion of its salmon bycatch cap remaining after it harvested all its pollock allocation in the B season, NMFS could then reapportion that sector's remaining B season salmon bycatch to other sectors. The reapportionment would be based on the amount of pollock remaining in each sector, as previously described.

2.2.5.7 Monitoring requirements for managing transferable bycatch allocations

Prohibited species catch monitoring requirements depend on whether NMFS manages PSC limits (caps) for a group of vessels or whether these PSC limits are allocated among specific entities within a fishery. There are two general types of allocations:

- Fishery or sector-level PSC limits or caps. Management of limits or caps is done through directed fishing closures. For example, a notice is issued in the *Federal Register* when the Chinook salmon savings area closes to directed fishing for pollock as a result of reaching the Chinook salmon PSC limit. Similarly, directed fishing for the deep water and shallow water flatfish complexes in the GOA is closed once the amount of halibut PSC allocated to these fisheries has been reached. These closures apply to all vessels participating in the relevant directed fisheries. Any vessel fishing after the closure is in violation of regulations governing closed areas.

- PSC allocations made to a specific entity. These allocations are enforced through regulatory provisions that prohibit the entity from exceeding its allocation. For example, halibut PSC is currently allocated to an Amendment 80 cooperative, six CDQ groups, and GOA Rockfish Program cooperatives. These entities monitor their halibut bycatch relative to their allocation and are prohibited from exceeding their halibut PSC allocations. Similar prohibitions against exceeding allocations to specific entities exist in the CDQ Program and for pollock catch by the inshore cooperatives. NMFS does not issue fishery closures once these allocations are reached.

Management programs that allocate PSC to entities give recipients more specific control over their fisheries. Therefore, the general management approach changes with such allocations. Entities that receive allocations generally are prohibited from exceeding their allocations. If they exceed an allocation, NOAA may initiate an enforcement action against the entity. This requires a more accurate catch monitoring and accounting system than is required when managing allocations at a fishery or sector level. This is particularly true when catch or bycatch data collected by observers must be used as a basis for enforcement action should an entity exceed an allocation.

The catch of most target species is readily determined using observer and landings data because the target species must be retained, landed, and sold for the vessel owner to receive earnings from that catch. However, prohibited species catch generally is required to be discarded and its catch often limits the catch

of economically valuable target species. The greater the potential to limit the target species catch, the greater the incentive created to not have prohibited species bycatch identified and estimated.

Current methods for estimating Chinook salmon bycatch by catcher vessels delivering to inshore processors or motherships and by catcher/processors is described in Section 3.1. Estimates of prohibited species bycatch by catcher vessels delivering to inshore processors are based on data collected by observers. Data collected by an observer on a vessel is used to estimate the bycatch by that vessel. Bycatch rates from observed vessels are used to estimate the bycatch by unobserved vessels. There are two primary problems associated with using estimated bycatch rates when enforcing a prohibition against exceeding a PSC allocation.

- The CAS method of applying information from observed vessels to non-observed vessels to estimate PSC bycatch by catcher vessels delivering to inshore processors assumes that the observed vessel fishes in a manner similar to the unobserved vessel. NMFS has not evaluated this assumption. From a legal perspective, calculated bycatch rates (based on other entities fishing activities) do not reliably represent a vessels fishing behavior and cannot be used as a basis for imposing liability for exceeding a PSC allocation.

- As new observer information becomes available, the CAS continuously updates rates, which are applied to non-observed vessels or hauls. The CAS rate calculation would continuously change account balances (positive or negative) for PSC allocation holders. Thus, an entity may exceed a particular allocation due to the CAS analytical process. This can present several problems for enforcement, including whether the entity was even aware of the overage.

Transferable bycatch allocations that would be implemented under Component 2 are used in other Bering Sea fisheries, such as the CDQ fisheries and the allocations to the non-AFA trawl catcher/processors under Amendment 80 to the BSAI FMP. These fisheries provide the model for NMFS's recommendations about the management and monitoring requirements that would be needed to implement Alternatives 2 through 5.

Catch monitoring issues were a large component of the implementation of the Amendment 80 Program, which allows non-AFA catcher/processors to form cooperatives. Amendment 80 cooperatives receive allocations of BSAI flatfish and PSC species. Similar to the constraint that will exist as a result of a Chinook salmon bycatch cap, halibut PSC catch by the Amendment 80 cooperatives could limit their catch of target species. The analysis prepared to evaluate the monitoring requirements for the Amendment 80 Program concluded that the use of bycatch rates from observed vessels to estimate the bycatch by unobserved vessels was not appropriate due to the incentive for unobserved vessels to fish differently than observed vessels and the difficulty of enforcing penalties for overages based in part on bycatch rates from other vessels. Furthermore, while the Amendment 80 limited access sector was not issued quota, it could be composed of participants that acted like a single entity. The ability for such vessels to collude could allow them to manipulate their bycatch rates to the degree that NMFS would be prevented from collecting and estimating accurate PSC information.

For the reasons described above, to ensure effective monitoring and enforcement of transferable Chinook salmon bycatch allocations, NMFS recommends that the following additional monitoring requirements be implemented:

- Each catcher vessel regardless of length, except catcher vessels delivering unsorted codends, must have 100 percent observer coverage.

- All salmon of any species that is brought onboard a catcher vessel must be retained onboard the catcher vessel and delivered to the processing facility (no at-sea discards of salmon from catcher vessels).

- Shoreside processor monitoring requirements will have to be adjusted to incorporate a higher standard for Chinook salmon bycatch accounting. This could include such changes as modifying observer duties, modifying factory configurations, or reducing the flow of pollock into the factory to ensure that Chinook salmon do not pass the observer's sampling area without being counted.

- Chinook salmon bycatch by catcher/processors and catcher vessels delivering to motherships will be based on a count or census of the salmon rather than using the current method described in section 3.1 of estimating Chinook salmon bycatch based on observer's species composition samples. Additional regulations will be needed to ensure that all salmon are retained and counted by an observer before they are discarded from a catcher/processor or mothership.

These additional monitoring requirements are described below and in RIR Chapter 6 in more detail. Electronic (video) monitoring in lieu of observers would only be allowed after a successful, comprehensive assessment of the effectiveness of electronic monitoring to verify that Chinook salmon are not discarded.

2.2.5.8 Changes to Inshore Catcher Vessel Monitoring Requirements

For reasons described in Section 2.2.5.7, NMFS's existing use of bycatch rates to estimate salmon bycatch by unobserved catcher vessels is not adequate to support a system of transferable salmon bycatch allocations. It would be too difficult to enforce penalties that are imposed on an entity for exceeding a salmon bycatch cap in situations where direct empirical evidence of an overage could not be documented. Enforcement of salmon caps would require entity-specific bycatch accounting. Thus, without vessel and trip-based specific bycatch accounting, the agency would likely not be able to enforce Chinook salmon caps because bycatch rates from observed vessel would be applied to unobserved vessels. Establishing a legal case using data that may not represent a vessel's actual salmon bycatch is difficult, since such data do not necessarily reflect how much salmon the vessel actually caught. Also, Chinook salmon are difficult to differentiate from other species of salmon unless an observer can examine each fish. Therefore, Alternative 2 would require that all salmon of any species are retained onboard the catcher vessel and delivered to a processing plant where it would be counted using the methods described below in Section 2.2.5.9. In addition, each catcher vessel, regardless of size, must have 100 percent observer coverage to ensure that salmon are not discarded at sea before they are counted at the processing plant.

2.2.5.9 Changes to Inshore Processor Monitoring Requirements

Each inshore processing plant that receives AFA pollock is required to develop and operate under a NMFS-approved CMCP. Monitoring standards for CMCP are described in regulation at 50 CFR 679.28(g). Additional information about current methods for counting salmon bycatch at the inshore processors is in section 3.1.

Sector-level salmon bycatch caps could result in individual salmon significantly limiting pollock fishing. Since each salmon counted against a hard cap could ultimately constrain the full harvest of a sector's pollock allocation, Chinook salmon hard caps may create strong economic incentives to misreport salmon bycatch. The factory areas of processing plants are large and complex. Preventing observers from seeing Chinook salmon that enter the factory would not be difficult. In order for hard caps to be effective, NMFS

needs to ensure that there is a credible salmon bycatch monitoring system in place at shoreside processing plants. This would ensure that observers have access to all salmon, prior to the fish being conveyed into the factory.

NMFS proposes that additional measures need to be implemented to ensure that no salmon make it into the factory when the vessel observer is monitoring a CV's offload. Chinook salmon are difficult to differentiate from other species of salmon as they pass by the observer on the conveyor belt. The observer must examine each salmon to verify the species identification. Therefore, processors would be prohibited from allowing salmon to pass from the sorting area and into the factory and no salmon of any species would be allowed to pass the observer's sampling area. To ensure that an observer may completely sort and count all salmon, the following constraints on processors would be required:

- Processors would be prohibited from allowing salmon to pass from the area where catch is sorted and into the factory area of the processing plant;
- The observer work station would be required to be located within the observation area;
- A location must be designated within the observation area for the storage of salmon, and;
- All salmon of any species must be stored in the observation area and within view of the observer at all times during the offload.

NMFS considered whether the use of video surveillance inside the factory could ensure that salmon did not enter the factory, or could ensure that any salmon that did enter the factory were detected and counted. However, this does not appear to be a reasonable option. This approach was rejected because factories are so complex that it would be logistically impossible to cover all areas where a salmon could appear in the factory. Also considered, but rejected, was the requiring of additional observers, enforcement personnel, or staff at the plant to monitor salmon inside the factory. This approach was rejected because of the number of people that would be required to thoroughly monitor all areas where salmon could appear in the factory because of the complexity and variety of plant layouts.

The reduction in the flow of fish through the initial catch sorting area could slow pollock processing, since fish would enter the factory at a slower rate. The degree to which processing speed would be reduced is highly variable among the processors, as the infrastructure changes necessary to allow observers access to all salmon depends on the plant's current layout.

If new monitoring requirements were implemented, the time needed for processors to sort bycatch out of a delivery could increase, due to the reduction in the flow of fish past the plant personnel who sort bycatch from pollock. The extent to which processing time could increase (due to a decrease in the flow of fish entering the factory) also depends on how the shoreside processors modified their factories to allow observers access to all salmon in a delivery. Pollock processing time may not be affected if processors modify the factories in a manner that allows observers to access all salmon in a delivery and continue to allow fish to move into the processing area at the current rate.

2.2.5.10 Changes to Catcher/Processor and Mothership Monitoring Requirements

Current methods for estimating salmon bycatch by catcher/processors and catcher vessels delivering to motherships are described in section 3.1. These methods rely on requirements for two observers on each AFA catcher/vessel and mothership and expanding observers' species composition data to estimate the number of salmon in each haul. NMFS recommends that an actual count of all of the salmon in each haul be used for determining Chinook salmon bycatch under Alternative 2 and all of the other alternatives that involve hard caps on Chinook salmon bycatch. A count, or census, of the Chinook salmon would remove the uncertainty associated with expanding the species composition data. Industry members also have

expressed interest in using a census because of their concern with the uncertainty associated with current methods. NMFS supports the use of a census on catcher/processors and motherships, as long as conditions exist to properly monitor that all of the salmon bycatch is retained and to provide the observer the tools needed to identify, count, and report salmon bycatch by haul. Current regulations require the retention of salmon "until the number of salmon has been determined by an observer." Observers report the count of salmon for each haul in data submitted to NMFS and vessel operators separately report the count of salmon bycatch each day on their daily production reports.

To ensure accurate counts of salmon bycatch, the following requirements would be applied to the catcher/processors and motherships:

- No salmon of any species would be allowed to pass from the location catch is sorted and into the factory area of the catcher/processor or mothership;
- All salmon bycatch of any species must be retained until it is counted by an observer;
- Vessel crew must transport all salmon bycatch from each haul to an approved storage location adjacent to the observer sampling station so that the observer has free and unobstructed access to the salmon, and the salmon must remain within view of the observer from the observer sampling station at all times;
- The observer must be given the opportunity to count the salmon and take biological samples, even if this requires the vessel crew to stop sorting or processing catch until the counting and sampling is complete; and
- The vessel owner must install a video system with a monitor in the observer sample station that provides views of all areas where salmon could be sorted from the catch and the secure location where salmon are stored;
- The counts of salmon by species must be reported by the operator of a catcher/processor for each haul, using an electronic logbook that will be provided by NMFS as part of the current eLandings software.

The video requirements would be modeled similar to those designed for the bin monitoring requirements under Amendment 80 and the Rockfish Pilot Program. A vessel may provide and maintain cameras, a monitor, and a digital video recording system for all areas where sorting, storage, and discard of salmon prior to being counted by an observer could be located. The video data must be maintained and made available to NMFS upon request for no less than a 120 day period. The video systems would also be subject to approval by NMFS at the time of the observer sample station inspection.

In addition, NMFS would require vessel operators to report the salmon bycatch counts by species for each haul rather than the daily total currently required. NMFS would require that an electronic logbook be used to submit these haul-by-haul salmon bycatch counts so that the data is readily available to NMFS in an electronic format. The haul-by-haul reporting of salmon by the vessel operator would ensure that the vessel operator agreed with the salmon counts submitted by observers and that any discrepancies or disagreements about the counts could be resolved quickly.

2.2.5.11 Management and monitoring for inshore cooperatives

Component 4 contains additional options for management of inshore cooperatives that would only apply if Component 3, sector allocations, also was selected. This component includes two transfer options (1) pollock could be transferred between cooperatives, or (2) salmon bycatch could be transferred between cooperatives. These types of transfers differ from Component 3, which does not allocate salmon bycatch to cooperatives within the inshore sector. Component 3 only allows salmon bycatch to be transferred between AFA sectors and does not have an option to allow the transfer of pollock between sectors.

Additional caps created for cooperative allocations

Component 4 would allow NMFS to subdivide the inshore CV sector allocation among the seven inshore cooperatives, and potentially to an inshore open access fishery. The latter allocation would be required under circumstances in which one or more catcher vessels in the inshore sector did not join a cooperative, although in recent years, all AFA eligible catcher vessels have joined a cooperative. If a vessel or vessels decided not a join an inshore cooperative, they would become part of an inshore open access fishery (this has not happened since 2005). The creation of an inshore open access fishery would result in the inshore sector allocation of salmon being divided between the cooperatives and the inshore open access fishery. The amount of salmon allocated to the inshore open access fishery would be based on the pollock catch history by vessels within that fishery. This allocation of salmon would not be transferable and could not rolled over to other sectors.

Allocating salmon to the cooperatives and the inshore open access sector would result in a potential maximum of 16 seasonal allocations and 32 annual salmon allocations, as depicted in the Table 2-35. Compared with Component 3, which does not include cooperative allocations, selection of Component 4 increases the number of seasonal salmon allocations from 9 to 16 and the annual allocations from 18 to 32.

Table 2-35 Potential number of seasonal salmon bycatch caps under Component 4.

Season	Number of caps, non-CDQ sector				Number of caps, CDQ sector	Total salmon caps
	Catcher/ processor	Mothership	Cooperatives	Inshore Open Access		
A season	1	1	7	1	6	16
B season	1	1	7	1	6	16
Annual total	2	2	14	2	12	32

Inshore cooperatives are affiliations of catcher vessels and specific inshore processors. Cooperatives must adhere to regulatory requirements at 50 CFR 679.61 and 679.62. NMFS annually approves contracts for inshore cooperatives. These contracts contain information about the cooperative structure, including the vessels that are parties in the contract and the primary processor that will receive pollock deliveries. Each catcher vessel in a cooperative must have an AFA permit with an inshore endorsement, LLP permit authorizing the vessel to engage in trawl fishing for pollock in the Bering Sea or Aleutian Islands, and no sanctions on the AFA or LLP permits. Any contractual provisions under the AFA are enforced by the industry, rather than NMFS.

Once a cooperative's contract is approved by NMFS, the cooperative receives an annual pollock allocation based on the catch history of vessels listed in a cooperative contract. The allocation of pollock to each inshore cooperative does not change within a year, unless NMFS reallocates pollock from the Bering Sea pollock incidental catch allowance or from the Aleutian Islands subarea TAC into the Bering Sea pollock TAC. Such reallocations are apportioned among the AFA sectors, including the inshore sector and its associated cooperatives.

The AFA requires an inshore cooperative to deliver at least 90 percent of its annual pollock allocation to the AFA inshore processor designated in the cooperative's contract. These regulations also allow the remaining 10 percent of pollock to be delivered to any AFA inshore cooperative. Within a fishing season, inshore catcher vessels may move between cooperatives through contractual arrangements. Only vessels that are part of an inshore cooperative may contract with other cooperatives. These contracts allow vessels

to harvest another cooperative's allocation of pollock, but do not allow the transfer of pollock between cooperatives. For example, a vessel that is a member of cooperative A could harvest pollock allocated to cooperative B, resulting in the vessel becoming a temporary member of cooperative B. However, the catch history of the vessel remains with cooperative A.

Cooperatives wanting to contract with a vessel must submit an application and a copy of the contract to NMFS. The type of information required in the application is described in 50 CFR 679.62. The application process alerts NMFS that some vessels might be reporting pollock catch under an alternate AFA inshore cooperative identification number. The cooperative identification is a unique number that allows pollock catch to be attributed to the proper cooperative account in NMFS's CAS.

Cooperative-level Chinook salmon allocations would be the most complex among the components and options for NMFS to monitor and manage, due to the large number of seasonal and sector salmon bycatch allocations that would be created. The selection of Component 3, Option 1 (sector transfers) and Component 4 (cooperative transfers) would yield the greatest range of possibilities for salmon bycatch transfers among the components and options.

Vessel operators within a cooperative determine which vessel is allowed to catch the cooperative's annual allocation of salmon. These arrangements specify the penalties that members are subject to if they exceed their contracted allowable catch amount. Cooperative members or the co-op's manager are responsible for tracking a cooperative's catch, and may trade or lease the rights to fish within a cooperative without notifying NMFS. The distribution of fishing privileges within a cooperative is enforced through contractual agreements between cooperative members. Contract disputes are settled by the parties in conflict through civil procedures. NMFS is not responsible for resolving such disputes.

Federal regulations at 50 CFR 679.61(e) that govern AFA contracts require contract information to be provided to NMFS on an annual basis. In general, these regulations require the name of the designated cooperative representative who is responsible for filing all reports on its behalf, recognition of a primary contact person for the cooperative, the list of parties to the cooperative contract, and submission of certain types of data on an annual basis. These regulations currently require cooperatives to report on the effectiveness of the salmon VRHS.

If Component 4 were selected, NMFS recommends that salmon bycatch estimates for the inshore sector be based on an census or counts of all salmon. All of the revisions to monitoring requirements for inshore catcher vessels described in Sections 2.2.5.8, including 100% observer coverage on all inshore catcher vessels regardless of vessel length, and all of the revisions to monitoring requirements for inshore processors described in Section 2.2.5.9 would be required. Allocating salmon bycatch to the cooperative level would increase the need for more reliable estimates or a census of salmon bycatch by this component of the pollock fishery. The use of bycatch rates to estimate the salmon bycatch by vessels without observers is not accurate or legally sufficient to manage allocations, transfers, or overages. Chinook salmon bycatch data for the inshore sector is affected by existing observer coverage levels (30 percent or 100 percent of fishing days) on catcher vessels and the use of estimated bycatch rates that are used to calculate the amount of salmon caught by unobserved vessels. Furthermore, shoreside monitoring of salmon bycatch would have to be enhanced, as described in Section 2.2.5.9, to support an accurate count of Chinook salmon bycatch by each inshore catcher vessel.

Option 1: Pollock transfers between cooperatives

Component 4, option 1, would allow an inshore cooperative to transfer pollock to another inshore cooperative after the first cooperative's Chinook salmon allocation is reached. This option provides another means in addition to the transfer of the Chinook salmon bycatch allocations to match available pollock and available salmon bycatch for the inshore cooperatives.

Sections 206(a) and (b) of the AFA establish the allocation of the TAC of pollock among the different AFA sectors, including the CDQ Program. Section 213(c) allows the Council to supersede some provisions of the AFA under certain circumstances. However, section 213(c) specifically does not allow the Council to supersede the sector allocations of pollock in sections 206(a) and 206(b). Therefore, the AFA's allocation requirements effectively preclude the transfer of pollock from *one sector to another*. However, the AFA would allow the transfer of pollock among the inshore cooperatives. Such transfers would be subject to the 90 percent processor delivery requirement in section 210(b), which requires that 90 percent of the pollock allocated to an inshore cooperative must be delivered to the inshore processor associated with that cooperative. The AFA specifically requires that this provision be included in the inshore cooperative contracts and NMFS regulations contain this contract requirement in the inshore cooperative permitting requirements at §679.4(l)(6).

Although not prohibited by the AFA, NMFS regulations currently do not authorize the transfer of pollock among the inshore cooperatives. Thus far, regulations authorizing inter-cooperative transfers of pollock have not been recommended to NMFS by the Council. However, regulations could be amended to allow pollock transfers among inshore cooperatives, subject to the requirement that the inshore cooperative contracts continue to include the 90 percent processor delivery requirement. These regulatory amendments could be made without requiring the Council to supercede requirements of the AFA.

Full transferability of pollock among the inshore cooperatives by superseding the 90 percent processor delivery requirements of subsections 210(b)(1) and (b)(6), could be allowed as long as the findings required in section 213(c)(1) of the AFA are made. To supersede this requirement, the Council would have to provide a rationale that explained why the proposed action mitigated adverse effects on fishery cooperatives and how it took into account all factors affecting the fisheries, including rationale explaining that the action was imposed fairly and equitably, to the extent practicable, among and within the sectors in the pollock fishery. In discussions about this option at its April 2008 meeting, the Council declined to broaden the scope of this option to include superseding the 90 percent processor delivery requirements of the AFA because of the additional complexity associated with this action and the potential impacts on the inshore processors of lifting the 90 percent processor delivery requirement.

Component 4, Option 1 would require NMFS to monitor the pollock harvest for each cooperative and track amounts of transferred pollock among cooperatives. By way of example, NMFS has implemented management programs that allow the transfer of fish among entities in various BSAI and GOA fisheries. These programs use a combination of electronic reporting done by the processing plant, online account access for cooperatives, and NMFS approval and tracking of transfers. Component 4 would be similar to other programs in that annual allocations of pollock would be tracked for each cooperative using the existing NMFS's CAS and electronic reporting system (eLandings). The CAS is configured to track cooperative-specific amounts of pollock, but in its current configuration does not accommodate pollock transfers. Thus, adjustment to the CAS would be needed to accommodate programming complexities associated with transfers, business rules, and CAS account structure.

Pollock transfers would require NMFS approval before the transaction could be completed. Upon receipt of a transfer application, NMFS would review a cooperative's catch to ensure its salmon cap was reached and that an adequate amount of pollock was available. The transfer process could be through eLandings or using a paper application process. NMFS prefers online transfers because paper-based transfers increase staff burden, the time required to complete a transfer, and may only be completed during business hours.

Online accounting of pollock is dependent on the CAS structure, which is the primary repository for catch data. The online interface would need to allow harvesters and NMFS to check account balances, make

and accept transfers of pollock, and allow account balances to be updated based on transferred pollock and inseason rollovers of pollock from the ICA and Aleutian Islands, should such rollovers occur. The online system would not allow cooperatives to receive transfers of pollock if they don't have any remaining Chinook salmon bycatch allocation. Thus, pollock allocation amounts and associated CAS account structure is dependent on whether salmon bycatch is allocated to the cooperative level and transferability of salmon is allowed. Any changes to the CAS required for salmon allocation transfers (Option 2) would need to interface with pollock transfer accounting.

Option 2: Chinook salmon cap transfers between cooperatives
Component 4, option 2, would allow inshore cooperatives to transfer salmon bycatch to or from other inshore cooperatives. This would allow the inshore sector to match its salmon bycatch allocations, actual salmon bycatch, and pollock catch based on the performance on each member cooperative. Note that the Council did not include the ability for cooperatives to conduct post delivery transfers under Alternative 2, unlike its recommendations for cooperative allocations under the CDQ Program, GOA Rockfish Program, Amendment 80, and the Crab Rationalization Program. (The Council did, however, recommend allowing post delivery transfers under Alternative 5, the preferred alternative.)

If inshore cooperatives are allowed to transfer salmon, then NMFS would monitor salmon at the cooperative level for the inshore sector and the sector level for the mothership and catcher/processor sectors. Each sector would be required to maintain its salmon bycatch below specified seasonal and annual limits. NOAA may impose penalties through an enforcement action against the entity and vessel operator responsible for a particular allocation overage.

The salmon bycatch monitoring requirements that NMFS recommends in conjunction with Component 3 (Sector transfers) are equally applicable to intercooperative salmon bycatch transfers. They may be even more important because of the small amounts of salmon that ultimately be allocated to the cooperative level. Increased monitoring requirement for catcher vessels and shoreside processors would provide more accurate salmon bycatch accounting for the inshore sector.

Salmon bycatch transfers would require a similar process as that described in section 2.2.5.5 for intercooperative pollock transfers. Salmon bycatch transfers between inshore cooperatives would require NMFS approval before the transaction could be completed. Approval by NMFS requires cooperative parties to notify the agency prior to a transfer so it may review catch records to ensure allocations are not exceeded. Transfers applications will be available online and transfers will be required to be made electronically. NMFS will develop the computer programs necessary to conduct electronic transfers similar to how transfers are made under Amendment 80, the Gulf of Alaska rockfish program, the CDQ Program, and the Crab Rationalization Program. As long as the electronic forms are filled out completely and correctly and the transferring entity has available Chinook salmon bycatch to transfer, the transfers will be completed in a very short period of time.

2.3 Alternative 3: Triggered closures

Triggered closures are regulatory time and area closures that are invoked when specified cap levels are reached. Cap levels for triggered closures are the same as those specified under Alternative 2. Closures may involve a single area (A season) or multiple areas (B season). Once specified areas are closed, pollock fishing could continue outside of the closure areas until either the pollock allocation is reached or the pollock fishery reaches a seasonal (June 10) or annual (November 1) closure date.

If the trigger cap is not further allocated among the non-CDQ sectors under Component 3, sector allocation, the CDQ Program would receive an allocation of 7.5 percent of the Chinook salmon trigger cap. This CDQ allocation would be further allocated among the six CDQ groups based on percentage

allocations currently in effect. Each CDQ group would be prohibited from directed fishing for pollock inside the closure area(s) when that group's trigger cap is reached.

Five components are included under this alternative. These components describe how the cap is formulated (Component 1), who manages the closures (Component 2), how the cap is subdivided (Component 3), whether and how salmon can be transferred among sectors (Component 4), and the specific area closure options (Component 5). The areas themselves, as described in Component 5, are the same areas regardless of who manages the closure (Component 2).

Under Alternative 3, existing regulations related to the Chinook salmon prohibited species catch limit of 29,000 salmon and triggered closures of the Chinook salmon savings areas in the Bering Sea would be removed from 50 CFR part 679.21. The 700 Chinook salmon trigger cap and Chinook Salmon savings area in the Aleutian Islands would remain in effect. Additionally, the current VRHS ICA regulations would be revised to remove all reference to Chinook salmon. Regulations associated with the non-Chinook salmon elements of the VRHS ICA would remain in regulations.

Table 2-36 Alternative 3 Components and options.

Setting the cap (Component 1)	How to formulate the cap	Select a cap from a range of numbers, 29,323 – 87,500 (same range as Alternative 2)			
	How to apportion cap by season	Apportion cap A season : B season from range 70:30 to 50:50 (same range as Alternative 2)			
Managing the cap (Component 2)	NMFS closes areas to pollock fishing when cap is reached				
	Option 1: An ICA will set in place a system to allow vessels to avoid bycatch, and will close areas when cap is reached for vessels managed under the ICA				
Allocating the hard cap to sectors (Component 3)		CDQ	Inshore CV	Mothership	Offshore CP
	By sector (same range as Alternative 2)	3% - 10%	45% - 70%	6% - 9%	21% - 36%
	Default, if no sector allocation	7.5%	92.5% (all three sectors combined)		
Sector transfers (Component 4)	Voluntary transfers among sectors are allowed				
	NMFS can reapportion unused salmon to other sectors based on their proportion of remaining pollock (except not from CDQ groups)				
Area Closures (Component 5)	A season closure area (Fig. 2-2)	Once triggered, area would close for the rest of the A season			
	B season closure areas (Fig. 2-3)	If the trigger was reached before August 15th, all three areas would close on August 15th for the rest of the B season. If the trigger was reached after August 15th, all three areas would close immediately for the rest of the B season.			

2.3.1 Component 1: Trigger cap formulation

The trigger cap amount would be set within the range of hard caps established under Alternative 2 (Table 2-4).

Suboption: Distribution of the trigger cap to the A and B season closures shall be as specified under Alternative 2, Component 1, Option 1, seasonal distribution of caps suboptions (Section 2.2.1.2).

2.3.2 Component 2: Management

Triggered area closures could be managed in a number of different ways, depending on the combination of components and options selected.

Under Component 2, without Option 1 (intercooperative agreement management) or Components 3 and 4, NMFS would manage a single trigger cap for the non-CDQ pollock fisheries. Once the trigger cap was reached, NMFS would close the areas selected under Component 5 to directed fishing for pollock by all vessels fishing for the non-CDQ sectors. The trigger cap allocation to the CDQ Program would be further divided among the six CDQ groups as occurs under status quo. Each CDQ group would be prohibited from fishing inside the closure area(s) once the group's trigger cap is reached.

If sector allocations under Component 3 are selected, NMFS would issue closures of the area(s) selected under Component 5 to each non-CDQ sector individually and separately.

If transferable sector allocations under Component 4, Option 1, are selected, NMFS would not actively manage the pollock fisheries by issuing fishery closures once the trigger cap was reached for each sector. Rather, the trigger closures would be managed similar to current management of the trigger closures under the CDQ Program. Each sector would receive a transferable trigger cap allocation, and vessels participating in that sector would be prohibited from fishing inside the area(s) selected under Component 5 after the sector's trigger cap is reached.

2.3.2.1 Option 1: Allow ICA management of triggered closures

Under Option 1, a NMFS-approved ICA would manage any subdivision of the seasonal trigger caps at the sector level, inshore cooperative, or individual vessel level under its contract and would enforce the area closures to the designated group or entity when subdivided caps established by the ICA are reached. The subdivision of the trigger caps under the ICA would not be prescribed by the Council or NMFS regulations. The ICA would decide how to manage participating vessels to avoid reaching the trigger closures as long as possible during each season. However, NMFS regulations would specify that the ICA would be required to include a closure to the area(s) specified under Component 5 once the overall trigger cap selected under Component 1 is reached.

Vessels participating in the ICA would operate under the same fishery level caps for the A and B seasons as any vessels not participating in the ICA. NMFS would continue to manage triggered area closures for vessels not participating in the ICA as described in Section 2.3.2 above. Vessels participating in the ICA would be exempt from NMFS's area closures, and would instead be subject to the ICA closures. If none of the sector allocation of the trigger caps under Component 3 are selected, the area closures that would result from NMFS management and ICA management would occur at the same time. NMFS's closure would apply to vessels not participating in the ICA and the ICA's closure would apply to vessels participating in the ICA.

Under Component 3, the NMFS-managed seasonal caps may be further subdivided among the inshore, catcher/processor, or mothership sectors. The ICA, however, would operate only under the fishery-level seasonal caps established under Component 1. With sector allocations of the trigger caps under Component 3, then NMFS's closures of the area(s) by sector may occur at different times than the ICA's closures because the ICA would not be required to follow the sector allocations of trigger caps that would govern NMFS's area closures.

Any CDQ group that participated in the ICA would bring to the ICA its portion of the trigger cap to be combined with the non-CDQ trigger cap for purposes of the area closures that would apply to all CDQ and non-CDQ vessels participating in the ICA.

2.3.3 Component 3: Sector Allocation

Sector allocations are equivalent to those under consideration for hard caps (Section 2.2.2, Options 1, 2a-2d).

When a sector reaches its salmon bycatch cap, NMFS would close the area(s) specified under Component 5 to directed fishing for pollock by that sector for the remainder of the season. The remaining sectors may continue to fish in the area(s) until they reach their sector level salmon bycatch cap. Pollock fishing could continue outside of the closure areas until either the pollock allocation to the sector is reached or the pollock fishery reaches a seasonal (June 10) or annual (November 1) closure date.

With Option 1 for ICA management of the trigger cap, vessels participating in the ICA would not be subject to NMFS's sector-level closures.

If transferable sector trigger caps are selected under Component 4, then each sector would be prohibited from fishing inside the closure area(s) once the sector's trigger cap was reached. NMFS would not issue *Federal Register* notices closing directed fishing for pollock by a sector under transferable trigger cap allocations.

The CDQ allocations would continue to be managed as they are under status quo, with further allocation of the salmon bycatch cap among the six CDQ groups, transferable trigger cap allocations, and a prohibition against a CDQ group fishing inside the closure area(s) once the group's salmon bycatch cap is reached.

2.3.4 Component 4: Sector Transfer

Options under this component may be selected only with the allocation of the salmon bycatch trigger cap among the sectors, under Component 3.

Options 1 and 2 are mutually exclusive, which means that either Option 1 to allow transferable salmon bycatch trigger caps at the sector level or Option 2 to require NMFS to manage the reapportionment of salmon bycatch trigger from one sector to another must be selected.

2.3.4.1 Option 1: Transferable salmon bycatch caps

Option 1) Allocate salmon bycatch trigger caps to each sector and allow the entity representing each non-CDQ sector and the CDQ groups to transfer salmon bycatch trigger caps among the sectors and CDQ groups.

Suboption: Limit salmon bycatch trigger cap transfers to the following percentage of salmon that is available to the transferring entity at the time of transfer:

a) 50%
b) 70%
c) 90%

Transfers are voluntary requests initiated by the entity receiving a salmon bycatch trigger cap for NMFS to move a specific amount of a salmon bycatch trigger cap from one entity's account to another entity's account.

Option 1 would require that each sector receiving a transferable allocation be represented by an entity that could:

- represent all vessels eligible to participate in the particular AFA sector and receive an allocation of a specific amount of salmon bycatch on behalf of all of those vessels,
- be authorized by all members of the sector to transfer all or a portion of the sector's salmon bycatch cap to another sector or to receive a salmon bycatch transfer from another sector on behalf of the members of the sector,
- be responsible for any penalties assessed for exceeding the sector's salmon bycatch cap (i.e., have an agent for service of process with respect to all owners and operators of vessels that are members of the entity).

If transferable salmon bycatch trigger caps are allocated to an entity representing an AFA sector or to a CDQ group, each entity receiving a transferable trigger cap would be responsible for not fishing within the closure area(s) once the trigger cap was reached. Any fishing in an area closure would be reported to NOAA OLE for an enforcement action against the responsible entity.

If transferable trigger caps were selected, transfers could be allowed between individual CDQ groups and any of the three non-CDQ sectors. A transferable salmon trigger cap would allow a sector or CDQ group to obtain additional salmon bycatch to allow that sector or CDQ group to continue to fish within the areas subject to closure for a longer period of time in a season. It is also possible that a sector or CDQ group could be closed out of the area after reaching its salmon bycatch cap, transfer in more salmon bycatch, and allow the area to reopen again for that sector of CDQ group.

Transferable sector trigger caps likely would not be a viable option under Component 2, Option 1 to allow ICA management of triggered closure areas. Transferable salmon bycatch caps at the sector level require a contractual arrangement among all participants in a sector to establish the entity required to receive and transfer salmon bycatch allocations. If even one vessel in a sector joined an ICA, then it is unlikely that this vessel also would join with other members of a sector to create the entity necessary to manage transferable salmon bycatch caps outside of the ICA.

2.3.4.2 Option 2: Rollover unused salmon bycatch

Option 2) NMFS would rollover unused salmon bycatch from the sector level trigger caps to other sectors still fishing in a season based on the proportion of pollock remaining for harvest by each sector.

Option 2 could apply if the non-CDQ trigger caps were allocated among the inshore, catcher/processor, and mothership sectors and the (1) ICA management of the trigger caps was not allowed (Component 2, Option 1), (2) transferable trigger caps among the sectors was not allowed (Component 4, Option 1), or (3) the non-CDQ AFA sectors could not form the entity necessary to receive transferable salmon bycatch caps. Under Option 2, NMFS would rollover or reapportion the salmon bycatch trigger caps among the sectors. A reapportionment of salmon bycatch would occur if a sector completed harvest of its pollock allocation and had some salmon bycatch trigger cap allocation remaining in a season. That remaining salmon bycatch trigger cap could be reapportioned to other sectors still fishing based on the proportion of pollock remaining to be harvested by each sector.

2.3.5 Component 5: Area options

Chinook closure areas may be triggered for the A season or B season. A season closure area is in Fig. 2-2 and the B season closure areas are in Fig. 2-3. Coordinates for these areas are in Table 2-37 and Table 2-38. These areas are designed to cover where 90% of Chinook bycatch has occurred from the years 2000

though 2007. In the A season, the designated area closes immediately when triggered and remains closed for the duration of the A season. For the B season, the three areas close simultaneously when the trigger is reached and remain closed for the duration of the B season (until December 31st). Unless the trigger for the B season is reached prior to August 15th, then the areas would close on August 15th until December 31st.

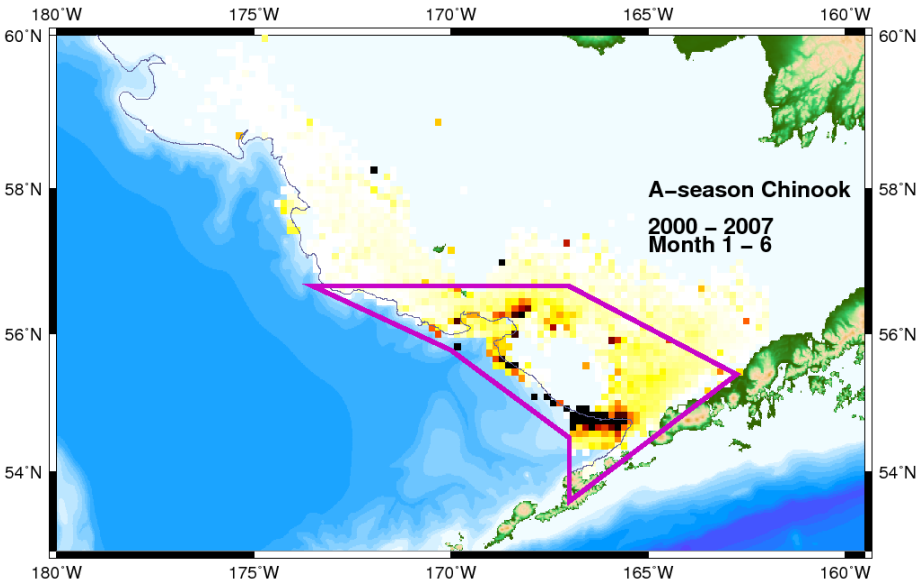

Fig. 2-2 Proposed A-season trigger closure, encompassing 90% of Chinook bycatch in 2000-2007.

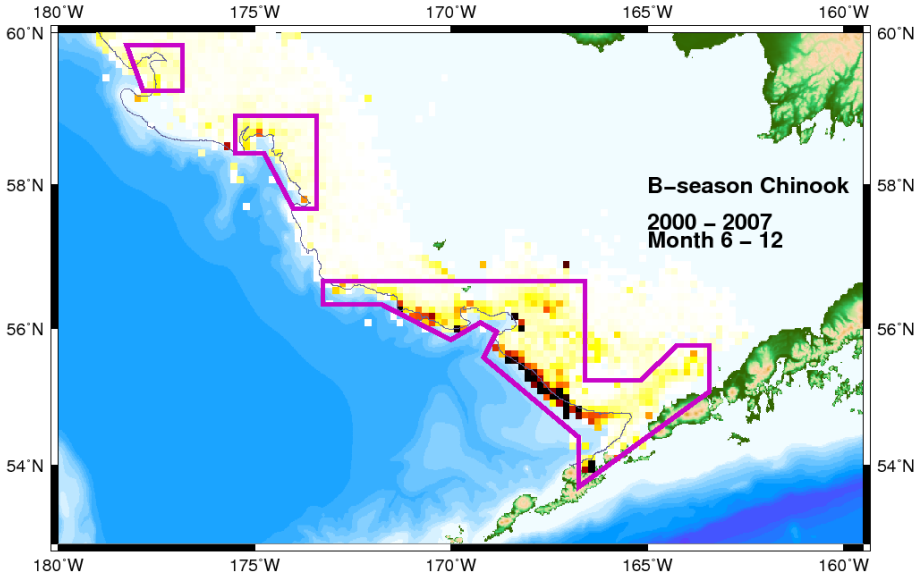

Fig. 2-3 Proposed B-season trigger closures, encompassing 90% of Chinook bycatch in 2000-2007.

Table 2-37 Coordinates for the A-season closure area

Latitude	Longitude
56 40	173 30
55 46	170 00
54 30	167 00
53 33	167 00
55 25	162 45
56 40	167 00
56 40	173 30

Table 2-38 Coordinates for the three B-season closure areas

1) Latitude	Longitude	2) Latitude	Longitude
59 15	176 50	57 40	173 25
59 50	176 50	58 55	173 25
59 50	178 15	58 55	175 30
59 15	177 50	58 25	175 30
59 15	176 50	58 25	174 45
		57 40	174 00
		57 40	173 25

3) Latitude	Longitude		Latitude	Longitude
54 25	166 45		56 40	173 15
53 40	166 45		56 20	173 15
55 05	163 25		56 20	171 45
55 45	163 25		55 50	170 00
55 45	164 15		56 05	169 15
55 15	165 10		55 57	168 50
55 15	166 35		55 35	169 10
56 40	166 35		54 25	166 45

Suboption: Periodic adjustments to areas based on updated bycatch information.

Under this suboption, the updated salmon bycatch information would be reassessed after a certain number of years to determine whether adjustments to the hard cap are needed. Any revisions to the salmon bycatch management measures would require additional analysis and rulemaking. As a general rule, the Council may reassess any management measure at any time and does not need to specify a particular timeframe for reassessment of the Chinook salmon bycatch management measures.

2.3.1 Managing and Monitoring Alternative 3

The implementation of a triggered Chinook salmon cap on the Bering Sea pollock fishery would require various changes to federal regulations and to NMFS management practices compared to the status quo. These regulatory changes would address bycatch allocations to different industry sectors, increased monitoring measures, reporting requirements, inseason management functions, and enforcement measures. Whereas Alternative 2 is centered on fishery closures, Alternative 3 focuses on closing specific areas to directed fishing for pollock once a salmon bycatch allocation is reached. This is similar to how the existing salmon savings area system functions, although the components and options associated with triggered closures are much more complicated than the status quo. Alternative 3 embodies many similar implementation requirements as Alternative 2, such as the establishment of caps and subsequent allocations of the caps to the AFA sectors, inshore cooperatives, and CDQ groups. Thus, the management and monitoring issues described for Alternative 2 are applicable to this alternative as well.

The Chinook salmon trigger caps used to determine area closures would be established within the range of hard caps that are considered under Alternative 2, Component 1. Under Alternative 2, Component 1, the hard caps are automatically divided seasonally. Under Alternative 3, there is a suboption to divide the

hard caps seasonally. If so, NMFS would have to modify its catch accounting systems and management practices to accommodate those seasonal allocations, similar to what is described under the management effects described under Alternative 2, Component 1.

2.3.1.1 Management of triggered area closures

Trigger closures would require a sector to stop pollock fishing in certain closure areas when its allocation of Chinook salmon PSC is reached. Different closure areas would be specified for the A season (one closure area) and the B season (three separate areas that would be closed simultaneously). Potential area closures are described under Component 5. Depending on the selection of subsequent components in this alternative, salmon may be allocated at the fishery level (CDQ and non-CDQ) or to each sector (inshore, mothership, catcher/processor, and CDQ).

NMFS would issue pollock fishery closures once either the non-CDQ fishery or a non-CDQ sector reached its salmon bycatch limit. Vessel operators would be prohibited from directed fishing for pollock in a Chinook salmon savings area once NMFS closed the area to a fishery or sector. The CDQ sector would not be subject to pollock fishery closures; instead, CDQ groups would have to stop fishing for pollock in the closed areas once they had reached their Chinook bycatch allocation.

Enforcement of the area closures would be similar to the process currently used to monitor salmon bycatch and issue salmon savings area closures. NMFS would have to determine whether a vessel was directed fishing for pollock and then match that vessel with its fishery component (CDQ or non-CDQ) or sector. This would require NMFS to use several different data sources including VMS, catch and effort information from a vessel's catch reports, and observer information.

NMFS currently uses a combination of VMS, industry reported catch information, and observer data to monitor vessel activities in special management areas, such as habitat conservation areas and species-specific savings areas (e.g., salmon savings area). These data sources are used by NMFS on a daily basis to monitor fishery limits. Information from VMS is useful for determining vessel location in relation to closure areas, but it may not conclusively indicate whether a vessel is fishing, transiting through a closed area, or targeting a particular species. Existing salmon savings area management measures under Alternative 1. One primary difference between the status quo and triggered area closures is that NMFS would be closing different savings areas, on a seasonally-specific basis, than is current practice under the status quo.

ICA management of triggered closures

Under Option 1, as currently written, a NMFS-approved ICA would manage any subdivision of the seasonal trigger caps at the sector level, inshore cooperative, or individual vessel level. The ICA specifies contractual obligations associated with enforcing the area closures to the designated group or entity when subdivided caps established by the ICA are reached. The subdivision of the trigger caps under the ICA would not be prescribed by the Council or NMFS regulations. The ICA would decide how to manage participating vessels to avoid reaching the trigger closures as long as possible during each season. However, NMFS regulations would specify that the ICA would be required to include a closure to the area(s) specified under once the overall trigger cap is reached.

This option may constitute an unlawful delegation of enforcement authority because NMFS cannot delegate to the ICA the authority to enforce an area closure specified in federal regulations. One way to retain ICA participation in management of the trigger closures is to modify this option to read:

> Under Option 1, a NMFS-approved ICA would manage any subdivision of the seasonal trigger caps at the sector level, inshore cooperative, or individual vessel level under its

contract. The subdivision of the trigger caps under the ICA would not be prescribed by the Council or NMFS regulations. The ICA would decide how to manage participating vessels to avoid reaching the trigger closures as long as possible during each season. However, NMFS regulations would specify the overall trigger cap selected under Component 1 and the trigger closure areas selected under Component 5. NMFS would close the specified areas for all vessels once the overall trigger cap was reached.

For ICA management of subdivision of the seasonal trigger caps at the sector level, inshore cooperative, or individual vessel level, NMFS would have to revise the salmon bycatch ICA regulations at 50 CFR 679.21 to incorporate any changes made to the Chinook salmon savings areas proposed under this alternative. NMFS would approve an ICA if it met applicable regulatory requirements, but would not enforce the contractual conditions of an ICA. Each CDQ groups could opt to participate in an ICA. Vessel operators fishing for pollock CDQ would be then be exempt from salmon savings area closures. If a CDQ group was not part of a salmon bycatch ICA, vessel operators would be prohibited from fishing within a closed Chinook salmon savings area once that group's seasonal or annual Chinook salmon allocation had been caught.

Enforcement of area closures for ICA member vessels would be similar to non-ICA vessels. As previously described for non-ICA vessels, enforcement of area closures would require NMFS to use VMS data, vessel observers, and vessel logbooks.

2.3.1.2 Management of Sector Allocations and Transfers

The management of sector allocations would be the same as under Alternative 2. Allocating salmon caps to individual sectors would increase the complexity of NMFS's salmon bycatch monitoring efforts, as it would increase the number of salmon bycatch caps that NMFS would have to monitor.

The management of sector transfers would be similar to those discussed under Alternative 2, Component 3. Allowing sector transfers would have a bearing on whether an entity or vessel operator could continue to fish in, or re-enter, a salmon savings area, once it was closed. This transfer option would only apply to those sectors or vessels that did not join a salmon bycatch ICA, if any. This could decrease the number potential number transfers, since there would be fewer entities available to conduct transfers.

Transfers would complicate NMFS's management of salmon savings areas that had been closed due to a sector's salmon cap being reached. Allowing salmon bycatch transfers would allow entities to increase (or decrease) their salmon allocations within a season, which means an entity's status in relation to a prohibited area could change multiple times throughout a season. Components 2 through 4 would increase the complexity of the area closures from two fishery level allocation (CDQ and non-CDQ) to sector and season-specific closure options. Additionally, allowing transfers between sectors, as well as having parallel but different regulations applicable to vessels in an ICA would increasingly complicate NMFS's management of the Bering Sea pollock fishery.

Furthermore, as with Alternative 2, sector transfers would require an increase to the catch monitoring requirements for the inshore CV sector. This includes increased observer coverage for those vessels that currently are subject to 30 percent observer coverage, as well as revisions to shoreside and at-sea processor monitoring requirements described in Section 2.2.5.7.

The method used to close an area to directed pollock fishing would depend on whether Component 4, transfers among sector entities, is selected. If Component 4 is not selected, then NMFS would close savings areas through closure notices because an allocation of salmon is made to a sector, rather than an entity. Selection of Component 4 would require sectors to form an entity that would be authorized to

make transfers. The entity would be allocated a specific amount of salmon that could be adjusted through transfers from other entities. Vessels in a given sector would be prohibited from directed fishing in a closed area once they had reached their salmon bycatch allocation.

2.4 Alternative 4: Hard caps with an intercooperative agreement

In June 2008, the identified Alternative 4 as the preliminary preferred alternative by mixing and matching various components and options available under Alternative 2, as well as some additional considerations that are not included under the other alternatives (e.g., a bycatch reduction incentive program developed through an intercooperative agreement (ICA)). Alternative 4 includes a choice between two different overall Chinook salmon cap levels (68,392 Chinook salmon and 47,591 Chinook salmon). The high cap would be available if some or all of the pollock industry participates in a private contractual arrangement called an ICA that establishes an incentive program to keep Chinook salmon bycatch below the 68,392 Chinook salmon cap. The combination of the high cap and the bycatch reduction incentive program in the ICA is intended to provide a more flexible and responsive approach to minimizing salmon bycatch than would be achieved by a cap alone. Alternative 4 would rely on the cap to limit Chinook salmon bycatch in all years and, if the ICA works as intended, it would provide incentives to keep bycatch below the cap.

Alternative 4 contains selected provisions under four components:

- **Component 1** addresses the Chinook salmon bycatch caps, ICA requirements under the high cap, and seasonal distribution and rollovers of the caps.
- **Component 2** specifies the seasonal allocations of the Chinook salmon bycatch caps among the four AFA sectors: the CDQ sector, the inshore CV sector, the mothership sector, and the offshore CP sector.
- **Component 3** allows transferability of the Chinook salmon bycatch allocations among the sectors.
- **Component 4** allows further allocation of the inshore sector's Chinook salmon bycatch among the inshore cooperatives and the inshore open access fishery, if the inshore open access fishery exists in any particular year. Component 4 also allows transferability of the inshore cooperatives Chinook salmon bycatch allocations with the mothership and catcher/processor sector and the CDQ groups.

2.4.1 Council's June 2008 motion

The Council developed Alternative 4 as the preliminary preferred alternative at the June 2008 Council meeting. The following is the Council's June 2008 motion.

> **MOTION**
> The Council directs staff to provide analysis on the preliminary preferred alternative specified below in addition to those in the existing analysis and release the resulting EIS/RIR/IRFA for public review. For a complete description of alternatives in the existing analysis, see Chapter 2 of the BSAI Salmon Bycatch EIS Initial Review Draft (dated May 15, 2008).
>
> **Alternative 4: Preliminary preferred alternative**
> Alternative 4 would establish a Chinook salmon bycatch cap for each pollock fishery season which, when reached, would require all directed pollock fishing to cease for that season. Components 2-4 specify the allocation and transferability provisions associated with the cap.

Component 1: Hard cap with option for ICA regulated incentive system

Annual scenario 1: Hard cap with an ICA that provides explicit incentive(s) to promote salmon avoidance in all years

Hard cap if an ICA is in place that provides explicit incentive(s) for each participant to avoid salmon bycatch in all years:

Overall cap: 68,392, allocated by season and under Components 2-4 as described below

For those operations that opt out of such an ICA, the hard cap will be established as follows:

Overall cap: 32,482
CDQ allocation: 2,436
Non-CDQ cap: 30,046

All salmon bycatch attributed to the AFA pollock trawl fleet will accumulate against this lower cap, but only those operations not in the ICA will be required to stop fishing when the CDQ or non-CDQ cap has been reached. This backstop cap of 32,482 will not be allocated by sector, so all other components in Alterative 4 are not relevant to this backstop cap. (In absence of a sector allocation for this backstop cap a 7.5% allocation applies to the CDQ sector by default, and the remaining 92.5% is set as the non-CDQ cap.)

ICA requirements:

- An ICA must provide incentive(s) for each vessel to avoid salmon bycatch under any condition of pollock and salmon abundance in all years.
- Incentive measures must include rewards for salmon bycatch avoidance and/or penalties for failure to avoid salmon bycatch at the vessel level.[24]
- The ICA must specify how those incentives are expected to promote reductions in actual individual vessel bycatch rates relative to what would have occurred in absence of the incentive program. Incentive measures must promote salmon savings in any condition of pollock and salmon abundance, such that they are expected to influence operational decisions at bycatch levels below the hard cap.

Annual reporting:

- The ICA must be made available for Council and public review.
- An annual report to the Council will be required and must include:
  1) a comprehensive explanation of incentive measures in effect in the previous year,
  2) how incentive measures affected individual vessels, and
  3) evaluation of whether incentive measures were effective in achieving salmon savings beyond levels that would have been achieved in absence of the measures.

Annual scenario 2: Hard cap in absence of an ICA with explicit incentive(s) to promote salmon avoidance

Hard cap in absence of an ICA that provides explicit incentive(s) to all participants to avoid salmon bycatch in all years:

Overall cap: 47,591, allocated by season and under Components 2-4 as described below

Seasonal distribution of caps

[24] NMFS recommends that the term "and/or" not be used in regulation because of the possible confusion about the meaning of this term. NMFS assumes that this requirement means "Incentive measures must include rewards for salmon bycatch avoidance at the vessel level or penalties for failure to avoid salmon bycatch at the vessel level and may include both."

Any hard cap would be apportioned between the pollock A and B seasons. The seasonal distribution is 70/30, based on the average distributional ratio of salmon bycatch between A and B seasons in the 2000-2007 period.[25]

Seasonal rollover of caps
Unused salmon from the A season would be made available to the recipient of the salmon bycatch hard cap in the B season within each management year at an amount up to 80% of the recipient's unused A season bycatch cap.

Component 2: Sector allocation
Separate sector level caps will be distributed within each season for the CDQ sector and the three remaining AFA sectors, the inshore catcher vessel (CV) sector, the mothership sector, and the offshore catcher processor (CP) sector, as follows:

A season: CDQ 9.3%; inshore CV fleet 49.8%; mothership fleet 8.0%; offshore CP fleet 32.9%
B season: CDQ 5.5%; inshore CV fleet 69.3%; mothership fleet 7.3%; offshore CP fleet 17.9%

This distribution is based on the 5-year (2002-2006) historical average of the annual proportion of salmon bycatch by sector within each season, adjusted by blending the bycatch rate for CDQ and non-CDQ partner sectors. It is also weighted by the AFA pollock allocation for each sector; in each season, the proportional allocation by sector comprises the adjusted 5-year historical average by sector weighted by 0.75 for the salmon bycatch history and the AFA pollock allocation by sector weighted by 0.25.

Component 3: Sector transfers
Allocate salmon bycatch caps to each sector and allow the entity representing each non-CDQ sector and the CDQ groups to transfer salmon bycatch caps among the sectors and CDQ groups. (NMFS does not actively manage the salmon bycatch allocations).

Component 4: Cooperative provisions
Each inshore cooperative and the inshore open access fishery (if the inshore open access fishery existed in a particular year) shall receive a salmon allocation managed at the cooperative level. If the cooperative or inshore open access fishery salmon cap is reached, the cooperative or inshore open access fishery must stop fishing for pollock.

The initial allocation of salmon by cooperative within the inshore CV fleet or to the inshore open access fishery would be based upon the proportion of total sector pollock catch associated with the vessels in the cooperative or inshore open access fishery.

Cooperative transfers
When a salmon cooperative cap is reached, the cooperative must stop fishing for pollock and may transfer salmon bycatch from other inshore cooperatives, CDQ groups, or entities representing non-CDQ groups (industry initiated).

[25] This sentence is not applicable to the 70/30 seasonal distribution. However, it remains in the text because it was part of the Council's June 2008 motion.

2.4.2 Description of Alternative 4

Alternative 4 includes two different annual scenarios with different caps for each scenario. Annual scenario 1 contains a dual cap system with a high cap of 68,392 Chinook salmon and a backstop cap of 32,482 Chinook salmon. Annual scenario 2 contains a single cap of 47,591 Chinook salmon. The distinction between the scenarios lies in the presence or absence of a NMFS-approved ICA which provides explicit incentives to avoid salmon. Under Alternative 4, either annual scenario 1, annual scenario 2, or both annual scenario 1 and annual scenario 2 combined, may be chosen, as discussed below. The prescribed sector allocations (and provisions to divide the sector allocations to the inshore CV cooperatives and among CDQ groups) are identical for both the annual scenario 1 high cap and the annual scenario 2 cap. All caps would be partitioned seasonally 70 percent to the A season (January 20 - June 10) and 30 percent to the B season (June 10-November 1). Table 2-39 provides a summary of the features of Alternative 4. Table 2-40 shows the three caps and each cap's seasonal and sector divisions.

Under either annual scenario 1 or annual scenario 2, existing regulations related to the Chinook salmon prohibited species catch limit of 29,000 salmon and triggered closures of the Chinook salmon savings areas in the Bering Sea would be removed from 50 CFR part 679.21. The 700 Chinook salmon trigger cap and Chinook Salmon savings area in the Aleutian Islands would remain in effect. Additionally, the current VRHS ICA regulations would be revised to remove all reference to Chinook salmon. Regulations associated with the non-Chinook salmon elements of the VRHS ICA would remain in regulations.

During the process of writing the Draft EIS and describing and analyzing Alternative 4, three issues arose that had a bearing on how, and whether, Alternative 4 could be implemented as intended by the Council. They are:

- Two issues related to the formation and composition of the ICA.
- The potential for the 68,392 Chinook salmon hard cap to be exceeded because Chinook salmon bycatch would accrue to both the high cap and the backstop cap.

The Draft EIS, in Section 2.4.3 Options for changes to Alternative 4, describes these issues and suggests possible options for resolving them. The Council, in developing Alternative 5, resolved the applicable issues, as discussed in the description of Alternative 5 in Section 2.5.

Table 2-39 Alternative 4 components

Setting the hard cap (Component 1)	Annual scenario 1 (AS 1)	High cap 68,392 Chinook salmon for vessels in a NMFS-approved ICA			
		Backstop cap 32,482 Chinook salmon for vessels not in a NMFS approved ICA.			
	Annual scenario 2 (AS 2)	A cap of 47,591, with no ICA.			
	AS1 + AS2	A fleet-wide cap of 47,591, unless industry submits and NMFS approves an ICA agreement which provides explicit incentive for salmon avoidance, then the cap increases to 68,392 Chinook salmon. Vessels not in the ICA would be subject to the backstop cap of 32,482.			
	A season/ B season division	All hard caps would be divided 70/30 between the A and B season			
	Seasonal rollovers	NMFS would rollover up to 80 percent of a sector's or cooperative's unused salmon bycatch from its A season account to that sector's or cooperative's B season account. No rollover would occur from the B season to the A season. No rollover would occur for the backstop cap.			
Allocating the hard cap to sectors (Component 2)		CDQ	Inshore CV	Mothership	Offshore CP
	A season	9.3%	49.8%	8.0%	32.9%
	B season	5.5%	69.3%	7.3%	17.9%
Sector transfers (Component 3)	If sector level caps are issued as transferable allocations, then these entities could request NMFS to move a specific amount of the transferable allocation from one entity's account to another entity's account during a fishing season. Allocations under the backstop cap are non-transferable.				
Allocating the hard cap to cooperatives (Component 4)	Each inshore cooperative and the inshore open-access fishery would receive a transferable allocation of the inshore CV sector level cap and must stop fishing once the allocation is reached.				
	Inshore cooperative allocations would be based on that cooperative's AFA pollock allocation percentage. Inshore open access allocation would be based on the pollock history of those vessels participating in the inshore open access fishery.				
	Cooperative Transfers	Upon request, NMFS could transfer allocations among all recipients during a fishing season.			

2.4.3 High Cap of 68,392 Chinook salmon – Annual scenario 1

For each season, the high cap would be divided into separate sector level caps for the CDQ sector, the inshore CV sector, the mothership sector, and the CP sector according to the percentage allocations in Component 2. All Chinook salmon bycatch by vessels in these sectors that are parties to the NMFS-approved ICA with incentives to reduce salmon bycatch would accrue against the sector's specific seasonal salmon bycatch cap.

Table 2-40 A and B season caps for Alternative 4 under annual scenarios 1 and 2

	Annual scenario 1				Annual scenario 2 cap	
	High Cap		Backstop cap			
Overall cap		**68,392**		**32,482**		**47,591**
A season allocation (70%):		47,874		22,737		33,314
CDQ	9.3%	4,452	7.5%	1,705	9.3%	3,098
Inshore CV	49.8%	23,841			49.8%	16,590
Mothership	8%	3,830			8%	2,665
Offshore CP	32.9%	15,751	92.5%	21,032	32.9%	10,960
B season allocation (30%):		20,518		9,745		14,277
CDQ	5.5%	1,128	7.5%	731	5.5%	785
Inshore CV	69.3%	14,219			69.3%	9,894
Mothership	7.3%	1,498			7.3%	1,042
Offshore CP	17.9%	3,673	92.5%	9,014	17.9%	2,556

Note: under both the 68,392 Chinook salmon cap and 47,591 Chinook salmon cap, the inshore sector allocation and CDQ Program allocations would be further allocated among the inshore cooperatives, inshore open access fishery, and six CDQ groups.

Table 2-40 shows the percentage allocations of Chinook salmon bycatch and the resulting sector level caps. As described in the Council's motion, the percentage allocations of Chinook salmon bycatch among the AFA sectors, including the CDQ sector, is based on the 5-year (2002-2006) historical average of the annual proportion of salmon bycatch by sector within each season, adjusted by blending the bycatch rate for CDQ and non-CDQ partner sectors. It is also weighted by the AFA pollock allocation for each sector; in each season, the proportional allocation by sector comprises the adjusted 5-year historical average by sector weighted by 0.75 for the salmon bycatch history and the AFA pollock allocation by sector weighted by 0.25.

Blending of the CDQ and non-CDQ bycatch history was done because the actual bycatch rates could not be accurately estimated due to past practices in how pollock hauls were assigned to CDQ and non-CDQ pollock allocations by the catcher/processors and mothership that fished on behalf of the CDQ groups. Historically, CDQ groups were constrained by multiple hard caps for other groundfish species and prohibited species when the non-CDQ pollock fisheries were not. Some CDQ groups would request that the vessel operators assign the lower bycatch hauls to the CDQ groups and higher bycatch hauls to the non-CDQ pollock fisheries. This would result in it appearing that vessels fishing on behalf of the CDQ groups were achieving lower bycatch in their CDQ pollock hauls versus their non-CDQ hauls. Because actual bycatch rates could not be estimated due to this method of assigning hauls, and because bycatch history is such an important element in the percentage allocations under Alternative 4 and Alternative 5, the Council approved using an average bycatch rate for the CDQ and non-CDQ sectors that the CDQ groups partnered with.

The adjusted historical percentage bycatch for the CDQ, offshore C/P, and mothership sectors was determined as follows. The number of Chinook salmon recorded as CDQ bycatch within each of the two CDQ partner sectors was summed with the number of Chinook salmon recorded within the respective CDQ partner sector as non-CDQ for each year. Similarly, the volume of CDQ and non-CDQ pollock harvested in each year was summed. This combined pool of CDQ and non-CDQ Chinook salmon was divided by the combined pool of harvests for each CDQ partner sector. This average bycatch rate was multiplied by the pollock associated with the CDQ harvest to calculate and 'adjusted' number of CDQ

Chinook salmon taken as bycatch in each year and season, and was multiplied by the pollock associated with the non-CDQ harvest to calculate an 'adjusted' non-CDQ number of Chinook salmon in each year and season for each of the two partner sectors. These adjusted numbers of Chinook salmon within each season and sector are used to calculate adjusted proportion of salmon bycatch by sector and season in Table 2-40. This adjustment does not affect the allocations to the inshore catcher vessel sector.

The inshore CV sector cap would be divided among the inshore cooperatives and the inshore open access fishery based on the proportion of total sector pollock catch associated with the vessels in the cooperative or inshore open access fishery. NMFS would issue transferable allocations to the inshore cooperatives because the inshore cooperatives are entities. The inshore open access fishery cap would be non-transferable and NMFS would close pollock to directed fishing by this fishery once this cap was reached.

The CDQ sector level cap would be allocated as transferable allocations to the CDQ groups. The six CDQ groups are entities that receive transferable Chinook bycatch allocations under current regulations governing the CDQ Program.

NMFS would allocate the sector level cap as a transferable allocation to the catcher/processor sector and the mothership sector if all eligible members of each sector formed the necessary entity required to receive and manage a transferrable allocation. If members of the catcher/processor sector or members of the mothership sector were not each able to form their own sector's entity, NMFS would close pollock to directed fishing by that sector once the respective sector's Chinook salmon bycatch cap was reached.

For sectors, inshore cooperatives, or CDQ groups with transferable allocations, unrestricted transfers to other entities would be allowed within a season. No transfers of A season allocations to the B season or vice versa would be allowed. Transfers would be conducted through NMFS to ensure accurate Chinook salmon bycatch account balances and NMFS would develop regulations to establish the transfer process. No transfers of sector level caps without transferable allocations would be allowed.

Up to 80 percent of a recipient's unused salmon allocation from the A season may be rolled over into that recipient's B season allocation. No rollover is permitted from an entity's unused B season Chinook salmon cap into the following year's A season cap. Rollovers could occur for both transferable allocations and sector level caps.

Alternative 4 does not specify participation or composition requirements for the ICA. Therefore, individual vessels, sectors, inshore cooperatives, or CDQ groups could opt out of the ICA. NMFS would develop regulations to establish the ICA requirements specified in Alternative 4. The regulations would establish the process for industry to submit an ICA to NMFS and for NMFS approval or disapproval of the ICA. NMFS would establish the appropriate salmon bycatch cap based on whether an approved ICA was in effect. Once approved, the ICA would not need to be re-submitted or approved each year. Provisions would be made in the regulations for the industry to submit amendments to the ICA. The effectiveness of the ICA would be determined by the Council through the annual reporting requirements specified under Component 1.

It is important to note that the high cap of 68,392 Chinook salmon is not a hard cap because Alternative 4 does not include provisions necessary to allow for hard cap management when vessels opt-out of the ICA and fish under the backstop cap of 32,482. The 68,392 cap would be fully allocated among those participating in the ICA and only catch by vessels in the sector or cooperative that is participating in the ICA would accrue against that transferable allocation or sector level cap. Alternative 4 does not have a mechanism for reducing a cooperative's or sector's allocation or sector level cap if some vessels in the cooperative or sector opt out of the ICA and fish under the backstop cap. This means that allocations to the sectors, inshore cooperatives, and CDQ groups participating in the ICA would not be reduced and

sector level caps would not be affected by Chinook salmon bycatch from vessels fishing under the backstop cap. To do so would penalize the ICA participants for the bycatch of vessels not fishing in the ICA.

Chinook salmon bycatch by any vessels fishing under the backstop cap would be in addition to bycatch caught under the high cap. Unless some portion of the high cap was not caught (either because of the effectiveness of the ICA's bycatch reduction measures or low Chinook salmon abundance), bycatch by non-ICA vessels fishing under the backstop cap potentially could result in the total annual Chinook bycatch exceeding 68,392 Chinook salmon.

If an entire sector, inshore cooperative, or CDQ group opted out of the ICA, then there would be no vessels accruing catch against the sector level cap for that sector, inshore cooperative, or CDQ group. Under this scenario, the high cap is much less likely to be exceeded, but this still could happen if catch by the opt-out sector, inshore cooperative, or CDQ group exceeded what that entity would have been allocated under the high cap.

2.4.4 Backstop Cap of 32,482 Chinook salmon – Annual scenario 1

Entire sectors, inshore cooperatives, or CDQ groups could choose to not participate in the ICA, or any number of individual vessels within the catcher/processor or mothership sectors or the inshore cooperatives could opt out of the ICA and fish under the backstop cap. Any vessels or CDQ groups not participating in the ICA would be managed as a group under the backstop cap and prohibited by NMFS from directed fishing for pollock once the backstop cap was reached.

The backstop cap would not be allocated to sectors or cooperatives. Instead, it would be divided between the CDQ (2,436) and non-CDQ (30,046) fisheries, and by season, as shown in Table 2-40. Chinook bycatch by the CDQ groups, including the CDQ groups participating in the ICA, would accrue against the CDQ portion of the backstop cap. Chinook salmon bycatch by all non-CDQ vessels directed fishing for pollock, including those vessels participating in the ICA, would accrue against the non-CDQ portion of the backstop cap. This means that salmon bycatch by the ICA vessels would accrue against both the high cap and the backstop cap, but the bycatch by non-ICA participants would only accrue against the backstop cap.

Alternative 4 does not provide a mechanism for deducting the salmon bycatch in the "opt-out" fishery from the sector allocations of the high cap. Thus, if the high cap allocations made to the sectors, cooperatives and CDQ groups are reached by the ICA participants, any bycatch in the opt out fishery would result in the total annual Chinook salmon bycatch exceeding 68,392 Chinook salmon.

No transfer or rollover provisions exist for non-ICA participants fishing under the backstop cap. Under annual scenario 1 only, and if no NMFS-approved ICA existed in a given year, the entire pollock fleet would be subject to the backstop cap for that year.

2.4.5 Annual scenario 1 combined with Annual scenario 2

Under both annual scenario 1 and annual scenario 2, the Bering Sea pollock fleet would be subject to a cap of 47,591 Chinook salmon, unless industry submits and NMFS approves an ICA agreement which provides explicit incentives for salmon avoidance. NMFS would increase the cap to 68,392 Chinook salmon if it approved the ICA. Vessels that did not participate in the ICA would be subject to the backstop cap.

2.4.6 A Cap of 47,591 Chinook salmon – Annual scenario 2

Under annual scenario 2 only, the Bering Sea pollock industry would be subject to a cap of 47,591 Chinook salmon, regardless of whether the industry operated under an ICA with incentives to avoid salmon bycatch. Alternative 4 provides the ability to manage this cap as a hard cap. This cap would be subject to the same seasonal apportionments, sector allocations, and rollover and transfer provisions described for the annual scenario 1 high cap.

2.4.7 Managing and Monitoring Alternative 4

The general management of transferable sector, cooperative, and CDQ group Chinook salmon bycatch allocations would be similar to those discussed under Alternative 2 (Section 2.2.5). The Chinook bycatch allocations would increase the complexity and cost of NMFS's salmon bycatch monitoring efforts due to the staff and budget resources associated with establishing, monitoring, and enforcing additional Chinook salmon caps. As under Alternative 2, transferable salmon bycatch allocations must be issued to an entity that represents all members of the group eligible to receive the transferable allocation (see Section 2.2.5.4). The entity could be created by a contract among the group of eligible AFA participants in that sector who are receiving the transferable salmon bycatch allocation.

Alternative 4 is more complicated to manage and enforce than the other alternatives because annual scenario 1 has two different Chinook salmon bycatch caps that could be operating at the same time and it includes the requirement for an ICA agreement with incentives to reduce Chinook salmon bycatch below the cap levels. Under annual scenario 1, NMFS would be required to identify which cap each of the approximately 110 vessels participating in the pollock fishery is fishing under prior to the start of each year's fishery, accrue the catch from that vessel to the appropriate sector level cap or transferable allocation account, and monitor compliance with Chinook salmon bycatch caps for up to 36 different groups of vessels fishing under different Chinook salmon bycatch allocations. In addition, NMFS would be required to review a proposed ICA submitted by the pollock industry and approve or disapprove this proposed ICA prior to the start of the pollock fisheries.

2.4.7.1 Salmon Bycatch Intercooperative Agreement (ICA)

The ICA concept includes two components to implement the incentive program to reduce salmon bycatch:

- the ICA contract that contains the elements of the incentive program that all vessel owners and CDQ groups agree to follow in the future, and
- the annual report to the Council on performance under the ICA in the previous year.

The ICA would be required to be submitted to and approved by NMFS prior to fishing under the ICA. The ICA representative would prepare the annual report after the fishing season is over to provide an evaluation of how the measures implemented through the ICA actually worked.

Under Alternative 4, allocations under the high cap of 68,392 Chinook salmon would only be available to sectors, cooperatives, or CDQ groups participating in a salmon bycatch ICA that meets the following requirements:

- An ICA must provide incentive(s) for each vessel to avoid salmon bycatch under any condition of pollock and salmon abundance in all years.
- Incentive measures must include rewards for salmon bycatch avoidance and/or penalties for failure to avoid salmon bycatch at the vessel level.
- The ICA must specify how those incentives are expected to promote reductions in actual individual vessel bycatch rates relative to what would have occurred in absence of the incentive program. Incentive measures must promote salmon savings in any condition of pollock and

salmon abundance, such that they are expected to influence operational decisions at bycatch levels below the hard cap.

The Council expressed its intent at its June 2008 meeting that the Alternative 4 requires the creation of a single ICA. However, nothing in Alternative 4 would prevent a single ICA from having multiple sections each describing a different type of incentive program for different sectors, cooperatives, CDQ groups, or vessel types as long as each of those sections described an incentive program that complied with all relevant regulations. An ICA with multiple sections would take longer for NMFS to review, which would need to be factored into when industry would have to submit an ICA.

Alternative 4 does not include any specific requirements for the type of incentives that must be included in the ICA other than the general language above. One of the specific components the Council discussed that could be included in an ICA is some type of fee per salmon caught. A fee would impose costs on fishermen for every salmon caught while pollock fishing and would provide cost savings, or benefits, to those fishermen who avoided Chinook salmon bycatch. These costs and benefits would start occurring with the first salmon caught as bycatch. However, the Magnuson-Stevens Act does not provide authority to the Council and NMFS to require a fee per salmon either directly in regulations or indirectly through a regulation that requires a fee to be a component of an ICA. In addition, there may be other, more effective incentives that could be developed by the industry. Therefore, the ICA requirements only specify the end result of what the Council wants the industry to achieve and does not specify how the industry must reach these goals.

Participation in the ICA is voluntary and any vessel, sector, inshore cooperative, or CDQ group could decide to not participate in the ICA, or to "opt out" of the ICA. Alternative 4 uses the term "operations" when it refers to those who can opt out of the ICA, however, the term is not defined. Analysts assume that the term refers to individual AFA eligible vessels (catcher/processors, motherships, catcher vessels) and to inshore cooperatives and CDQ groups. Furthermore, analysts assume that the term "operations" was not limited to AFA cooperatives or Alternative 4 would have specified the option for cooperatives to opt out rather than for "operations" to opt out.

Alternative 4 does not specify participation or composition requirements for the ICA, nor does it require 100 percent participation in the ICA because of inclusion of the backstop cap and language referring to "those operations that opt out of such an ICA." Therefore, analysts assume that entire sectors, inshore cooperatives, or CDQ groups could opt to not participate in the ICA, or any number of individual vessels within the catcher/processor or mothership sectors or the inshore cooperatives could opt out of the ICA. Vessels fishing on behalf of a CDQ group could not opt out on their own because they are not authorized to make decisions about whether a CDQ group participates in the ICA or opts out. They fish under whatever cap and whatever ICA conditions the CDQ group agrees to and these conditions are part of the contract between the CDQ group and the vessel harvesting pollock on its behalf. In this respect, only a CDQ group could decide whether to participate in an ICA or not, rather than the owners of vessels fishing on behalf of the CDQ group. A CDQ group could not have some vessels fishing under the 68,392 cap and others fishing under the backstop cap.

NMFS would implement the requirements for the ICA in regulation. These regulations would include requirements for the information that must be included in the ICA and a deadline for submission of the ICA. In addition, the regulations would describe the process NMFS would use to review and approve or disapprove the ICA. If NMFS approved the ICA, those participating in the ICA would receive transferable allocations of the 68,392 Chinook salmon cap.

The Chinook salmon bycatch ICA would be required to be submitted to NMFS prior to the start of the fishing year and in enough time for NMFS to review the proposed ICA and provide some time to address

any minor issues identified in this review. Because the requirements for the ICA are performance based, i.e., they address what the ICA should accomplish, any number of different incentive programs could meet these objectives. As long as a proposed ICA contains all of the information required in NMFS regulations and it generally describes an incentive program that is designed to accomplish the goals specified in regulation, NMFS would have to approve the ICA. The annual report and evaluation by the Council and the public of how the incentive program is working will be the primary tool to determine whether the ICA is meeting the Council's goal to reduce Chinook salmon bycatch below the cap level.

Approval or disapproval of the ICA by NMFS would be an administrative determination. NMFS would review a proposed ICA by comparing the actual content of a proposed ICA with the information requirements in regulations and decide whether the proposed ICA provides the required information. The information requirements in regulation would be based on the ICA requirements in Alternative 4, using the exact same words as Alternative 4 unless minor wording changes were necessary for clarity (e.g. NMFS recommends not using the term "and/or" in regulation). NMFS would not develop additional requirements for the ICA beyond those recommended by the Council.

The ICA would be required to explain the incentive program and how it would create the incentives desired by the Council. For example, the ICA would be required to explain how the incentive program provided incentive(s) for each vessel to avoid salmon bycatch under any condition of pollock and salmon abundance in all years; how the incentive program provided rewards for salmon bycatch avoidance and/or penalties for failure to avoid salmon bycatch at the vessel level; how the incentives would promote reductions in actual individual vessel bycatch rates relative to what would have occurred in absence of the incentive program; and how the incentive measures in the ICA promote salmon savings in any condition of pollock and salmon abundance so that these measures influence operational decisions at levels of bycatch below the hard cap. NMFS would approve the proposed ICA if it included this information. NMFS would look for key words and key sections of descriptive text in the ICA that addressed the requirements of Alternative 4. However, NMFS would not judge the adequacy of the incentives described or whether these incentive measures would, in fact, successfully provide the incentives intended by the Council. Judgments about the efficacy or outcomes of the proposed incentive program would be subjective and the regulations would not provide a legal basis for NMFS to disapprove the proposed ICA because it did not believe that the proposed measures would work as intended. Minor errors or omissions in the ICA likely would be resolved by NMFS contacting the ICA representative and requesting revisions to the ICA. The approved ICA would be made available for Council and public review.

Once submitted and approved, the ICA would not have to be re-submitted each year. If approved, the ICA it would remain in effect unless it had an expiration date specified by the ICA participants or until the participants notified NMFS that the ICA was revoked. Amendments or revisions to the ICA could be submitted to NMFS by the parties to the ICA at any time. NMFS would review whether the amendments would create an ICA that still complied with all of the appropriate regulations. The original, approved ICA would be effective until NMFS approved amendments or revisions. If amendments were disapproved, then the existing, approved ICA would remain in effect. Once a party to an ICA, a vessel owner, sector, inshore cooperative, or CDQ group could not withdraw from the ICA mid-way through the year.

If the regulatory requirements for the ICA were not met, NMFS would issue an initial administrative determination (IAD) explaining the reasons that the proposed ICA did not comply with NMFS regulations. Possible reasons for disapproval would be a complete lack of information that responds in any way to one or more of the ICA requirements or information that did not make sense in such an obvious way as to be clearly not responsive to the requirements. Information that seemed to be somewhat responsive, but did not include sufficient detail or information that was responsive by using the right words but was difficult to understand would not be sufficient reasons for disapproval. If NMFS issued an

IAD disapproving a proposed ICA, the ICA representative could then file an administrative appeal challenging the IAD to disapproved the proposed ICA. An administrative appeal likely would not be resolved prior to the fishing year in which the ICA was supposed to be effective.

The Chinook salmon bycatch cap that would be in effect if an ICA is not submitted or approved by NMFS by the start of the fishing year would depend on whether annual scenario 1 alone or annual scenario 1 and annual scenario 2 combined were in effect.

Under annual scenario 1 only and if no ICA was submitted or approved, all vessels would fish under the backstop cap of 32,482 salmon.

Under annual scenario 1 and annual scenario 2 together, NMFS would recommend the following regulatory structure. The 47,591 Chinook salmon cap would be the initial cap specified in regulation. It would be allocated as transferable seasonal Chinook salmon bycatch allocations among the catcher/processor sector, mothership sector, inshore cooperatives, and CDQ groups. This cap would be in effect if no approved ICA existed for any of the following reasons:

- No ICA was submitted for NMFS review,
- An ICA was submitted, but NMFS issued an initial administrative determination to disapprove the ICA because it was inconsistent with regulations, and the appeal was not yet resolved by the time the fishing year started,
- NMFS issued a final agency action to disapprove the ICA (either no appeal was filed or the appeal was resolved in NMFS's favor).

The regulations also would specify that if NMFS approved an ICA, then the 68,392 cap and the 32,482 backstop cap would be in effect and would be implemented as described in this chapter. This regulatory structure would ensure that an initial fixed cap was in place regardless of the outcome of the submission of and approval of an ICA.

An alternative interpretation would be to require implementation of the high cap while an IAD to disapprove the proposed ICA was under appeal. However, this interpretation could create an incentive to submit an ICA that would be disapproved just to have the high cap in place without any ICA in effect that implements the bycatch reduction incentive program. However, such an ICA is an integral component of Alternative 4.

Annual reporting requirements: A second component of the ICA provisions is the requirement for an annual report about performance under the ICA. This report would be required to include:

- a comprehensive explanation of incentive measures in effect in the previous year,
- how incentive measures affected individual vessels, and
- evaluation of whether incentive measures were effective in achieving salmon savings beyond levels that would have been achieved in absence of the measures.

The Council would review an annual report about performance under the ICA. It could initiate FMP or regulatory amendments to revise or remove the ICA requirements if it found that the ICA concept needed improvement or was not performing as intended.

The Council would have no role in NMFS's review and approval/disapproval of the ICA. That administrative process would be conducted by NMFS based on the regulations in effect at the time of review. The Council reviewed industry proposals for the ICA prior to its final action on Amendment 91. However, nothing in NMFS's potential regulations would require the industry to submit exactly the same ICA that was presented to the Council prior to its final action or at any time in the future.

2.4.7.2 Catch accounting

Catch accounting would be more complex under Alternative 4 that under the other alternatives because of the potential for two separate caps under annual scenario 1. Under annual scenario 1, all Chinook salmon bycatch by vessels fishing under transferable bycatch allocations (the high cap) would accrue against those allocations. Chinook salmon bycatch by vessels fishing under the backstop cap would not accrue against the transferable bycatch allocations. However, all bycatch by all vessels in the pollock fishery would accrue against the backstop cap, including all of the bycatch from those vessels fishing under transferable allocations of the 68,392 cap and all bycatch by vessels fishing under the backstop cap. Chinook salmon bycatch by vessels fishing on behalf of CDQ groups would accrue against the CDQ portion of the backstop cap and bycatch by vessels fishing in the non-CDQ pollock fisheries would accrue against the non-CDQ portion of the backstop cap. However, only those vessels not participating in the ICA would be managed under the non-CDQ and CDQ backstop caps and prohibited by NMFS from directed fishing for pollock once the backstop cap was reached. This dual system of catch accounting against the backstop cap provides further incentive for vessels to participate in the ICA and fish under the transferable allocations.

NMFS would have to differentiate between ICA and non-ICA participants in order to properly account for Chinook salmon bycatch towards appropriate caps. This could occur by identifying vessels or CDQ groups as either ICA or non-ICA eligible in the Catch Accounting System (CAS).

As shown in Table 2-41, seasonal allocations of Chinook salmon caps under annual scenario 1 would require NMFS to monitor up to 18 seasonal and 36 annual Chinook caps. This would occur if all industry sectors and CDQ groups participated in an ICA and were subject to the high Chinook salmon bycatch cap and some vessels or CDQ groups opted out of the ICA and NMFS had to manage two salmon bycatch caps per season under the backstop cap.

Table 2-41 Potential number of seasonal and sector caps under annual scenario 1.

	ICA fishery under high cap				**Opt-out fishery with backstop cap**		**Total salmon caps**
	Catcher/ processor	Mothership	Inshore co-op's (and open access)	CDQ	Non-CDQ	CDQ	
A season	1	1	8	6	1	1	18
B season	1	1	8	6	1	1	18
Annual total	2	2	16	12	2	2	36

If some operations (i.e., vessels) or CDQ groups did not participate in a Chinook salmon bycatch ICA, then NMFS would have to manage the Chinook salmon bycatch by such entities separately, and in aggregate, from the entities receiving Chinook allocations. With respect to CDQ groups that opt-out of the ICA, this could mean that there would be fewer caps to manage under the hard cap, but the associated complexity of managing annual and seasonal caps under both high and backstop caps would increase NMFS's management burden. The agency would have to account for all Chinook salmon bycatch made by components that had transferrable salmon bycatch allocations against the sectors' salmon bycatch accounts, as well as simultaneously accounting for Chinook salmon bycatch made by all vessels directed fishing for pollock against either of the two potential backstop caps, should such caps be in effect.

The inclusion of the backstop cap also would increase NMFS's inseason management responsibilities. Multiple Chinook salmon bycatch caps for the catcher/processor sector, the mothership sector, seven inshore cooperatives, six CDQ groups, and any operations not in the ICA would increase the effort needed to manage these various caps. This includes incorporating such caps into the annual BSAI groundfish harvest specifications (if needed) either directly or by reference to applicable regulation. NMFS would have to manage both transferrable Chinook bycatch allocations (i.e., monitor for a seasonal

allocation being exceeded) and issue directed fishing closures applicable to those vessels fishing under the backstop caps. Directed fishing for pollock by vessels not in the ICA would be prohibited once either the non-CDQ low cap or CDQ low cap was reached, based on the total aggregate Chinook catch by vessels directed fishing for pollock under either the low or high caps.

Under annual scenario 2 only or as the initial cap in combination with annual scenario 1, the 47,591 Chinook salmon bycatch cap would be set in regulation. It would be allocated among the catcher/processor sector entity, the mothership sector entity, the inshore cooperatives and the inshore open access fishery, if it existed in a particular year, and the CDQ groups. These caps would be subject to the same seasonal and sector specific apportionments as those described above under the annual scenario 1 high cap. These low caps are portrayed in Table 2-42. There would be four less caps under this scenario than under annual scenario 1.

Table 2-42 Number of potential seasonal and sector caps under annual scenario 2.

	Number of caps by sector				**Total salmon caps**
	Catcher/ processor	Mothership	Inshore co-op's (and open access)	CDQ	
A season	1	1	8	6	16
B season	1	1	8	6	16
Annual total	2	2	16	12	32

This cap established under annual scenario 2 would be subject to the same seasonal and sector specific apportionments as those described above under the annual scenario 1 high cap. Any Chinook salmon bycatch by these entities would accrue against their respective seasonal salmon bycatch allocation. Each sector or entity receiving a Chinook salmon bycatch allocation would be prohibited from exceeding that allocation.

The monitoring, management, and enforcement issues for the annual scenario 2 (47,591 hard cap) are essentially the same as described for annual scenario 1 high cap, as well as under Alternative 2. Annual scenario 2 would be simpler for NMFS to implement, as it would not have to include the dual accounting that would be required under annual scenario 1. This would put annual scenario 2 on par with the CAS development cost and complexity considered under Alternative 2. Under annual scenario 2, the lower cap could impose additional constraints on some inshore cooperatives relative to their allocations of salmon bycatch. This could require them to solicit a greater amount of Chinook transfers than might be necessary under annual scenario 1.

NMFS's involvement with Chinook salmon transfers under either annual scenario 1 or annual scenario 2 would be inshore open to adjusting applicable CAS bycatch accounts, per industry notification of the parties involved in the transfer and the amount of salmon bycatch being transferred. The number of transfers that could annually occur between entities is not possible to predict at this time. The need for Chinook bycatch allocation transfers would depend on Chinook salmon abundance, bycatch rates, and the willingness or ability for industry components to transfer Chinook bycatch based on actual or anticipated needs. Presumably, in years of higher Chinook abundance or bycatch, industry components would catch relatively more Chinook and be more interested in receiving Chinook transfers. Conversely, they would be less interested in transferring away amount of Chinook salmon bycatch.

2.4.7.3 Observer coverage and monitoring requirements

As was discussed for transferable Chinook salmon bycatch allocations under Alternatives 2 and 3, NMFS recommends the increased monitoring requirements under Alternative 4. This includes NMFS's recommendations for increased observer coverage for inshore catcher vessels that currently are only

subject to 30 percent observer coverage, as well as enhancements to shoreside processor, catcher/processors, and mothership monitoring requirements. These recommendations are described in Section 2.2.5.7 through Section 2.2.5.10

Given the complexity of the dual Chinook accounting envisioned under annual scenario 1 (including Chinook transferability by some sectors and CDQ groups), NMFS recommends 100 percent observer coverage for all inshore catcher vessels, even those fishing with non-transferable allocations under the backstop cap. An additional, and perhaps more significant, a factor associated with the backstop cap is that all of the vessels fishing under this cap will be racing to harvest their pollock before the backstop cap is reached without the limitations that will be placed on those vessels fishing under the ICA. This would increase the incentive for vessels fishing under the backstop cap to discard Chinook salmon that would otherwise accrue against the backstop cap. The earlier the cap was reached, the sooner NMFS would close directed fishing for pollock for the fleet fishing under this cap. The potential discard incentive and fast pace of the pollock fishing conducted under the backstop caps support the need to require 100 percent observer coverage on all inshore catcher vessels.

2.5 Alternative 5: Hard caps with incentive plan agreements and a performance standard (Preferred Alternative)

The Council developed Alternative 5 as the preferred alternative at the April 2009 Council meeting. Alternative 5 builds on Alternative 4, the preliminary preferred alternative. Alternative 5 includes two different overall Chinook salmon cap levels (60,000 Chinook salmon and 47,591 Chinook salmon). The high cap would be available if some or all of the pollock industry participates in a private contractual arrangement, called an incentive plan agreement (IPA) [26], that establishes an incentive program to keep Chinook salmon bycatch below the 60,000 Chinook salmon cap. Alternative 5 would rely on the cap to limit Chinook salmon bycatch in all years and, if the IPA works as intended by the Council, it would provide incentives to keep bycatch below the cap.

The combination of the high cap, transferable allocations, and one or more IPAs is intended to provide a more flexible and responsive approach to minimizing salmon bycatch than would be achieved by a cap alone. The high bycatch cap of 60,000 Chinook salmon alone would be unlikely to meet the conservation objectives of the Council and would not be expected to minimize Chinook salmon bycatch in most years. Likewise, the bycatch cap of 47,591 Chinook salmon on its own would not provide the desired flexibility to accommodate the high variability in Chinook salmon encounters and the difficulty of avoiding salmon encounters in certain years. Therefore, the Council combined the 60,000 Chinook salmon hard cap with an IPA to provide incentives to avoid Chinook salmon in all years with the goal that actual salmon bycatch would be below the cap.

To ensure Chinook salmon savings regardless of whether an IPA successfully minimizes bycatch at all levels of salmon encounters, the Council established a sector level performance standard in Alternative 5. For a sector to continue to receive Chinook salmon bycatch allocations under the 60,000 Chinook salmon cap, that sector may not exceed its performance standard in any three years within seven consecutive years. If a sector fails this performance standard, it will permanently be allocated a percentage allocation of the 47,591 Chinook salmon cap.

[26] The term incentive plan agreement (IPA) under Alternative 5 is the same concept as the intercooperative agreement (ICA) under Alternative 4. The term IPA is used under Alternative 5 because participation in the IPA is not limited to AFA cooperatives as it may include individual vessel owners or CDQ groups. In addition, more than one IPA may be approved and an IPA could be created by a single cooperative (so an IPA is not required to include more than one cooperative or to be an agreement among cooperatives).

Alternative 5 contains selected provisions under six components:

- **Component 1: Hard cap with options for IPAs,** addresses the Chinook salmon bycatch caps, IPA requirements under the high cap, and seasonal distribution and rollovers of the caps.
- **Component 2: Sector allocation**, specifies the seasonal allocations of the Chinook salmon bycatch caps among the four AFA sectors: the CDQ sector, the inshore CV sector, the mothership sector, and the offshore CP sector.
- **Component 3: Sector transfers**, allows transferability of the Chinook salmon bycatch allocations among the sectors, inshore cooperative, and CDQ groups to better ensure harvest of the full pollock TAC.
- **Component 4: Cooperative provisions,** allows further allocation of the inshore sector's Chinook salmon bycatch among the inshore cooperatives and the inshore open access fishery, if the inshore open access fishery exists in any particular year.
- **Component 5: Performance standard**, annually evaluates each sector's bycatch against that sector's portion of 47,591 Chinook salmon.
- **Component 6: Observer program,** authorizes NMFS to modify regulations for shoreside processors and increase observer coverage on all catcher vessels.

Table 2-43 Alternative 5 components

Setting the hard cap (Component 1)	**47,591 Chinook salmon**	The fleet-wide cap unless industry submits and NMFS approves an IPA agreement which provides explicit incentives for salmon avoidance.			
	60,000 Chinook salmon	The fleet-wide cap if fishery participants form one or more IPAs that meet the criteria in regulations.			
	28,496 Chinook salmon	Vessels not in an IPA would fish under a portion of this "opt-out" or backstop cap.			
	A season/ B season division	The Chinook salmon caps would be divided 70% A season and 30% B season before allocations to sectors, CDQ groups, and cooperatives.			
	Seasonal rollovers	NMFS would rollover 100% percent of a sector's, cooperative's, or CDQ group's unused salmon bycatch from its A season account its B season account. No rollover would occur from the B season to the A season. No rollover would occur under the backstop cap.			
Allocating a hard cap to sectors (Component 2)		**CDQ**	**Inshore CV**	**Mothership**	**Offshore CP**
	A season	9.3%	49.8%	8.0%	32.9%
	B season	5.5%	69.3%	7.3%	17.9%
Sector transfers (Component 3) + Cooperative transfers	Upon request, NMFS could transfer allocations among all recipients of transferable allocations during a fishing season. If an entity's allocation account falls below zero in a given season, the entity would be provided the opportunity to receive transfers of Chinook salmon bycatch sufficient to bring the entity's account to zero.				
Allocating the hard cap to cooperatives (Component 4)	Each inshore cooperative and the inshore open-access fishery would receive a transferable allocation of the inshore CV sector level cap and must stop fishing once the allocation is reached.				
	Inshore cooperative allocations would be based on that cooperative's AFA pollock allocation percentage. Inshore open access allocation would be based on the pollock history of those vessels participating in the inshore open access fishery.				
Performance Standard (Component 5)	If a sector's annual bycatch exceeds its performance standard in any three years within seven consecutive years, NMFS would reduce that sector's Chinook salmon allocation to that sector's portion of 47,591 Chinook salmon for perpetuity.				
Observer Program (Component 6)	Increase observer coverage to 100% for catcher vessels not delivering unsorted cod-ends at sea and modify, if necessary, shore side processors' catch monitoring plans.				

2.5.1 Council's April 2009 motion for Alternative 5

The following is the Council's April 2009 motion to recommend its preferred alternative:

> This alternative would establish a Chinook salmon bycatch cap for each pollock fishery season which, when reached, would require all directed pollock fishing to cease for that season. Components 2-4 specify the allocation and transferability provisions associated with the cap.
>
> **Component 1: Hard cap with option for incentive plan agreements (IPA)**
>
> **Annual scenario 1: Hard cap with an IPA(s) that provides explicit incentive(s) to promote Chinook salmon avoidance in all years**
> Hard cap if an incentive plan agreement (IPA) is in place that provides explicit incentive(s) for each participant to avoid Chinook salmon bycatch in all years:

Overall Chinook salmon cap: 60,000, allocated by season and under Components 2-4 as described below.

For those vessels or CDQ groups that opt out of such a NMFS approved incentive plan agreement, the maximum hard cap (backstop cap) will be established as follows:

An amount no greater than the overall cap: 28,496

Option 3: To ensure the overall cap can be managed as a hard cap, subtract from the overall cap a proportion representing vessels or CDQ groups opting out of the incentive plan(s), and create a backstop cap so that the sum of the caps does not exceed the high cap.

Option C: Subtract from the overall cap the proportion of the backstop cap represented by vessels or CDQ groups opting out and fishing under the backstop cap and use this same amount to create the backstop cap.

Adjustments to the overall cap and backstop cap for vessels or CDQ groups opting out will be made after sector allocations. The amount of the adjustments will be based on the opt out vessel's percentage of AFA pollock within their sector as specified on pages 67-70 of the DEIS or on the CDQ group's current percentage allocation of their sector allocation of the Chinook salmon cap.

IPA requirements (for NMFS approval):

- An IPA must describe incentive(s) for each vessel to avoid Chinook salmon bycatch under any condition of pollock and Chinook salmon abundance in all years.
- Incentive measures must describe rewards for Chinook salmon bycatch avoidance, penalties for failure to avoid Chinook salmon bycatch at the vessel level, or both.
- The IPA must specify how those incentives are expected to promote reductions in actual individual vessel bycatch rates relative to what would have occurred in absence of the incentive program. Incentive measures must promote Chinook salmon savings in any condition of pollock and Chinook salmon abundance, such that they are expected to influence operational decisions to avoid Chinook salmon bycatch.
- The IPA must describe how the IPA ensures each vessel will manage their bycatch to keep total bycatch below the sector level regulatory performance standard.

Annual reporting:

- The IPA(s) must be made available for Council and public review. In addition, year-end annual reports are required to be submitted to the Council by April 1 the following year to provide sufficient time for independent evaluation by the Council.
- An annual report to the Council must include:
  1) a comprehensive explanation of incentive measures in effect in the previous year,
  2) how incentive measures affected individual vessels, and
  3) evaluation of whether incentive measures were effective in achieving salmon savings beyond levels that would have been achieved in absence of the measures.

IPA eligibility:
On an annual basis, before a date certain established by NMFS through regulation, participants in the pollock fishery may file an IPA with NMFS or join or exit an existing approved IPA. An IPA will be considered valid if 1) it meets the criteria set forth above; 2) it commits each party to be bound by the rules of the IPA; and 3) the parties to the IPA represent not less than 9% of the pollock quota and at least two non-affiliated companies using the AFA definition of affiliation.

Membership in an IPA is voluntary. No person may be required to join an IPA. Upon receipt of written notification that a person wants to join an IPA, that IPA must allow the person to join subject to the terms and agreements that apply to all members of the IPA as established in the contract governing the conduct of the IPA.

In the event that no IPA is approved by NMFS, then the pollock fishery shall be managed under annual scenario 2.

Annual scenario 2: Hard cap in absence of an approved IPA with explicit incentive(s) to promote Chinook salmon avoidance

Hard cap in absence of an approved IPA that provides explicit incentive(s) to all participants to avoid salmon bycatch in all years:

Overall Chinook salmon cap: 47,591, allocated by season and under Components 2-4 as described below:

Seasonal distribution of caps

Any hard cap would be apportioned between the pollock A and B seasons. The seasonal distribution is 70/30.

Seasonal rollover of caps

Unused salmon from the A season would be made available to the recipient of the salmon bycatch hard cap in the B season within each management year at an amount equal to the recipient's unused A season bycatch cap.

Component 2: Sector allocation

Separate sector level caps will be distributed within each season for the CDQ sector and the three remaining AFA sectors, the inshore catcher vessel (CV) sector, the mothership sector, and the offshore catcher processor (CP) sector, as follows:

A season: CDQ 9.3%; inshore CV fleet 49.8%; mothership fleet 8.0%; offshore CP fleet 32.9%
B season: CDQ 5.5%; inshore CV fleet 69.3%; mothership fleet 7.3%; offshore CP fleet 17.9%

Rationale for distribution: This distribution is based on an estimate of the 5-year (2002-2006) historical average of the annual proportion of Chinook salmon bycatch by sector within each season, adjusted by blending the reported bycatch for CDQ and non-CDQ partner sectors. It is also weighted by the AFA pollock allocation for each sector. In each season, the proportional allocation by sector is made up of 0.75 multiplied by the adjusted 5-year historical average bycatch by sector and 0.25 multiplied by the AFA pollock allocation by sector.

Component 3: Sector transfers
Allocate Chinook salmon bycatch caps to each sector and allow the entity representing each non-CDQ sector and the CDQ groups to transfer Chinook salmon bycatch caps among the sectors and inshore cooperatives and CDQ groups.

Allow post-delivery (bycatch) transfer of Chinook salmon allocations. This provision would be administered consistent with the post-delivery provisions the Council adopted for the BSAI crab rationalization program, Amendment 80, and Rockfish Program, except that any recipient of a post delivery transfer during a season may not fish for the remainder of that season.

Component 4: Cooperative provisions
Each inshore cooperative and the inshore open access fishery (if the inshore open access fishery existed in a particular year) shall receive a Chinook salmon allocation managed at the cooperative level. If the cooperative or inshore open access fishery Chinook salmon cap is reached, the cooperative or inshore open access fishery must stop fishing for pollock.

The initial allocation of Chinook salmon by cooperative within the shore-based CV fleet or to the inshore open access fishery would be based upon the proportion of total sector pollock catch associated with the vessels in the cooperative or inshore open access fishery.

Cooperative transfers
When a Chinook salmon cooperative cap is reached, the cooperative must stop fishing for pollock. Cooperatives may transfer Chinook salmon bycatch with other sectors, inshore cooperatives, or CDQ groups.

Allow post-delivery (bycatch) transfer of Chinook salmon allocations. This provision would be administered consistent with the post-delivery provisions the Council adopted for the BSAI crab rationalization program, Amendment 80, and Rockfish Program, except that any recipient of a post delivery transfer during a season may not fish for the remainder of that season.

Component 5: Performance standard
Each sector will be annually evaluated against a performance standard. If the sector's annual Chinook salmon bycatch exceeds the sector's portion of the annual scenario 2 cap level in any 3 years within a consecutive 7-year period, all vessels within that sector will operate under annual scenario 2 in all subsequent years. Any vessel or CDQ group that fishes under the opt-out backstop pool will not be evaluated or included in annual calculations of a sector's performance standard.

Component 6: Observer program
The Council includes in its preferred alternative the observer coverage and monitoring requirements recommended by NMFS for the PPA and described in Section 2.5.4.3 (page 98) of the DEIS and in Sections 2.5.2.7 and 2.5.2.8 (pages 81 - 84). These recommendations increase observer coverage to 100 percent for catcher vessels regardless of vessel length. This increase in observer coverage does not apply to catcher vessels delivering unsorted codends at sea. Chinook salmon would be allowed to be discarded from catcher vessels only after being reported to and recorded by the vessel observer.

The Council also authorizes NMFS to develop modifications to regulations for the shoreside processors' catch monitoring and control plans to add performance standards to ensure accurate accounting for Chinook salmon at the plants, if NMFS determines that such modifications are needed.

Remove current regulations for Chinook salmon bycatch management
In taking final action, the Council's intent is for NMFS to remove current regulations governing Chinook salmon bycatch management in the Bering Sea and replace those regulations with the preferred alternative. Revisions to current regulations are as follows:

- Remove regulations for the current BS Chinook salmon PSC limit of 29,000 salmon that triggers closure of the Chinook salmon savings area for the BS pollock fishery.

- Remove Chinook salmon savings area definition for the BS.

- Remove exemptions to closure of the BS Chinook salmon savings areas for those cooperatives and CDQ groups participating in the current voluntary rolling hot spot (VRHS) ICA.

- Remove all elements of the current VRHS ICA regulations addressing Chinook salmon. New Chinook salmon bycatch management measures, including any incentive plan agreement requirements, would be added to the regulations. Retain regulations for the non-Chinook salmon components of the current VRHS ICA would remain.

2.5.2 Hard cap allocations under Alternative 5

Under Alternative 5, each year NMFS would determine the amount of transferable Chinook salmon bycatch allocations available to sectors, cooperatives, and CDQ groups based on their participation in a NMFS-approved IPA and a sector's past bycatch relative to its performance standard. Detailed examples for calculating the annual caps and allocations are in section 2.5.6. Once each sector, cooperative, or CDQ group reaches its specific allocation in a season, vessels in that sector would be prohibited from pollock fishing for the remainder of the season.

In the absence of any NMFS-approved IPAs, NMFS would allocate a portion of the 47,591 Chinook salmon hard cap to each sector, cooperative, and CDQ group eligible to receive pollock allocations. If some or all fishery participants form one or more IPAs that meet the criteria in regulations, then the high cap of 60,000 Chinook salmon would be available to the fleet. In this case, each year NMFS would make the following calculations to set Chinook salmon bycatch allocations:

1. Divide the 60,000 Chinook salmon cap by season.
2. Make initial allocations of the seasonal cap to the AFA sectors.
3. Make further allocations to the inshore cooperatives and CDQ groups.
4. Adjust the initial allocations if any CDQ group or vessel owner within a sector or cooperative chooses not participate in an approved IPA:
    a. reduce the amount of Chinook salmon bycatch allocated to its sector or cooperative by the calculated amount added to the backstop cap.
    b. distribute the remaining portion of the high cap among the sector or cooperative participating in an approved IPA.

c. reduce each sector's annual threshold amount proportionally for the vessels, cooperatives, or CDQ groups fishing under the backstop cap.

5. If no members of a sector participate in an IPA, or if a sector has not met the performance standard, the difference between their sector allocation of the 60,000 cap and the new sector allocation under a 47,591 or 28,496 cap would remain unallocated.

Both the 60,000 Chinook salmon cap and the 47,591 Chinook salmon cap would be allocated to AFA sectors using a method that recognizes that sectors have different fishing patterns and needs for salmon bycatch in order to harvest their AFA pollock allocation. Table 2-44 shows the sector allocation percentages and estimated cap levels. Under the 60,000 and the 47,591 Chinook salmon caps, the inshore and CDQ sector allocations would be further allocated among the inshore cooperatives, inshore open access fishery, and six CDQ groups based on the NMFS-approved percentage allocations that have been in effect since 2005 (71 FR 51804; August 31, 2006).

Table 2-44 Alternative 5 A and B season allocation percentages and corresponding cap levels for each sector.

Alternative 5	Allocation Percentages	60,000 Chinook salmon	47,591 Chinook salmon
A season allocation:	70.0%	42,000	33,314
CDQ	9.3%	3,906	3,098
Inshore CV	49.8%	20,916	16,591
Mothership	8.0%	3,360	2,665
Offshore CP	32.9%	13,818	10,960
B season allocation:	30.0%	18,000	14,277
CDQ	5.5%	990	785
Inshore CV	69.3%	12,474	9,894
Mothership	7.3%	1,314	1,042
Offshore CP	17.9%	3,222	2,556

The sector allocation percentages are based on the 5-year (2002-2006) historical average of the annual proportion of Chinook salmon bycatch by sector within each season, adjusted by blending the reported bycatch for CDQ and non-CDQ vessels fishing on behalf of CDQ groups. Allocation estimates for the sectors for each season were calculated by (1) multiplying 0.75 by each sector's adjusted 5-year historical average bycatch and (2) multiplying 0.25 by each sector's AFA pollock allocation. Providing for a portion of the historical average mitigates the inshore CV sector's disadvantage under the 70/30 seasonal split. Placing 70 percent of the cap in the A season benefited the CP, CDQ, and mothership sectors that have historically taken a larger portion of their bycatch in the A season. However, the 0.25 AFA pollock distribution adjustment to bycatch history ensures the poorest performers in the inshore CV sector will not be fully rewarded for past behavior.

Blending CDQ and non-CDQ bycatch history was done because the actual bycatch rates could not be accurately estimated due to past practices in how pollock hauls were assigned to CDQ and non-CDQ pollock allocations by the catcher/processors and mothership that fished on behalf of the CDQ groups. Historically, CDQ groups were constrained by multiple hard caps for other groundfish species and prohibited species when the non-CDQ pollock fisheries were not. Some CDQ groups would request that

the vessel operators assign the lower bycatch hauls to the CDQ groups and higher bycatch hauls to the non-CDQ pollock fisheries. This would result in it appearing that vessels fishing on behalf of the CDQ groups were achieving lower bycatch in their CDQ pollock hauls versus their non-CDQ hauls. Because actual bycatch rates could not be estimated due to this method of assigning hauls, and because bycatch history is such an important element in the percentage allocations under Alternative 4 and Alternative 5, the Council approved using an average bycatch rate for the CDQ and non-CDQ sectors that the CDQ groups partnered with.

The adjusted historical percentage bycatch for the CDQ, offshore C/P, and mothership sectors was determined as follows. The number of Chinook salmon recorded as CDQ bycatch within each of the two CDQ partner sectors was summed with the number of Chinook salmon recorded within the respective CDQ partner sector as non-CDQ for each year. Similarly, the volume of CDQ and non-CDQ pollock harvested in each year was summed. This combined pool of CDQ and non-CDQ Chinook salmon was divided by the combined pool of harvests for each CDQ partner sector. This average bycatch rate was multiplied by the pollock associated with the CDQ harvest to calculate and "adjusted" number of CDQ Chinook salmon taken as bycatch in each year and season, and was multiplied by the pollock associated with the non-CDQ harvest to calculate an "adjusted" non-CDQ number of Chinook salmon in each year and season for each of the two partner sectors. This adjustment does not affect the allocations to the inshore catcher vessel sector.

Any sector, cooperative, CDQ group, or individual vessel choosing not to participate in an IPA would fish under the backstop cap. NMFS would determine the amount of the backstop cap based on the opt-out participant's percentage share of AFA pollock. NMFS would subtract from the 60,000 Chinook salmon hard cap the proportion of the 28,496 backstop cap represented by the participant opting out of an IPA and use this same amount to create the backstop cap. Each vessel opting out of an IPA would forfeit any additional Chinook salmon that would have otherwise been allocated with participation in an IPA and allocations under the 60,000 hard cap. The Chinook salmon allocation forfeited by the opt-out participants will remain within the sector and be redistributed to IPA participants within that sector. However, if no members of a sector participate in an IPA or if a sector has not met the performance standard, the difference between their sector allocation of the 60,000 cap and the new sector allocation under a 47,591 or 28,496 cap would remain unallocated.

The resulting the backstop cap would be some number less than 28,496 Chinook salmon, depending on the number of vessels that opted out of an IPA. Only the Chinook salmon bycatch by vessels fishing under the backstop cap would accrue against the backstop cap. If only a few vessels fished under the backstop cap, the amount of Chinook salmon bycatch allocated to this cap could be very small. Unlike Alternative 4, the backstop cap would not be divided between CDQ and non-CDQ sectors. The Council determined that a separate allocation of the backstop cap to CDQ participants was unnecessary because the CDQ participants have the opportunity to realize the benefits of a direct allocation by participating in an IPA. The Council was also concerned that a CDQ allocation of a backstop cap could be so small that it may effectively prevent the CDQ group from participating in the pollock fishery. All vessels fishing under the backstop cap, including vessels fishing on behalf of a CDQ group, would be managed as a group under the seasonal allocation of Chinook salmon bycatch. NMFS would close directed fishing for pollock by vessels under the backstop cap before the seasonal backstop cap has been reached. No transfer provisions exist for non-IPA participants fishing under the backstop cap. NMFS would not rollover any remaining backstop cap from the A season to the B season.

Alternative 5 is similar to Alternative 4 in that if fishery participants do not form any IPAs for reducing Chinook bycatch, all vessels would fish under the hard cap of 47,591 Chinook salmon. Additionally, sectors that fail to meet their performance standard would fish under a portion of the 47,591 Chinook salmon hard cap.

2.5.3 Incentive plan agreements (IPAs)

A single hard cap could be perceived as a maximum number of Chinook salmon the pollock fishermen are authorized to catch each year. The concern is that fishermen would catch Chinook salmon up to this cap even if they could have taken some actions to limit their bycatch below the cap. To provide incentives for the fleet to avoid Chinook salmon bycatch, the hard cap of 60,000 Chinook salmon would be available to vessel owners or CDQ groups participating in a NMFS-approved IPA that included specific incentives to minimize bycatch in all years and fishing seasons. However, vessel owners, sectors, inshore cooperatives, or CDQ groups that chose not to participate in an IPA would be subject to the backstop cap. Also, if a sector exceeded its performance standard, its allocation would be reduced to a portion of the 47,591 Chinook salmon cap.

An IPA is a private contract among vessel owners, cooperatives, or CDQ groups that establishes incentives for participants to reduce Chinook salmon bycatch. Alternative 5 includes IPA content requirements, participation requirements, and deadlines for submission to NMFS for approval. Each IPA would be required to be submitted and approved by NMFS prior to fishing under the IPA. If NMFS approves an IPA, those participating in the IPA would receive an allocation of the 60,000 Chinook salmon hard cap.

To accomplish reductions in Chinook salmon bycatch, the IPA concept includes two components: (1) the NMFS-approved IPA contract that contains the elements of the incentive program that all vessel owners and CDQ groups agree to follow and (2) the annual report to the Council on performance under the IPA in the previous year. The IPA contract must meet the following requirements: (1) an IPA must provide incentive(s) for each vessel to avoid salmon bycatch under any condition of pollock or Chinook salmon abundance; (2) incentive measures must include rewards for salmon bycatch avoidance and/or penalties for failure to avoid Chinook bycatch at the vessel level; and (3) the IPA must specify how those incentives are expected to promote reduction in actual individual vessel bycatch rates relative to what would have occurred in absence of the incentive program. The Council intended that the IPAs contain incentive measures that promote salmon savings in any condition of pollock and salmon abundance, and that these incentive measures would influence fishing decisions at the vessel level to keep bycatch at or below the performance standard.

More than one IPA could be approved by NMFS. To be approved by NMFS, an IPA must meet minimum participation of vessel owners or CDQ groups representing at least 9 percent of the CDQ and non-CDQ pollock allocations for directed fishing under the AFA and be composed of at least two unaffiliated AFA companies or CDQ groups. The mothership sector, the smallest AFA sector, represents 9 percent of the amount of pollock allocated for directed fishing. The minimum participation requirements would allow each sector to form an IPA without needing participation from other sectors, as long as the IPA met all requirements and was submitted prior to the application deadline.

The deadline for submission of an IPA would be in the year preceding the year in which the IPA is proposed to be effective. All minor errors or omissions in the IPA would be resolved by NMFS contacting the IPA representative and requesting revisions to the IPA. All approved IPAs would be made available for Council and public review. Once approved, the IPA is in effect until the IPA representatives notify NMFS in writing that the IPA is no longer in effect or NMFS approves an amendment to the IPA. Although re-submission of an IPA is not required, the IPA representative must submit an annual participation list to NMFS that is signed by each owner or representative for each vessel and CDQ group that is a party to the IPA. Representatives of inshore cooperatives, catcher/processors, or motherships may sign a proposed IPA on behalf of all vessels that are members of the sector level entity. Once a party

to an IPA, a vessel owner, sector, inshore cooperative, or CDQ group could not withdraw from the IPA mid-way through the year.

If a proposed IPA does not meet the regulatory requirements, NMFS would identify the deficiencies in the IPA in writing to the IPA representative. The IPA representative would be provided 30 days to submit a revised IPA that addresses the deficiencies or to otherwise submit written information to NMFS that addresses the deficiencies. If the deficiencies identified by NMFS are not addressed within this 30 day evidentiary period, NMFS would issue an initial administrative determination (IAD) to disapprove the proposed IPA. The IPA representative would have 60 days to file an administrative appeal. If an administrative appeal was not filed within 60 days, disapproval of the IPA would be NMFS's final agency action.

The process of disapproving a proposed IPA is lengthy and resolution of an administrative appeal likely would not be completed prior to the fishing year in which the IPA is intended to start. The proposed IPAs would be due to NMFS by October 1. It likely would take NMFS four to six weeks to complete review and determine whether the proposed IPA could be approved or disapproved (up to November 15). If NMFS identifies deficiencies of the proposed IPA, the 30 day evidentiary period would likely run from November 15 to December 15. If the IPA representative submitted a revised proposed IPA that addressed the deficiencies identified by NMFS, the decision to approve the revised IPA could easily take until mid-January. However, if the IPA representative did not address the deficiencies identified by NMFS and an IAD was issued by the end of December, the 60 day deadline for filing an administrative appeal would be close to March 1, well after the start of the pollock A season. While an appeal is pending, participants in the proposed IPA may not receive transferable Chinook salmon allocations under the 60,000 hard cap.

Participants in the pollock fishery are not required to join an IPA, and vessel participation in an IPA would be voluntary. Entire sectors, inshore cooperatives, or CDQ groups could opt to not participate in an IPA, or any number of vessels within the catcher/processor or mothership sectors or the inshore cooperatives could opt-out of the IPA as long as an IPA was approved by NMFS. Vessels fishing on behalf of a CDQ group could not opt-out on their own because they are not authorized to make decisions about whether a CDQ group participates in an IPA or opts-out. In this respect, only a CDQ group could decide whether to participate in an IPA and not the owners of vessels fishing on behalf of the CDQ group. A CDQ group could not have some vessels fishing under the 60,000 hard cap and others fishing under the backstop cap.

Any vessel or CDQ group permitted to receive pollock allocations under the AFA that wants to join an IPA must be allowed to join subject to the terms and agreements that have been agreed upon by all parties in that IPA. A participant who believed that they were involuntarily excluded from the IPA could submit a challenge to NMFS's approval of the proposed IPA that provided documentation of violation. NMFS would have to review this information and determine whether the assertion was valid. If it were, NMFS would disapprove the IPA. Further resolution of the issue could then occur through NMFS's administrative appeal process. However, an appeal on the issue of involuntary exclusion could be difficult and time consuming to resolve and an on-going appeal would require all participants to fish under whichever cap would apply if no IPA was approved.

If no challenge was submitted and if a proposed IPA contains all of the required information, met the participation requirements, and it generally described an incentive program that is designed to accomplish the Council's goals, NMFS would approve the IPA. NMFS would not judge the adequacy of the incentives described or whether these incentive measures would, in fact, successfully provide the incentives intended by the Council. Judgments about the efficacy of outcomes of the proposed incentive program would be subjective and the regulations would not provide a legal basis for NMFS to disapprove the proposed IPA because it did not believe that the proposed measures would work as intended. Any

number of different incentive programs could meet these objectives because the requirements for the IPA are performance based. Therefore, the annual report and evaluation would be the primary tool to determine whether an IPA is meeting the Council's goal to minimize Chinook salmon bycatch.

Each IPA representative would be required to prepare an annual report that describes the performance of the IPA. All reports would be required to be submitted to the Council and would be made available to the public. This report would include (1) a comprehensive explanation of incentive measures in effect in the previous year, (2) how incentive measures affect individual vessels, and (3) an evaluation of whether incentive measures were effective in achieving salmon savings beyond levels that would have been achieved in the absence of the measures.

2.5.4 Transferability and eligibility to receive transferable allocations

Alternative 5 contains two provisions, transferability and rollovers, to provide the fleet the flexibility to fully harvest the pollock TAC while maintaining the overall Chinook salmon bycatch at or below either the 60,000 or 47,591 Chinook salmon hard caps. Separate Chinook salmon hard cap allocations could limit the pollock harvest within a sector or cooperative. Transferable Chinook salmon bycatch allocations under this alternative would enable eligible participants to transfer bycatch allocations among sectors, cooperatives, and CDQ groups. Transferability is expected to mitigate the large variation in the amount of Chinook salmon that each sector, CDQ group, or cooperative catches in a given season by allowing eligible participants to obtain a larger portion of the bycatch allocations in order to harvest their full pollock allocation or to transfer surplus allocation to other sectors.

Transfers are a voluntary request to NMFS, initiated by the entity transferring surplus Chinook salmon allocations, to move a specific amount of a Chinook salmon bycatch allocation from one entity's account to another entity's account. NMFS would review the transferring entity's catch account to ensure sufficient salmon was available to transfer; therefore, NMFS approval would be required before a transaction could be completed. Transfers to eligible entities could occur at anytime in a season but transfers cannot be made between the B and A seasons.

Transferable salmon bycatch allocations must be issued to an entity. The entity represents all members of the group eligible to receive the transferable allocation. Some AFA participants already are recognized as entities by NMFS. NMFS recognizes inshore cooperatives as entities by through the AFA pollock permitting process. They file contracts with NMFS and are issued permits by NMFS. Under §679.7(k)(5)(ii) an inshore cooperative is prohibited from exceeding its annual allocation of pollock. CDQ groups are entities recognized by NMFS to receive groundfish, halibut, crab, and prohibited species quota allocations. Under §679.7(d)(5) a CDQ group is prohibited from exceeding its groundfish, crab, and halibut PSC allocations. Chinook salmon bycatch allocations would be added to this prohibition under this action.

Non-transferable "sector" allocations of pollock are made to the catcher/processor sector and the mothership sector. Therefore, these two sectors have not been required to be permitted by NMFS and the sector is not held accountable through a prohibition in 50 CFR part 679 from exceeding its allocation of pollock. NMFS retains in-season management authority to close directed fishing by these sectors if their catch of pollock reaches their allocation. Existing contracts forming the Pollock Conservation Cooperative, the High Seas Catchers' Cooperative, and the Mothership Fleet Cooperative could be modified to create the entities required to receive transferable bycatch allocations from NMFS or new entities (contracts) could be formed by these same vessel owners to address only NMFS's requirements to receive and transfer Chinook salmon bycatch allocations.

The entity receiving transferable Chinook salmon bycatch allocations would be authorized to transfer all or a portion of the entity's salmon bycatch allocation to another entity or receive a transfer from another entity (authorized to sign transfer request forms), and be responsible for any penalties assessed for exceeding the entity's salmon bycatch allocation (i.e., the entity must have an agent for service of process with respect to all owners and operators of vessels that are members of the entity). The contract necessary to form the entity to receive salmon bycatch allocations is different from the contract establishing an IPA. If members of either the catcher/processor or mothership sector are unable to form a single entity to accept their share of the transferable salmon bycatch allocations under the 60,000 cap or the 47,591 cap, then that sector would receive its portion of the hard cap as a sector level cap that is not transferable and would be managed by NMFS with directed fishery closures that would apply to all members of the sector. Additionally, if the sector could not form an entity and some members of the sector joined an IPA and some members opted-out, then the nontransferable sector level cap would be adjusted to account for the opt-out vessels just like a transferable allocation as described under section 2.5.2.

Alternative 5 also contains a post-delivery transfer provision modeled after the provisions of Amendment 80 and the Central Gulf of Alaska Rockfish Pilot Program. The procedure for making transfers after an entity had exceeded its Chinook salmon bycatch allocation is described in Section 2.5.8.1.

Additionally, NMFS would rollover any unused Chinook salmon allocation or sector level cap remaining at the end of the A season to the B season for all sectors, cooperatives, or CDQ groups. Rollovers are management actions by NMFS to move unused Chinook salmon bycatch from an entity's A season account to its B season account. Rollovers could occur when a sector, cooperative, or CDQ group has harvested all of its pollock allocation, but has not reached its A season Chinook salmon bycatch allocation or sector level cap. Rollovers would only occur under the 60,000 and 47,591 Chinook salmon caps because these caps are allocated to sectors, cooperatives, and CDQ groups.

No rollover or transfer provisions exist for non-IPA participants fishing under the backstop cap because that cap is not apportioned to sectors, cooperatives, or CDQ groups. The Council's motion is not explicit on this point, however, the description of Alternative 4 in the DEIS was explicit that rollovers would not occur for the backstop cap and the motion language for the rollover provision is similar in the Council motion for both Alternative 4 and Alternative 5. The motion language states that unused salmon from the A season would be made available to the recipient of the salmon bycatch hard cap in the B season. No recipients would exist under the backstop cap as all vessels would be managed as a group.

2.5.5 Performance standard

The Council recognized the uncertainty and variability in salmon encounters in any given year when it selected the 60,000 Chinook salmon high cap. The Council also intended that bycatch over time be closer to the historical average through the IPAs that provide incentives to reduce bycatch below the cap. However, the Council also recognized that the IPA concept is novel and has not been demonstrated to achieve reductions in bycatch. Therefore, the Council included a performance standard as an additional tool to ensure sectors do not fully harvest the Chinook salmon bycatch allocation every year.

With the performance standard, for each sector to continue to receive its allocation of the 60,000 Chinook salmon cap, each sector's Chinook salmon bycatch could not exceed its annual portion of the 47,591 Chinook salmon in three years within a consecutive seven year period. The performance standard was designed to account for the unpredictability of high Chinook salmon encounters and the fact that occasionally a sector or cooperative may not be able to avoid exceeding its portion of 47,591 Chinook salmon in certain years.

Before each fishing year, NMFS would determine each sector's portion of 47,591 Chinook salmon. This amount would be called the annual threshold amount. A sector's annual threshold amount could vary each year depending on the number of vessels in that sector, or CDQ groups in the CDQ sector, choosing not to participate in an IPA. Any vessel or CDQ group that fishes under the backstop cap will not be included in the calculation of a sector's annual threshold amount. An example of calculating the annual threshold amount for the performance standard is in Section 2.5.7.

At the end of each fishing year, NMFS would evaluate each sector's bycatch in that year against that sector's annual threshold amount. Only the bycatch of vessels or CDQ groups participating in an IPA would accrue against a sector's annual threshold amount. If a sector's annual bycatch exceeds its annual threshold amount in any three years within seven consecutive years, NMFS would reduce that sector's Chinook salmon allocation to that sector's portion of 47,591 Chinook salmon, for all future years.

2.5.6 Calculating annual caps and allocations

Examples are provided below to illustrate how, under Alternative 5, NMFS would (1) assign an amount of Chinook salmon bycatch to sectors, cooperatives, and CDQ groups under each cap level and (2) adjust the sector level annual threshold amount if some vessels do not participate in an IPA.

Inshore CV Sector

NMFS would allocate the inshore CV sector's portion of either the 60,000 or 47,591 Chinook salmon cap to the inshore cooperatives based on the same percentages as the annual pollock allocations to the inshore cooperatives under current NMFS regulations. If the inshore CV sector was eligible for allocations under the 60,000 Chinook salmon cap, and if no vessel or cooperative opted out of an IPA, the amount of Chinook salmon allocated to the inshore CV sector would be 20,916 Chinook salmon in the A-season (49.8% of the A season allocation) and 12,474 Chinook salmon in the B-season (69.3% of the B season allocation) for a total of 33,390 Chinook salmon annually to the inshore CV sector. Assuming all permitted inshore catcher vessels were members of inshore cooperatives (no inshore open access fishery), then each of the inshore cooperatives would receive the transferable allocation of Chinook salmon shown in Table 2-45.

If one or more of the inshore cooperatives does not participate in an approved IPA, the amount of Chinook salmon allocated to the inshore CV sector would be reduced by the amount of Chinook salmon allocated to the backstop cap (Table 2-45). Members of the inshore cooperative not participating in an approved IPA would fish under a backstop cap with all vessels not participating in any IPA.

The following example shows how the allocations would be calculated if two inshore cooperatives opted out of an IPA and fished under the backstop cap. For this example, assume that the cooperatives with the highest and lowest Chinook salmon bycatch allocations opted out of an IPA; the Akutan CV Association (31.145%, highest allocation) and Arctic Enterprise Association (1.146%, lowest allocation). Also assume that vessels fishing for these two inshore cooperatives were the only vessels opting out of the IPA and fishing under the backstop cap.

Table 2-45 Each cooperative's (1) portion of the inshore sector's allocation of pollock, (2) Chinook salmon allocation in the A season and B season under the 60,000 Chinook salmon cap, (3) for the backstop cap, the amount of the 28,496 Chinook salmon that would be used to create the backstop cap if that cooperative opted out of an IPA, and (4) the amount of the 47,591 Chinook salmon cap used for the annual threshold calculation for the performance standard. Seasonal Chinook salmon bycatch allocations to the inshore cooperatives are based on each cooperative's percentage allocation of the inshore CV sector's allocation of pollock.

Inshore Cooperatives Alternative 5	**(1)**	**(2) 60,000**	**(3) 28,496**	**(4) 47,591**
Inshore sector A season allocation		20,916	9,933	16,591
Akutan CV Assoc	31.145%	6,514	3,094	5,167
Arctic Enterprise Assoc	1.146%	240	114	190
Northern Victor Fleet coop	9.481%	1,983	942	1,573
Peter Pan Fleet coop	2.876%	602	285	477
Unalaska coop	12.191%	2,550	1,211	2,023
Unisea Fleet coop	24.256%	5,073	2,409	4,024
Westward Fleet coop	18.906%	3,954	1,878	3,137
limited access AFA vessels	0.000%	0	0	0
Inshore sector B season allocation		12,474	5,925	9,894
Akutan CV Assoc	31.145%	3,885	1,845	3,081
Arctic Enterprise Assoc	1.146%	143	68	113
Northern Victor Fleet coop	9.481%	1,182	562	938
Peter Pan Fleet coop	2.876%	359	171	285
Unalaska coop	12.191%	1,521	722	1,206
Unisea Fleet coop	24.256%	3,026	1,437	2,400
Westward Fleet coop	18.906%	2,358	1,120	1,871
limited access AFA vessels	0.000%	0	0	0

If all members of the Akutan cooperative and the Arctic Enterprise cooperative did not participate in an IPA, the Chinook salmon allocated to the inshore sector would be reduced by these cooperatives' portion of 28,496 Chinook salmon. The Chinook salmon bycatch numbers specified under the 28,496 cap in Table 2-46 would be subtracted from the inshore sector's allocation of the 60,000 cap and that amount of Chinook salmon would be used to create the backstop cap. The calculation of the backstop cap associated with the two inshore cooperatives is shown below:

A season: 19,947 Chinook salmon * 49.8% (inshore A season proportion) = 9,933 Chinook salmon
9,933* [(31.145% (Akutan) + 1.146% (Arctic Enterprise)] = 3,208 Chinook salmon

B season: 8,549 Chinook salmon * 69.3% (inshore B season proportion) = 5,925 Chinook salmon
5,925* [(31.145% (Akutan) + 1.146% (Arctic Enterprise)] = 1,913 Chinook salmon

The backstop cap for these two inshore cooperatives would be 3,208 Chinook salmon in the A season and 1,913 Chinook salmon in the B season. In this example, the two inshore cooperatives were the only participants in the pollock fishery that did not participate in an approved IPA, thus this amount of Chinook salmon would represent the full amount available under the backstop cap.

This seasonal backstop cap would then be subtracted from the inshore sector's seasonal allocation of the 60,000 Chinook salmon cap; 20,916 in the A season and 12,474 in the B season. The resulting cap for the

inshore CV sector that participates in the IPA would be 17,708 in the A season and 10,561 in the B season.

The amount of Chinook salmon deducted from the inshore sector's allocation of the 60,000 cap would be 5,121 Chinook salmon, which is less than the amount of Chinook salmon that would have been allocated to the Akutan Cooperative and the Arctic Enterprise Cooperative had they participated in an IPA (10,782 Chinook salmon). The difference of 5,661 Chinook salmon remains in the inshore CV sector's allocation to be distributed among the inshore cooperatives that participate in an IPA, in proportion to each cooperative's adjusted share of Chinook salmon bycatch.

The adjusted Chinook salmon bycatch allocation for each inshore cooperative in an IPA would be calculated by (1) adding the percentage allocations of the remaining inshore cooperatives (67.71%), and (2) dividing each remaining inshore cooperative's original percentage allocation by 0.6771. The resulting percentage allocations for each cooperative participating in an IPA is applied to the total amount of Chinook salmon allocated to the inshore sector after the amount allocated to the backstop cap is subtracted. The adjusted percentages add to 100%. In this example, the remaining five inshore cooperatives participating in an approved IPA now share the remaining 5,661 Chinook salmon plus the initial allocation of 22,608 for a total of 28,269 Chinook salmon allocation.

Table 2-46 Allocations of Chinook salmon under Alternative 5 (1) if all cooperatives participate in an IPA and (2) if two cooperatives opt-out of an IPA.

Inshore Cooperative	% allocation of pollock	Chinook Salmon Allocations			If two cooperatives don't participate in IPA				
		A season	B season	Total	% share of backstop cap	A season	B season	Total removed from sector allocation to create backstop cap	Total Chinook salmon forfit to sector
Akutan CV Assoc	31.145%	6,514	3,885	10,399	31.145%	3,094	1,845	4,939	5,460
Arctic Enterprise Assoc	1.146%	240	143	383	1.146%	114	68	182	201
Total	32.291%	6754	4,028	10,782	**Total**	3,208	1,913	5,121	5,661
					Adjusted % share*	Adjusted A season	Adjusted B season	Adjusted annual allocation to IPA participants	Additional IPA allocation
Northern Victor Fleet co-op	9.481%	1,983	1,182	3,165	14.002%	2,480	1,479	3,959	794
Peter Pan Fleet co-op	2.876%	602	359	961	4.248%	752	449	1,201	240
Unalaska co-op	12.191%	2,550	1,521	4,071	18.005%	3,188	1,901	5,089	1,018
Unisea Fleet co-op	24.256%	5,073	3,026	8,099	35.823%	6,344	3,783	10,127	2,028
Westward Fleet co-op	18.906%	3,954	2,358	6,312	27.922%	4,944	2,949	7,893	1,581
open access AFA vessels	0.000%	0	0	0	0.000%	0	0	0	0
Total	100%	20,916	12,474	33,390	100%	17,708	10,561	28,269	5,661

*Adjusted share of the Chinook salmon allocation

Table 2-47 Hypothetical estimates for the catcher/processor sector of (1) the percentage of each vessel's pollock allocation, (2) the amount of Chinook salmon that would be apportioned to each vessel in the A season and B season under the 60,000 Chinook salmon cap, (3) the amount of Chinook salmon removed from the sector allocation to create the backstop cap, and (4) each vessel's portion of the 47,591 Chinook salmon for the annual threshold calculation for the performance standard.

Offshore Catcher/Processor Sector Alternative 5		**60,000**		**28,496**		**47,591**
		A season	**B season**	**A season**	**B season**	**Annual**
		42,000	18,000	19,947	8,549	
Vessel	Allocation	13,818	3,222	6,563	1,530	13,516
American Dynasty	4.932%	681	159	324	76	667
American Triumph	7.246%	1001	233	475	111	979
Northern Eagle	6.070%	839	196	398	93	820
Northern Hawk	8.449%	1167	272	554	129	1,142
Northern Jaeger	7.384%	1020	238	485	113	998
Ocean Rover	6.394%	883	206	420	98	864
Highland Light	5.136%	710	165	337	79	694
Island Enterprise	5.595%	773	180	367	86	756
Seattle Enterprise	5.476%	757	176	359	84	740
Kodiak Enterprise	5.904%	816	190	387	90	798
Northern Glacier	3.121%	431	101	205	48	422
Pacific Glacier	5.062%	699	163	332	77	684
Alaska Ocean	7.295%	1008	235	479	112	985
Arctic Storm	4.579%	633	148	301	70	619
Arctic Fjord	4.458%	616	144	293	68	603
Starbound	3.943%	545	127	259	60	533
Katie Ann*	0.000%	0	0	0	0	0
U.S. Enterprise*	0.000%	0	0	0	0	0
American Enterprise*	0.000%	0	0	0	0	0
Endurance*	0.000%	0	0	0	0	0
Ocean Peace	0.500%	69	16	33	8	68
American Challenger**	0.783%	108	25	51	12	106
Forum Star**	0.607%	84	20	40	9	82
Ocean Harvester**	1.076%	149	35	71	16	145
Tracy Anne**	1.155%	160	37	76	18	157
Muir Milach**	1.129%	156	36	74	17	153
Neahkahnie**	1.661%	230	54	109	25	225
Sea Storm**	2.046%	283	66	134	31	276

*AFA permitted catcher/processors, none of which participated in the 2006 Bering Sea pollock fishery and are unlikely to return to the directed pollock fishery. The *American Enterprise* and the *U.S. Enterprise* have not participated since 1998, the *Endurance* since 2000, and the *Katie Ann* since 2004.

**AFA permitted catcher vessels eligible to deliver to catcher processors.

Source: Testimony to the Council at the 10/2008 meeting. The *Harvester Enterprise* was incorrectly listed in the draft EIS for this action but has been removed from this table because the vessel is not AFA eligible. Revisions for the final EIS: Personal communication with Plesha, J.T. of Trident Seafoods, 9/03/2009.

Offshore CP

Hard cap adjustments under the 60,000 Chinook salmon cap are not as complicated for the CP and MS sectors because NMFS would allocate the Chinook salmon only to the sector level, regardless of the number of vessels in the sector participating or not participating in an approved IPA. Estimates of the pollock catch history used in this example to assign Chinook salmon bycatch allocations to CP vessels are provided in Table 2-47.

These hypothetical percentage allocations were recommended by the PCC board and were presented to the Council during the October 2008 meeting. The suggested values in Table 2-47 are based on the percentage of Bering Sea pollock that each company received under either PCC or HSCC agreement and the 2006 vessel catch history. The 2006 Bering Sea pollock catch histories represent the best estimate of each vessel's relative harvesting capacity because this is one of the few years the *F/T American Dynasty* fished for pollock in both the A and B seasons.

AFA eligible catcher/processors that do not currently participate in the fishery are not likely to return. Therefore, the PCC board recommended that these vessels receive 0 percent of the pollock catch history within the CP sector. Three of the four inactive vessels (*Katie Ann, U.S. Enterprise,* and *American Enterprise)* could return to the directed pollock fishery. The fourth vessel, *Endurance,* is listed as an AFA eligible vessel but is permanently precluded from participation in the fishery because foreign flagged vessels cannot receive endorsements to fish in the EEZ of the U.S. In the unlikely event that a vessel currently assigned a zero proportion would return to the fishery and choose to opt-out of participation in an IPA, the portion and number of Chinook salmon associated with that vessel will be assigned, within the sector, based on revisions to the cooperative contract until regulations can be revised to reflect the new proportions assigned to each vessel.

For this example, if the CP vessels assigned the highest and lowest proportions opted out of an IPA, the calculation of Chinook salmon bycatch allocations would be similar to those for cooperatives opting out of the CV sector. The CP vessel with the highest estimated salmon proportion (8.449%) is the Northern Hawk, and the vessel with the lowest proportion (0.5%), is the Ocean Peace.

If these vessels opt-out of an IPA, an amount equal to the allocation under the backstop cap (724 Chinook salmon) would be subtracted from the overall CP sector's allocation of the 60,000 Chinook salmon cap and used to create the backstop cap. The calculation of the amount of the backstop cap associated with these inshore cooperatives is shown below:

A season: 19,947 * 32.9% (Offshore CP A season proportion) = 6,563 Chinook salmon
6,563 * [8.449% (Northern Hawk) + 0.5% (Ocean Peace)] = 587 Chinook salmon

B season: 8,549 Chinook salmon * 17.9% (Offshore CP B season proportion) = 1,530 Chinook
1,530* [8.449% (Northern Hawk) + 0.5% (Ocean Peace)] = 137 Chinook salmon

The initial CP sector's share (13,818 A season; 3,222 B season; 17,040 annual Chinook salmon) of the 60,000 Chinook salmon cap would be reduced by 587 A season and 137 B season, for a total of 724 Chinook salmon annually to create the backstop cap. The adjusted allocation of Chinook salmon, 13,231 A season and 3,085 B season for a total of 16,316 annually, would be distributed among the remaining 26 vessels in the CP sector. Adjustments made to cooperative portions in the earlier inshore CV example are not necessary for the MS or CP sector because NMFS does not allocate Chinook salmon bycatch beyond the sector level for the offshore fleet.

Mothership sector

For illustrative purposes, information from the 2008 Final Report of the Mothership Fleet Cooperative, as provided to the Council, was used to determine relative percentage apportionments for the vessels in this sector. From that report, the cooperative member share percentages and their associated vessels were applied to the mothership sector level cap (Table 2-48). The proportions do not total exactly in this report (99.939% rather than 100.000%), hence the resulting salmon allocations are hypothetical.

As with the examples provided for inshore CVs and CP sectors, if the vessels from the mothership sector with the highest and lowest proportions were to opt-out of an IPA (e.g., the Pacific Challenger and the Alyeska), the resulting sector level cap for the mothership sector would be an adjusted annual allocation of 4,409 Chinook salmon, adjusted downward from their initial allocation (Table 2-48) by the portion removed by vessels opting out of IPA participation. The resulting backstop cap would then be 191 Chinook salmon in the A season 75 Chinook salmon in the B season.

Here the vessel with the highest estimated salmon proportion (9.671%), the Pacific Challenger with 325 A season and 127 B season Chinook salmon, and the vessel with the lowest proportion (2.272%), the Alyeska with 76 A season and 30 B season Chinook salmon, opt-out of the IPA.

Their allocation under the backstop cap (264 Chinook salmon) would be calculated and subtracted from the overall mothership sector's allocation of the 60,000 Chinook salmon cap and moved from the offshore sector's allocation cap to create the backstop cap. The calculation of the amount of the backstop cap associated with these inshore cooperatives is shown below:

A season: 19,948 * 8.0% (Mothership A season proportion) = 1,596 Chinook salmon
1,596* [9.671% (Pacific Challenger) + 2.272% (Alyeska)] = 190 Chinook salmon

B season: 8,548 Chinook salmon * 7.3%% (Mothership B season proportion) = 624 Chinook
624* [9.671% (Pacific Challenger) + 2.272% (Alyeska)] = 74 Chinook salmon

The initial mothership sector's share (3,360 A season; 1,314B season; 4,674 annual Chinook salmon) of the 60,000 Chinook salmon cap would be reduced by 190 A season and 74 B season, for a total backstop cap of 264 Chinook salmon. The adjusted allocation of Chinook salmon, 3,170 A season and 1,240 B season for a total of 4,410 Chinook salmon would be distributed among the remaining 17 vessels permitted by the AFA in the mothership sector.

Table 2-48 Hypothetical estimates for the mothership sector of (1) the percentage of each vessel's pollock allocation, (2) the amount of Chinook salmon that would be apportioned to each vessel in the A season and B season under the 60,000 Chinook salmon cap, (3) the amount of Chinook salmon removed from the sector allocation to create the backstop cap, (4) each vessel's portion of the 47,591 Chinook salmon for the annual threshold calculation for the performance standard.

Mothership Sector		**(2) 60,000 cap**		**(3) 28,496 backstop cap**		**(4) 47,591 Annual Threshold**
		A season	**B season**	**A season**	**B season**	
		42,000	18,000	19,947	8,549	
Vessel	**(1) Allocation**	3,360	1,314	1,596	624	3,707
American Beauty	6.000%	202	79	96	37	223
Pacific Challenger	9.671%	325	127	154	60	359
Nordic Fury	6.177%	208	81	99	39	229
Pacific Fury	5.889%	198	77	94	37	218
Margaret Lyn	5.643%	190	74	90	35	209
Misty Dawn	3.569%	120	47	57	22	132
Vanguard	5.350%	180	70	85	33	199
California Horizon	3.786%	127	50	61	24	140
Oceanic	7.038%	236	92	112	44	261
Mar-Gun	6.251%	210	82	100	39	231
Mark 1	6.251%	210	82	100	39	231
Aleutian Challenger	4.925%	165	65	79	31	182
Ocean Leader	6.000%	202	79	96	37	223
Papado II	2.953%	99	39	47	18	110
Morning Star	3.601%	121	47	57	23	134
Traveler	4.272%	144	56	68	27	158
Vesteraalen	6.201%	208	82	99	39	230
Alyeska	2.272%	76	30	36	14	84
Western Dawn	4.150%	139	55	66	26	154

Source: Information from the 2008 Final Report of the Mothership Fleet Cooperative, as provided to the NPFMC, was used to determine relative proportions.

CDQ groups

Similar adjustments would be made if one or more of the CDQ groups did not participate in an approved IPA. If the CDQ groups with the highest and lowest proportions Chinook salmon allocations were to opt-out of the IPA (e.g., the CVRF, 24% and the CBSFA, 5%) the resulting sector level cap for the CDQ sector would remain an annual total of 4,896, with 4,222 Chinook salmon allocated to CDQ groups participating in an IPA and 674 used to create the backstop cap. The resulting backstop cap would then be allocated between seasons: 538 Chinook salmon in the A season and 136 Chinook salmon in the B season (Table 2-49).

Table 2-49 Seasonal allocations to the CDQ sector and each CDQ group under the 60,000 and 47,591 Chinook salmon caps and, for the backstop cap, the amount of the 28,496 Chinook salmon that would be used to create the backstop cap if a CDQ group opted out of an IPA. Seasonal Chinook salmon bycatch allocations to the CDQ groups are based on each entity's percentage allocation of the CDQ sector's allocation of pollock.

CDQ Sector Alternative 5		60,000	28,496	47,591
A season allocation	**70.00%**	**42,000**	**19,947**	**33,314**
CDQ seasonal allocation	**9.30%**	**3,906**	**1,855**	**3,098**
APICDA	14.00%	547	260	434
BBEDC	21.00%	820	389	651
CBSFA	5.00%	195	93	155
CVRF	24.00%	938	445	743
NSEDC	22.00%	859	408	681
YDRFA	14.00%	547	260	434
B season allocation:	**30.00%**	**18,000**	**8,549**	**14,277**
CDQ seasonal allocation	**5.50%**	**990**	**470**	**785**
APICDA	14.00%	138	66	110
BBEDC	21.00%	208	99	165
CBSFA	5.00%	49	23	39
CVRF	24.00%	238	113	188
NSEDC	22.00%	218	103	173
YDRFA	14.00%	139	66	110

All sectors in aggregate

Assuming that all of these examples occurred during the same fishing season with two of each sector's vessels, cooperatives, or entities opting out of an IPA, all vessels these fishing under the backstop cap would be required to stop fishing once their bycatch aggregate accrued to the cap. In this case, the participants from each sector (inshore CV, offshore CP, MS, and CDQ) would fish under the backstop cap of 4,523 Chinook salmon in the A season and 2,260 Chinook salmon in the B season (Table 2-49 and Table 2-50). Vessels fishing under the backstop cap would not have individual or separate sector caps. Therefore, the bycatch of all vessels choosing to opt out of an IPA would accrue towards the seasonal backstop cap. Directed fishing under the backstop cap would likely lead to a 'race for bycatch' and truncated pollock fishing season for vessels fishing under the backstop cap. In this example NMFS would monitor the fishery and issue a directed fishery closure to ensure that bycatch does not exceed the backstop cap.

Under this example, the various sectors and vessels participating in a NMFS-approved IPA would receive an allocation of the remaining 53,216 Chinook salmon from the initial 60,000 hard cap allocation.

Table 2-50 Hypothetical sector level caps, under Alternative 5, resulting from the examples of highest and lowest members of each sector opting out of an IPA in a given year and the recalculated backstop cap of 6,783 Chinook salmon.

Sector	Initial annual allocation of the 60,000 cap	Amount deducted due to vessels with the high and low proportions "opting out"	Adjusted total allocation to IPA participants	Total allocation to sector
Inshore CV	33,390	5,121	28,269	33,390
Offshore C/P	17,040	724	16,316	17,040
Mothership	4,674	264	4,410	4,674
CDQ	4,896	674	4,222	4,896
Total	60,000	6,783	53,217	60,000

Regardless of the number of vessels participating in the IPA or under the backstop cap, the annual hard cap allocation will be 60,000 Chinook salmon. The total Chinook salmon hard cap allocation will remain 60,000, unless (1) an IPA is not approved by NMFS, (2) one or more entire sector(s) (inshore CV, offshore CV, MS, or CDQ (all six entities) opt out of an IPA, or (3) one or more sectors do not meet the sector level performance standard and fish under the 47,591 hard cap.

If one or more entire sectors did not participate in an IPA or had exceeded their performance standards the total allocation to the pollock fishery would not total 60,000 Chinook salmon annually. Instead, the total Chinook salmon hard cap allocation would be reduced by the difference between what the sector opting out would have been allocated under the 60,000 cap and their allocation under the new cap level, either 28,496 or 47,591 Chinook salmon. For example, if the mothership sector opted out of participation in an IPA their allocation under the 28,496 cap would be 2,220 Chinook salmon annually (1,596 A season and 624 B season), fewer fish than would have been allocated had the sector participated in an IPA (4,674 annually: 3,360 A season and 1,314 B season) (Table 2-44). Instead of being reallocated, as for individual vessels within a sector or cooperatives opt-out, the difference, 2,454 Chinook salmon (4,674-2,220), between these two allocations is not reallocated. The actual maximum Chinook salmon hard cap would then be reduced to 57,546 Chinook salmon annually for the pollock fishery. However, sectors with one or more vessels joining a NMFS approved IPA have less of a reduction in Chinook salmon allocations, as described above.

Similarly if the mothership sector, or any sector, had exceeded their performance standard and had to fish under the 47,591 hard cap, the difference in Chinook salmon allocations would not be redistributed among other participants in the fishery. In this case, the mothership sector would be allocated 3,707 Chinook salmon annually (2,665 A season and 1,042 B season) under the 47,591 Chinook salmon hard cap (Table 2-44). The fleet-wide maximum Chinook salmon hard cap would then be reduced to 59,033 Chinook salmon annually.

2.5.7 Calculating the annual threshold amounts for the performance standard

NMFS will annually calculate each sector's annual threshold amount under the performance standard based on its portion of 47,591 Chinook salmon and the level of participation by its members in an IPA. NMFS would determine a sector's portion of 47,591Chinook salmon by multiplying the sector's seasonal percentages by the seasonal allocations and summing the results (Table 2-44). This amount could change from year to year if any members of a sector do not participating in an IPA. The annual threshold amount for that sector would be reduced proportionally based on the percentages shown in Table 2-45, Table 2-47, Table 2-48, and Table 2-49 for the inshore cooperative, vessel, or CDQ group that did not

participate in the IPA. A sector's annual threshold amount would not change when vessels from other sectors or another sector opt-outs of an IPA or if another sector exceeds their performance standard and fishes under the 47,591 Chinook salmon cap. For example, if each inshore cooperative joined an IPA, the inshore sector's annual threshold would be 26,485 Chinook salmon, regardless of the participation of other sectors in an IPA or the performance of other sectors.

The calculation of the inshore sector's annual threshold amount is shown below:

- 16,591 Chinook salmon in the A-season (49.8% of the A season's allocation, 33,314); plus
- 9,894 Chinook salmon in the B-season (69.3% of the B season's allocation, 14,277); equals
- 26,485 Chinook salmon annually for the inshore sector.

If one or more of the inshore cooperatives or individual vessels within the inshore sector do not participate in an approved IPA, the amount of Chinook salmon in the inshore sector's annual threshold amount would be reduced by the portion of the 47,591 Chinook salmon cap represented by those operations opting out of an IPA (Table 2-45). Similar to the earlier CV example, members of the inshore sector not participating in an approved IPA would fish under a backstop cap with all other vessels not participating in an IPA. Vessels or cooperatives fishing under the backstop cap would not be a part of the calculation of the annual threshold amount for their sector. Assuming the cooperative with the highest and the cooperative with the lowest allocation of Chinook salmon PSC opt-out of an IPA, the annual threshold amount for the inshore vessels participating in an IPA would be reduced from 26,485 to 18,030 Chinook salmon.

The calculation of the amount of the inshore sector's annual threshold amount is shown below:

A season: 33,314 Chinook salmon * 49.8% (inshore A season proportion) = 16,591 Chinook
16,591* [(31.145% (Akutan) + 1.146% (Arctic Enterprise)] = 5,357 Chinook salmon

B season: 14,277 Chinook salmon * 69.3% (inshore B season proportion) = 9,894 Chinook salmon
9,894* [(31.145% (Akutan) + 1.146% (Arctic Enterprise)] = 3,194 Chinook salmon

Annual threshold amount = 26,485 Chinook salmon – (5,357 Chinook salmon + 3,194 Chinook salmon) = 17,934 Chinook salmon

2.5.8 Managing and Monitoring Alternative 5

The management and monitoring issues associated with Alternative 5 are many of the same issues discussed in Section 2.2.5 for Alternative 2 and Section 2.4.7 for Alternative 4. The preferred alternative would make transferable allocations of Chinook salmon bycatch to the following entities:

- No more than one entity representing the AFA catcher/processor sector,
- No more than one entity representing the AFA mothership sector,
- Up to seven inshore cooperatives,
- Six CDQ groups.

If all of these entities were eligible to receive transferable bycatch allocations there would be 15 different Chinook salmon bycatch accounts each season for a total of 30 bycatch accounts each year. Separate allocations would be made for the A season and the B season for a total of up to 30 transferable bycatch allocation accounts. This number of transferable bycatch account could exist under either the 60,000 Chinook salmon cap or the 47,591 Chinook salmon cap. In addition to the transferable allocations, non-transferable allocations could be issued under either cap to the inshore open access fishery for any inshore

catcher vessel that did not join an inshore cooperative. Under the 60,000 cap, NMFS would manage any vessels that did not participate in an IPA as a group under the seasonal "opt-out" or "backstop" cap. Table 2-51 shows the maximum number of transferable allocations under Alternative 5 and the two possible categories of non-transferable allocations. These allocations would be managed as described for Alternative 2 (Section 2.2.5) and Alternative 4 (Section 2.4.7.2).

Table 2-51 Potential number of transferable Chinook salmon bycatch accounts under Alternative 5.

	Entities that could receive transferable allocations					Potential non-transferable allocations	
	Catcher/ processors	Motherships	Inshore co-ops	CDQ Program	Total transferable	Inshore open access	Opt-out cap
A season	1	1	7	6	15	1	1
B season	1	1	7	6	15	1	1
Annual total	2	2	14	12	30	2	2

An added complexity of managing transferable allocations of Chinook salmon bycatch under the preferred alternative is the potential for some vessels to be fishing under transferable allocations of the 60,000 cap and other vessels to be fishing under transferable allocations of the 47,591 cap. This could occur if some sectors had not exceeded their performance standards, but other sectors had exceeded their performance standard. At its most complex, the preferred alternative could require NMFS to manage some transferable allocations under the 60,000 cap, some vessels fishing under the backstop cap, some vessels fishing in the inshore open access fishery under a different portion of the 60,000 cap, and some vessels fishing under transferable allocations of the 47,591 cap (vessels in sectors that had exceeded their performance standard in past years).

Alternative 5 would require NMFS to complete a number of administrative functions each year before the pollock fishery starts on January 20. These functions include:

1. determine how each sector had performed against its annual threshold for the previous year;

2. publish a notice in the *Federal Register* if any sector had exceeded its performance standard by exceeding its annual threshold amount of Chinook salmon bycatch in three of the past seven years;

3. determine if any sectors, inshore cooperatives, CDQ groups, or vessels were not participating in an IPA;

4. determine the appropriate Chinook salmon bycatch allocations for each entity, fishery, and season;

5. make adjustments to the transferable allocations and the opt-out cap for those not participating in an IPA; and

6. calculate the annual threshold amounts for the upcoming year for each sector still fishing under the 60,000 cap.

All information listed above would be posted on NMFS's web page by January 1 of each year.

NOAA GC advised NMFS that a reduction in a sector's allocations as a result of exceeding its performance standard requires NMFS to publish a notice in the *Federal Register*. In doing so, NMFS must address as part of each notice whether a public comment period is necessary on the decision or

whether waiver of notice and comment could be justified under the Administrative Procedure Act. NMFS anticipates that, because the determination of the performance standard and each sector's bycatch against its annual threshold will not involve any discretionary decisions by NMFS, that waiver of the public comment period could be justified. However, if the notice of reduction in allocations as a result of exceeding the performance standard cannot be made effective before January 20 of the next year, then it will be effective on January 20 of the following year, which would result in a one-year delay in reducing Chinook salmon bycatch allocations.

2.5.8.1 Managing transferable allocations under either the 60,000 cap or the 47,591 cap

Entities receiving transferable allocations of Chinook salmon bycatch would be prohibited from exceeding their seasonal allocations. Each group would be required to manage its pollock fishing so that neither its pollock allocation nor its salmon bycatch allocation was exceeded. The Council intended that both the A-season allocation and the annual allocation would not be exceeded. The only way to do that is to treat the A-season and B-season allocations as separate quota accounts and evaluate overages at the end of the A-season and the end of the year. NMFS would not close directed fishing for pollock by the sectors, inshore cooperatives, or CDQ groups receiving transferable salmon bycatch allocations when those salmon bycatch allocations are reached. Rather, penalties could be assessed for overages of their Chinook salmon bycatch allocation.

Chinook salmon bycatch allocations under the 60,000 cap and the 47,591 cap would be transferable among the entities receiving transferable allocations. The entity representing the catcher/processor sector, the entity representing the mothership sector, any of the inshore cooperatives, or any of the CDQ groups may transfer to and from any of the other entities, subject to the following restrictions:

- Entities receiving transferable allocations under the 60,000 cap would only be allowed to transfer to and from other entities receiving allocations under the 60,000 cap.

- Entities receiving transferable allocations under the 47,591 cap would only be allowed to transfer to and from other entities receiving allocations under the 47,591 cap.

- Chinook salmon may not be transferred from one entity's A-season account to another entity's B-season account or vice-versa.

Any Chinook salmon remaining in an entity's A-season account at the end of the A-season would be added by NMFS to the entity's B-season account.

Post-delivery transfers: If an entity's catches more Chinook salmon than it has been allocated each season, the entity's Chinook salmon bycatch allocation account balance will become negative. This is called an "overage" of the entity's Chinook salmon bycatch allocation. If an overage occurs, all vessels fishing on behalf of the entity would be allowed to complete the pollock fishing trip that they are on, but would not be allowed to start another fishing trip for the remainder of the season. Chinook salmon bycatch likely will continue to accrue against the entity's allocation as vessels complete fishing trips. The entity will be allowed to transfer in Chinook salmon bycatch from another entity to "cover" these overages and bring their Chinook salmon allocation account balance up to zero. They will not be allowed to transfer any more Chinook salmon than is needed to bring their account balance to zero. Because each entity will receive separate allocations for the A season and the B season and will be prohibited from exceeding either of those allocations, the allowance for post delivery transfers will be provided for both the A season and the B season allocations. Each entity will be allowed 15 days after the end of the A season and 30 days after the end of the B season to conduct post delivery transfers to cover overages. Any

overages that exist after June 25 for the A season and after December 1 for the B season will be subject to enforcement action for violating NMFS regulations.

2.5.8.2 Managing non-transferable Chinook salmon allocations under either the 60,000 cap or the 47,591 cap

There are three scenarios under which NMFS would manage non-transferable allocations of Chinook salmon bycatch:

1. Vessels fishing under the opt-out cap

2. The inshore sector open access pollock fishery that exists if any inshore catcher vessel does not join an inshore cooperative. Vessels in the inshore open access fishery could be allowed to participate in the Chinook salmon IPA. However, they could not receive a transferable salmon bycatch allocation. The inshore open access fishery would receive non-transferable Chinook salmon bycatch allocations under either the 60,000 cap or the 47,591 cap.

3. If the catcher/processor sector or mothership sector do not form the entity necessary to receive transferable allocations, these sectors would receive non-transferable allocations of Chinook salmon bycatch under either the 60,000 cap or the 47,591 cap.

Non-transferable Chinook salmon bycatch allocations would be managed by NMFS with a directed fishing closure once this limit was reached.

Managing the Opt-Out Cap: Any vessel or CDQ group entity in a sector or cooperative receiving an allocation under the 60,000 Chinook salmon cap, but not participating in an approved IPA, would be managed under the Chinook salmon bycatch opt-out cap. Vessel owners, cooperatives, or CDQ groups not participating in an IPA do not have to notify NMFS that they are not participating in an IPA. NMFS will know the list of vessels participating in each approved IPA and will post on the internet the status of all permitted vessels as to whether they are participating or not participating in an IPA and what cap they will be managed under. Vessel owners will be expected to notify NMFS if they are incorrectly listed as a vessel fishing under the opt-out cap. All Chinook salmon bycatch by vessels directed fishing for pollock in the Bering Sea under the opt-out cap will accrue against the opt-out cap. All vessels fishing under the opt-out cap, including vessels fishing on behalf of a CDQ group, will be managed as a group under the seasonal allocations of Chinook salmon bycatch to the opt-out cap. NMFS will close directed fishing for pollock by vessels fishing under the opt-out cap when NMFS determines that the seasonal cap has been reached. However, nothing would prevent the vessels or CDQ groups fishing under the opt-out cap from cooperating to conduct their pollock fisheries so that they did not exceed the cap.

No rollover or transfer provisions exist for non-IPA participants fishing under the backstop cap. However, if the A season closure date selected by NMFS results in more Chinook salmon caught than were allocated to these fisheries in the A-season, the amount over the A-season allocation would be deducted by NMFS from the B-season allocation to the opt-out cap.

2.5.8.3 Managing Chinook salmon bycatch under the CDQ Program

Transferable allocations of the Chinook salmon cap to the CDQ Program would be further allocated among the CDQ groups based on percentage allocations approved by NMFS on August 8, 2005 (71 FR 51804; August 31, 2006). For Chinook salmon, these percentage allocations are:

- Aleutian Pribilof Island Community Development Association (APICDA) 14%;

- Bristol Bay Economic Development Corporation (BBEDC) 21%;
- Central Bering Sea Fishermen's Association (CBSFA) 5%;
- Coastal Villages Region Fund (CVRF) 24%;
- Norton Sound Economic Development Corporation (NSEDC) 22%;
- Yukon Delta Fishery Development Corporation (YDFDC) 14%.

Any CDQ group not participating in an approved IPA would not receive a transferable allocation of a portion of the 60,000 cap. Any CDQ group that does not participate in an IPA will fish under the seasonal opt-out cap along with any other vessels not participating in an approved IPA. Only the CDQ group may decide whether to participate in an IPA or opt out, not owners of vessels fishing on behalf of a CDQ group. A CDQ group could not have some vessels fishing under the 60,000 cap and others fishing under the opt-out cap.

Vessels fishing on behalf of a CDQ group could not individually opt out of the IPA because they are not authorized to make decisions about whether a CDQ group participates in the IPA or opts out. They fish under whatever cap and whatever IPA conditions the CDQ group agrees to, and these conditions are part of the contract between the CDQ group and the vessel harvesting pollock on its behalf.

The amount of Chinook salmon bycatch subtracted from the CDQ sector's allocation of the 60,000 cap would be the percentage allocation for that CDQ group opting out to the CDQ sector's allocation of 28,496 Chinook salmon. This amount would be added to the opt-out cap. The difference between the opting out CDQ group's share of the 60,000 cap and its share of the 28,496 cap would be redistributed among the CDQ groups receiving transferable allocations of the 60,000 cap based on the remaining CDQ groups' percentage allocations. The annual threshold amount for purposes of applying the annual performance standard will be based on the proportional share of 47,591 represented by the CDQ groups that are participating in an approved IPA each year.

If Chinook salmon bycatch by vessels fishing on behalf of CDQ groups under transferable allocations of the 60,000 cap exceeds the CDQ sector's annual threshold bycatch amount in any three years within a consecutive seven-year period, then all CDQ groups, including those under the under the opt-out cap, will fish under transferable allocations of the 47,591 cap in all subsequent years.

CDQ allocations of a portion of the 60,000 or 47,591 Chinook salmon cap could be transferred to other CDQ groups, inshore cooperatives, or the entity representing the catcher/processor sector or the mothership sector if these other entities also are fishing under transferable allocations of these caps. All other transfer limitations described above also apply to the CDQ sector and entities.

Any new monitoring requirements that apply in the BS pollock fisheries will apply to vessels and processors fishing or processing CDQ pollock. In addition, catcher vessels directed fishing for pollock on behalf of the CDQ groups and delivering to shoreside processing plants will be required to deliver to a plant that has an approved catch monitoring and control plan. This requirement is necessary to properly account for any Chinook salmon bycatch in that pollock CDQ delivery.

2.5.8.4 Observer coverage and monitoring requirements

As was discussed for transferable Chinook salmon bycatch allocations under Alternatives 2, 3, and 4, NMFS recommends the increased monitoring requirements under the preferred alternative. The Council included these recommendations as component 6 for Alternative 5. These recommendations are described in Section 2.2.5.7 through Section 2.2.5.10 and include:

- Each catcher vessel regardless of length, except catcher vessels delivering unsorted codends, must have 100 percent observer coverage.
- All salmon of any species that is brought onboard a catcher vessel must be retained onboard the catcher vessel and delivered to the processing facility (no at-sea discards of salmon from catcher vessels).
- Shoreside processor monitoring requirements will have to be adjusted to incorporate a higher standard for Chinook salmon bycatch accounting. This could include such changes as modifying observer duties, modifying factory configurations, or reducing the flow of pollock into the factory to ensure that Chinook salmon do not pass the observer's sampling area without being counted.
- Chinook salmon bycatch by catcher/processors and catcher vessels delivering to motherships will be based on a count or census of the salmon rather than using the current method described in section 3.1 of estimating Chinook salmon bycatch based on observer's species composition samples. Additional regulations will be needed to ensure that all salmon are retained and counted by an observer before they are discarded from a catcher/processor or mothership.
- Electronic (video) monitoring in lieu of observers would only be allowed after a successful, comprehensive assessment of the effectiveness of electronic monitoring to verify that Chinook salmon are not discarded.

Given the complexity of the dual Chinook salmon accounting envisioned under Alternative 5 (including Chinook transferability by some sectors and CDQ groups), NMFS recommended 100 percent observer coverage for all inshore catcher vessels, even those fishing with non-transferable allocations under the inshore open access fishery or the opt-out cap, as described in Section 2.4.7.3.

2.6 Alternatives considered and eliminated from further analysis

The alternatives in this analysis were developed through a public Council and stakeholder process. Many issues were aired and other possible management options, or points within the range of the options, were considered. Through an iterative process, the Council arrived at an extensive suite of management options that best suit the problem statement, that represent a reasonable range of alternatives and options, and also represent a reasonable combination of management measures that can be analyzed and used for decision-making.

The Council and NMFS also concurrently held a formal scoping period which provided another forum for the public to provide input to the development of alternatives. A scoping report was provided which summarized the comments for the Council, and the comments were taken into account in the Council's selection of a final suite of alternatives for this analysis. Chapter 1 includes a detailed discussion of the issues raised in scoping, which is referenced but not repeated here. Many of the comments received from scoping are captured in the current analysis; others were not carried forward for the reasons described below; still others were outside of the scope of this action's purpose and need, and were also not carried forward.

This section discusses the Council's process for developing alternatives, and those alternatives that were originally discussed at the Council level and through the Council's Salmon Bycatch Workgroup, but which, for the reasons noted below, were not analyzed in detail.

The Council, in February 2007, established a Salmon Bycatch Workgroup (SBW) committee, comprising of members representing the interests of western Alaska (4 members) and of the pollock industry (4 members). This committee had two Chairs, one from each of the major interest groups represented in its membership. The Council later (June 2007) appointed an additional member from the Alaska Board of Fisheries (BOF). The Council requested that the SBW provide recommendations to the Council regarding appropriate salmon cap levels, by species (Chinook and chum or 'other' salmon), to be considered for the

pollock fishery, as well as to work with staff to provide additional review of and recommendations for the development of alternatives for analysis.

The SBW met 5 times, in March 2007, May 2007, August 2007, November 2007 and January 2009. These meetings were open to the public and noticed in the Federal Register accordingly. Following each meeting, a report was compiled representing the recommendations and discussions by the committee, and provided to the Council at its subsequent meeting (April 2007, June 2007, October 2007, December 2007, February 2009). Based upon the recommendations from the Council's Salmon Bycatch Workgroup in August 2007, the Council initially considered a broader range of numbers for Chinook caps. These numbers ranged from 14,000 to 114,000 fish, based on various methodologies for increasing or decreasing a cap above or below historical averages and highest years of bycatch. At the December 2007 Council meeting, the Council modified the range under consideration so that the highest cap in the alternatives is 87,500 Chinook salmon annually. The Council's intent with this action is to reduce salmon bycatch to the extent practicable in the pollock fishery, and the Council did not believe that including the higher numbers would be a reasonable alternative to consider in light of the purpose of the action. This was also a recommendation by the SBW resulting from its November 2007 meeting. The Council chose to limit the low end of the range of caps under consideration to 29,323 which is representative of the 5 year average prior to 2001. Percentage decreases below this level were initially considered, but the Council felt that including this number was sufficiently conservative to meet the purpose of this action.

The SBW meeting in January 2009 was held with the express purpose to review incentive program proposals prior to Council review of these proposals in February 2009. This SBW meeting occurred during the public comment period on the DEIS. The DEIS had identified a preliminary preferred alternative (now Alternative 4) which incorporated these programs conceptually and review and comment by the committee provided an additional opportunity for committee members as well as members of the public to understand and provide feedback on the programs during their development. As with previous SBW meetings, a report was compiled by staff of the discussions and recommendations of the committee and presented to the Council at the subsequent meeting (February 2009).

At the February 2008 meeting, the Council considered including a three year step down mechanism for the hard cap by starting with a cap at a 20% increase in the highest year pre-2007. This would have meant starting with a Chinook hard cap of 99,908. The cap would start at this number and then move towards the Council's target hard cap in equal increments over three years. This alternative was rejected because it is not consistent with the purpose and need because it would not minimize bycatch to the extent practicable in the first three years of implementation.

Absent from this analysis is a suite of separate management measures for chum salmon. An extensive set of alternative management measures have been developed for chum salmon, including similar measures as considered in this analysis for Chinook salmon, i.e. hard caps on the pollock fishery and triggered time/area closures. In April 2008, the Council moved to bifurcate the analysis of management measures by species such that this EIS would focus on Chinook salmon measures while further discussion of chum management measures would occur under a separate analysis. The Council identified the Chinook bycatch issue as a higher priority, and acted to move as expediently as possible towards implementation of revised management measures for the pollock fishery. The chum salmon alternatives were last modified by the Council in June 2009 (see June 2009 Council motion at http://fakr.noaa.gov/npfmc/current_issues/bycatch/Chumbycatch709.pdf). The Council continued to discuss these alternatives in December 2009 and will likely move forward with an analysis of separate chum salmon management in 2010.

During the development of alternatives, several other alternatives were considered that were not included in the final alternative set. A fixed area closure for Chinook salmon was considered in February 2008 but

was not included in the final set of alternatives. Similarly, complex triggered area closures were brought forward in various iterations to the Council via staff discussion papers in December 2007, February 2008 and April 2008, and these likewise were not included in the current set of alternatives. The Council adopted the recommendation of the SSC, as follows. "**[T]he SSC recommends deleting alternatives that do not meet the problem statement's goal of reducing bycatch. To this end, the Council should consider removing alternatives for fixed closed areas and triggered closures that would be similar, in kind, to past implementation of the triggered closures of the Salmon Savings Areas. Over time, these area closures have been found to be insufficient to reduce bycatch.** The rationale for dropping the various types of closed area configurations is that the Bering Sea environment is expected to continue to change in both subtle and remarkable ways, and the spatial and temporal use of this environment by salmon and pollock is also expected to change, such that closure boundaries identified at this time cannot be expected to be effective over the longer term. Compounding this problem is the considerable uncertainty of the effects that will be realized if the pollock fleet is excluded from the most productive grounds. Potential effects include increased effort to achieve the TAC and increased bycatch of smaller pollock, perhaps also of salmon. Unfortunately, the quantitative information on which to base analyses of the effects of fishing outside of the productive grounds is extremely limited. This limitation would be most severe for the large closed area alternatives that encompass large percentages of productive pollock fishing areas."

An option was considered to modify the PSC accounting period to begin with the B season and continue through the A season of the following year. This option more accurately reflects salmon life history, and was included to provide additional conservation benefits to the same cohort of salmon that is on the fishing grounds (and caught) in the B season and then subsequently in the A season of the following year. Modification of the annual accounting period would have a profound effect on both the fleet and the relative amount of salmon taken from any one cohort of salmon if it were applied in conjunction with an annual cap (triggered or hard cap). If this were applied in conjunction with, for example, a hard cap on Chinook, based on historical fishing practices, the fleet (or sectors thereof) would very likely have reached their salmon cap prior to or during the early weeks of the A season. Thus they would be constrained in the A season due to bycatch in the previous B season; as the A season catch is more lucrative, this would increase economic costs to the pollock fishery. While the same number of salmon (depending on the hard cap selected) may be caught absent this option (e.g. in a calendar year), in this case the conservation benefits are improved by constraining catch specifically on a particular cohort of salmon. The Council did not move forward with this option, because it instead chose to adopt seasonal distribution of the annual cap. Seasonal caps would already convey the appropriate conservation benefits to the salmon stocks of restricting catch in any one time period, thus further modifications of the accounting period would be redundant. This was reinforced by the SSC in its April recommendations: "**the SSC recommends removing Option A (modifying the PSC accounting period to begin at the start of the B season) recognizing that seasonal accounting, which is expected to be done, will make this option unnecessary."**

A couple of scoping comments suggested changes to the pollock fishery management such as reducing the pollock "A" and "B" season TACs, changing the timing of fishing activity to reduce bycatch, changing the trawl gear to reduce bycatch, closing the pollock fishery, and shortening the pollock "B" season based on information that suggests that substantial savings could result from closures in the latter part of the "B" season, when Chinook bycatch rates tend to increase drastically (while pollock catches are typically low). While some of these measures, such as changing the timing of fishing activity and shortening the B season may result in Chinook salmon savings, the Council has determine that a hard cap or triggered areas closures are the most direct way to minimize bycatch. Gear modifications to reduce salmon bycatch are already under development by the pollock industry. Reducing the TAC or closing the pollock fishery would not be in compliance with the Magnuson Stevens Act and would not meet the

proposed action's purpose and need to minimize bycatch to the extent practicable while achieving optimum yield from the fishery.

In the development of cap alternatives, an index cap was considered previously as an option under this analysis that would framework in regulations a method to set the cap relative to salmon returns. This cap formulation would be based on consideration of run-size impacts and involve a number of uncertain components (e.g., river-of-origin, ocean survival, future expected run size). It thus would have to be derived from estimated probabilities to account for the varying uncertainty. The Council did not think that the index cap formulation was sufficient developed at this time to include as an alternative.

The Council also considered establishing a new cap on an annual basis; however, this would be extremely difficult, if not impossible, to implement successfully. The process first requires Council to make a recommendation and second requires NMFS to implement that recommendation through a rulemaking, which must comply with a variety of federal laws. NMFS expects that it would take more that a year for (1) for the necessary information to be collected, analyzed and presented to the Council, (2) for the Council to determine alternative cap levels that would then be analyzed according to NEPA and applicable law, (3) for the Council recommend to the Secretary of Commerce the alternative cap level that best represented the new information, and (4) for NMFS to implement the new cap level in Federal regulations. By the time the new cap level was effective, it would be based on outdated information and the current information may indicate that a different cap level is appropriate.

The Council considered different flexible bycatch accountability mechanisms, such as a hard cap with tradable salmon quotas issued to individual vessels, cooperatives, or sectors, or a hard cap with hybrid quota/fee system. Scoping comments suggested that if the action includes a hard cap, then the action should impose the cap at the sector, cooperative, or individual vessel level for individual vessel accountability to reward good behavior (acceptable bycatch rates) and penalize bad behavior (high bycatch rates). Scoping comments suggested that, absent a system of individual vessel accountability, a hard cap that threatens to shut down the pollock fishery prior to the achievement of the TAC would inevitably result in irresponsible vessel operators (those that make no effort to avoid or reduce bycatch) prospering and the responsible vessel operators (those that alter their fishing behavior in order to reduce bycatch) suffering. Alternatives 2, 3, and 4 contains options for transferable allocations at the sector, cooperative, and CDQ group level and Alternative 4 allows individual vessel accountability through the salmon bycatch ICA. The Council determined that the levels of accountability in the suite of alternatives analyzed in this EIS/RIR would provide the flexibility for sectors, cooperatives, and CDQ groups to work to avoid salmon bycatch while harvesting their pollock allocations and that individual vessel allocations were not necessary.

Finally, the Council requested analysis of a fee per salmon caught to provide an incentive to reduce bycatch and to support research assessing impacts and methods to further reduce salmon bycatch. However, the Magnuson-Stevens Act provides NMFS limited authority to impose fees. Section 304(d)(1) specifically limits the amount of fees to "the administrative costs incurred in issuing the permits." Similarly, in the context of limited access privilege programs, NMFS and the Council must impose fees "that will cover the costs of management, data collection and analysis, and enforcement activities." Thus, the Magnuson-Stevens Act does not authorize NMFS or the Council to impose a fee on a per-salmon basis or collect fees to support research for reducing salmon bycatch. In addition, NOAA General Counsel also advises that NMFS cannot require that an ICA contain management measures that NMFS does not have the authority to require directly. Therefore, NMFS cannot implement regulations that would expressly require a salmon bycatch ICA to include fees on salmon bycatch, even if such fees were not directly assessed by NMFS.

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