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UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for Oceans and Atmosphere
Washington, D.C. 20230

ER #1
FINAL EA/RIR

DEC 27 1999

To all Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment for an Emergency Rule to Implement Permit Requirements for Vessels, Processors, and Cooperatives Wishing to Participate in the Bering Sea and Aleutian Islands Pollock Fishery Under the American Fisheries Act

LOCATION: Federal Waters of the Bering Sea and Aleutian Islands

SUMMARY: This emergency rule would implement permit requirements to authorize vessels and processors to fish or and process pollock under the American Fisheries Act and provide the opportunity for inshore catcher vessels to form cooperatives for the 2000 fishing year. The emergency rule is necessary due to the statutory January 2000 implementation requirement of the American Fisheries Act.

RESPONSIBLE OFFICIAL: Steven Pennoyer
Regional Administrator
Alaska Region
National Marine Fisheries Service
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The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact, including the environmental assessment, is enclosed for your information. Also, please send one copy of your comment to me in Room 5805, PSP, U.S. Department of Commerce, Washington, D.C. 20230.

Sincerely,

Susan Fruchter

Director of the Office of Policy and Strategic Planning

Enclosure

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW (EA/RIR)

AMERICAN FISHERIES ACT (AFA) MEASURES

EMERGENCY INTERIM RULE TO IMPLEMENT PERMIT REQUIREMENTS FOR VESSELS, PROCESSORS, AND COOPERATIVES WISHING TO PARTICIPATE IN THE BERING SEA AND ALEUTIAN ISLANDS POLLOCK FISHERY UNDER THE AFA

December 6, 1999

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APPENDICES

EXECUTIVE SUMMARY

Chapters 1, 2, and 3 of this document contain background information on the American Fisheries Act, the Council's list of alternatives for sideboard provisions (including the PREFERRED ALTERNATIVES), a summary of the status of stocks for all species, and a discussion of potential environmental impacts of the alternatives. None of the alternatives under consideration is expected to result in significant impacts relative to NEPA considerations.

Chapter 4

This chapter addresses the inconsistencies in definitions between existing regulations and terms used in the AFA. The Council is recommending that consistency be achieved by (1) having the same definitions of inshore and offshore in the BSAI and the GOA; (2) use of the term groundfish (instead of fish) throughout the implementing regulations; (3) use of the terms inshore and offshore would apply only to directed fishing for I/O species (BSAI pollock and GOA Pollock and Pacific cod); and, (4) the duration of the I/O regulations should be the same for the BSAI and the GOA.

Additionally this chapter addresses an alternative related to processor sideboards which was raised by the Council in February - the proposed option that floating processors be limited to a single geographic location for purposes of processing I/O species. Provisions of the AFA may negate the need for such a requirement due to explicit BSAI pollock allocation in the AFA, though non-AFA processors propose that such a restriction be in place. The Council did take action to restrict floating processors to a single geographic location, and took action to achieve consistency among definitions, as recommended by staff.

Chapter 5

This chapter discusses required and potential provisions of co-op agreements, including options which were identified by the Council in the previous two meetings. In addition to disclosure of catch and bycatch statistics (for which regulations are being developed separately), the Council proposed the following:

* limit co-op agreements to specific duration (1-6 years)
* prohibit linkages of membership to delivery of non-pollock species
* require contracts to be submitted by December 1

Although a brief discussion of the pros and cons of these proposals is contained in Chapter 5, they appear to primarily be policy issues for the Council, for which direction to the industry will be necessary in order for the year 2000 co-ops to be negotiated and completed this summer and fall. The Council took the following action on these issues: (1) co-op agreements may be of any duration but must be reviewed annually; (2) co-op agreements must be submitted for Council review by December 1 of the year prior to fishing; (3) prohibit co-op agreements from requiring vessels to deliver species other than BSAI pollock to their AFA processor; and (4) co-op agreements shall require the disclosure of catch and bycatch statistics.

Chapter 6

The Act specifies in section 211(b)(2) that *"beginning January 1, 1999 catcher/processors eligible under paragraphs (1) through (20) of section 208(e) are prohibited from, in the aggregate -*

(A) exceeding the percentage of the harvest available in the offshore component of any Bering Sea and Aleutian Islands groundfish fishery (other than the pollock fishery) that is equivalent to the total harvest by such catcher/processors and the catcher/processors listed in section 209 in the fishery in 1995, 1996, and 1997 relative to the total amount available to be harvested by the offshore component in the fishery in 1995, 1996, and 1997;

(B) exceeding the percentage of the prohibited species available in the offshore component of any Bering Sea and Aleutian Islands groundfish fishery (other than the pollock fishery) that is equivalent to the total of the prohibited species harvested by such catcher/processors and the catcher/processors listed in section 209 in the fishery in 1995, 1996, and 1997 relative to the total amount of prohibited species available to be harvested by the offshore component in the fishery in 1995, 1996, and 1997; and

(C) fishing for Atka mackerel in the eastern area of the Bering Sea and Aleutian Islands and from exceeding the following percentages of the directed harvest available in the Bering Sea and Aleutian Islands Atka mackerel fishery—

(i) 11.5 percent in the central area; and

(ii) 20 percent in the western area."

The Act was quite specific in how the catcher/processor sideboards were to be structured as a result of negotiations in Washington, DC. However the AFA is equally specific in stating that the Council could change the sideboard's structure to mitigate against the adverse impacts of cooperatives. Section 213(c) authorizes the Council to recommend additional conservation and management measures as necessary to mitigate adverse effects in fisheries caused by the AFA or cooperatives in the directed pollock fishery, so long as any such measures take into account all factors affecting the fisheries and are imposed fairly and equitably to the extent practicable among and within the sectors in the directed pollock fishery. Changes were made to the "negotiated" sideboards for the 1999 fishing seasons, and further revisions are being considered as part of this amendment package.

Chapter 6 provides an analysis of the catcher/processor sideboard caps. Sideboard caps set the maximum amounts of BSAI non-pollock groundfish that the 20 AFA catcher/processors, listed by name, can harvest in future years. The caps are set as a percentage of TAC and not a set tonnage. Setting the caps as a percent of TACs allows the caps to increase or decrease relative to the available quota. The sideboard caps are harvest limits and <u>not</u> allocations. Only BSAI pollock was distributed as an allocation under the AFA. Once the catcher/processors reach a cap they will be required to either stop fishing all together or stop fishing in the non-pollock target fisheries, depending on how the Council structures this program.

Several options for developing sideboard caps were considered by the Council. Sideboard caps could be based on the 1995-97 catch histories of the 20 eligible catcher/processors or the 20 eligible catcher/processors plus the nine ineligible catcher/processors. After deciding which vessel's history to include, the Council then had to decide whether to base the history on either their non-pollock target fishery catch or their catch in all target fisheries. These decisions yield the numerator for calculating the percentages of future TACs. The denominator for the calculation could use either total historic catch or the TAC available these years. Table 1 provides a summary of the estimated future sideboard caps under these alternatives. Only species which are expected to have adequate cap amounts for a directed fishery are included in the table. Atka mackerel is constant as those caps are prescribed in the AFA.

Table 1: Percentage of future TAC available to 20 AFA catcher processors under various sideboard options for six possible directed fisheries. Tonnage range is derived by using the range of possible percentages multiplied by the 1999 TACs.

Fishery	(TAC or catch)	Non-Pollock Targets 20	All Targets 20	Non-Pollock Targets 29	All Targets 29
Yellowfin sole	TAC	19.7%	20.0%	23.3%	23.7%
	Catch	23.8%	24.1%	28.1%	28.6%
	Range		(36,839 - 53,482 mt)		
Pacific cod	TAC	12.8%	17.4%	26.3%	33.4%
	Catch	13.7%	18.7%	28.2%	35.9%
	Range		(5,369 - 15,069 mt)		
Atka mackerel W. AI	TAC	20.0%	20.0%	20.0%	20.0%
	Catch	20.0%	20.0%	20.0%	20.0%
	Range		(4,590 mt)		
Atka mackerel C. AI	TAC	11.5%	11.5%	11.5%	11.5%
	Catch	11.5%	11.5%	11.5%	11.5%
	Range		(2,190 mt)		
Other flatfish	TAC	11.0%	11.4%	13.1%	13.6%
	Catch	16.5%	17.0%	19.7%	20.4%
	Range		(8,362 - 15,508 mt)		
Rock sole	TAC	5.1%	6.0%	7.3%	8.9%
	Catch	6.0%	7.2%	8.7%	10.6%
	Range		(4,335 - 9,010 mt)		

Source: NMFS Blend data 1995-97

The Council also considered a sub-option that would divide the sideboard caps by the quarter of the year in which the qualifying harvest was made. This would prevent catcher/processors from dramatically altering their temporal harvest patterns, to take advantage of market conditions. For example, members of industry stated in public testimony that some flatfish species are difficult to market and their prices drop once a certain amount of product reaches the market. Quarterly apportionments were suggested as a method to limit the amount of fish the AFA catcher/processors can market early in the year.

PSC sideboard caps are also being developed. These caps are based on the amount of PSC that was harvested by AFA catcher/processors from 1995-97. Table 2 reports the estimated percentage of future trawl PSC apportionments. Note that these percentages are not broken out by PSC target fishery.

Table 2: Percent of PSC Bycatch Harvested by the AFA Catcher Processors in the BSAI from 1995-97, and Estimated Future PSC Caps Based on 1999 Apportionments

	Non-pollock Targets		Pollock Targets		All Target Fisheries	
	AFA CPs		AFA CPs		AFA CPs	
PSC Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Percent of Future PSC Apportionments						
Halibut Mortality	5.60%	8.42%	2.22%	3.41%	7.82%	11.82%
C. *bairdi* (Zone 1)	12.68%	14.02%	1.01%	2.26%	13.68%	16.28%
C. *bairdi* (Zone 2)	4.20%	5.02%	0.12%	0.41%	4.32%	5.43%
Red King Crab (Zone 1)	0.63%	0.65%	0.70%	1.74%	1.33%	2.39%
Herring	0.57%	1.20%	19.36%	21.85%	19.94%	23.05%
C. *opilio*	11.40%	13.56%	0.98%	2.13%	12.38%	15.69%
Chinook Salmon	1.39%	2.84%	17.10%	21.24%	18.48%	24.09%
Estimates of Future Caps Based on 1999 Trawl PSC Apportionments						
Halibut Mortality (mt)	206	309	82	125	288	434
C. *bairdi* (Zone 1)	93,000	102,000	7,000	16,000	100,000	118,000
C. *bairdi* (Zone 2)	77,000	93,000	2,000	8,000	79,000	101,000
Red King Crab (Zone 1)	1,200	1,300	1,400	3,400	2,600	4,700
Herring (mt)	10	20	326	368	336	388
C. *opilio*	496,000	590,000	43,000	93,000	539,000	683,000
Chinook Salmon	n/a	n/a	11,800	13,800	11,800	13,800

Source: National Marine Fisheries Service AKR PSC Bycatch Data (File Names BS95HALX, BS96HALX, and BS97HALX)

Estimates of historical bycatch in the pollock fishery were included in Table 2, because the Council requested an estimate of how much bycatch would be needed if the pollock fishery was conducted in a pelagic mode. The requested estimates indicate that halibut mortality could be reduced by 22 mt to as much as 74 mt, compared to the numbers in the second section of Table 2, depending on the method used to calculate the reduction. Reductions in the numbers of crab required were even more dramatic, with the largest reductions being calculated based on a pelagic definition of harvesting less than 20 crabs per tow as opposed to the gear based definition. It is unlikely that the estimates of PSC reductions are appropriate for an orderly prosecution of the pollock fishery in a pelagic mode, especially given the structural changes in the fishery brought on by steller sea lion concerns. However, some reductions may be possible given historic PSC bycatch levels in the pollock fishery when non-pelagic trawl gear was allowed.

The Council also reviewed information in the analysis which evaluated the historical levels of retained vs discarded groundfish catch. The Council's Preferred Alternatives for catcher/processor sideboards, as approved in June 1999, are detailed in Chapter 11 and in a later section of this Executive Summary.

Chapter 7

To mitigate the impact of AFA on the non-pollock fisheries, section 211(c) mandates that *"by not later than July 1, 1999 the North Pacific Council shall recommend for approval by the Secretary conservation and*

management measures to - (A) prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery". This chapter describes the options selected by the Council for constructing catcher vessel sideboards.

While language in the Act refers to the aggregate traditional harvest levels of AFA catcher vessels as a basis for determining sideboard levels, there is no further specification on measures of traditional catch nor is there guidance on implementation outside of the time line for submitting the amendment package to the SOC. Since the December 1998 meeting, the Council has developed a set of alternatives and options and tasked staff with developing the analysis. The Council has treated crabs and scallops independently of the general sideboard rules being considered for non-pollock groundfish in the BSAI and GOA, and this chapter is organized accordingly.

Crab

Five of the options for protecting non-AFA members of the BSAI crab fleet are aimed at reducing or altogether eliminating participation by AFA qualified vessels in one or more BSAI crab fisheries. A sixth option would limit AFA vessels to their traditional harvests. A number of exemptions are presented as sub-options, as are variations on the duration of the restrictions. These limitations have been drafted to apply equally to all catcher vessel sectors as defined under section 208.

The first option would prevent AFA catcher vessels from participating in any BSAI crab fishery. A total of 102 species/area endorsements affiliated with 43 vessels would consequently be eliminated if the Council selected this alternative, and adopted measures to prevent their transfer to owners of non-AFA vessels. The bulk of these endorsements are for the BSAI Tanner and Bristol Bay red king crab fisheries. Option 2 would prohibit AFA catcher vessels from fishing *C. bairdi* or *C. opilio*, resulting in the vessels forfeiting the rights to use 42 BSAI Tanner endorsements. A sub-option allowing vessels which made landings in 1995, 1996, and 1997 to continue their participation in the crab fisheries would exempt 10 vessels from options 1 and 2, and reduce the number of forfeited endorsements by 23 and 10, respectively. A third option would allow AFA crossovers to fish *C. opilio* only if the vessel fished *C. opilio* in 1996 or 1997. Of the 42 vessels with LLP endorsements for BSAI Tanner crab, only 7 have the requisite participation to qualify under this option. Option 4 would disallow crossovers at the endorsement level, allowing the Council the flexibility to replicate the restrictions of any of the other options as well as variations thereof. A fifth option would prohibit fishing in any crab fishery except for Bristol Bay red king crab, reducing the number of eligible crab endorsements by 61.

As an alternative or adjunct to the above restrictions, a sixth option would limit the crab harvest of AFA catcher vessels to their aggregate traditional harvest based on their percentage of the total catch in 1995, 1996, and 1997. By itself, this option would allow AFA vessels to fish any of their crab LLP endorsements, subject to a cap based on historical averages. Traditional levels of harvest would allow AFA catcher vessels to take up to 10 percent of the Bristol Bay red king crab fishery, 2 percent of the *C. opilio* fishery, 1 percent of the Pribilof fishery, and 0.5 percent of the St. Matthew fishery. A sub-option to this alternative would apply caps to individual vessels instead of at the cooperative or sectoral levels, presenting potential disclosure problems for analysis and enforcement should the sub-option be adopted.

Each of the options described above can be applied either to AFA catcher vessels that have entered into a cooperative agreement, or to all AFA qualified catcher vessels regardless of their cooperative membership status. Among industry concerns with the latter are worries that individuals with less historic catch in pollock

have a reduced incentive to join a cooperative. However, they will still be bound by sideboard caps while in the open access fishery. Competition for crab with vessels which have substantial pollock catch histories may cause these individuals to reluctantly join cooperatives if they perceive enough bargaining power to improve their share of the non-groundfish caps. Similarly, decisions on whether or not to join cooperatives will be affected by the chosen duration of the sideboard caps relative to the effective duration of cooperatives.

Scallops

Sideboards for scallops are to be based on an AFA catcher vessel's traditional catch. Two options were considered as qualifying time periods. The first is the years 1996 and 1997, the second option is for 1997 alone. Sideboards will be apportioned according to the percentage of statewide catch, or alternatively as a percentage of the PSC cap to limit scallop harvests according to crab bycatch.

Only one AFA catcher vessel, the Forum Star, has a recent scallop history, and its harvests in this fishery are limited to 1997. Based on the owner's estimated landings and statewide catch as the denominator, the Forum Star caught 3.95 percent of the 1996 and 1997 harvests and 7.63 percent of the 1997 catch. Based on projected annual statewide scallop harvests of 860,000 pounds, the Forum Star's catch could be limited to either 34,000 pounds or 65,600 pounds, for each of the two options, respectively.

Apportioning sideboards as a percentage of PSC caps is not as straightforward since the GHL and some crab bycatch limits are set separately according to species and area, making it difficult to predict when and for what reasons a fishery will close. Additionally, bycatch information is not reported at the vessel level. Adoption of this sub-option could have highly variable results depending on the locations of the Forum Star's fishing activity and the spatial concentration of its bycatch.

BSAI Groundfish

Groundfish sideboards for the various species are to be set as a percentage of future TACs according to the traditional catch of AFA catcher vessels, aggregated by either the individual cooperative or sector level. While the Act designates three sectors in section 208, the eligibility requirements of two sectors overlap so that some vessels are eligible for both the catcher vessel inshore as well as the catcher vessel to mothership sectors. For purposes of analysis, these vessels were grouped into a fourth sector since it is unknown how qualifying individuals will choose to operate. Of the 120 catcher vessels eligible under the Act, 92 meet the criteria for delivering to the inshore sector, 7 are qualified for delivering to motherships, 14 can deliver to both the inshore and mothership sectors, and 7 can deliver to catcher/processors.

Various options revolve around the determination of traditional catch for both the numerator and the denominator of the percentage calculation. There are two base periods considered, one for the years 1992 through 1997, and a more recent option spanning only 1995 through 1997. Problems associated with either time period include changes in the TAC groups over time, which affect how some species have been accounted for in making those calculations. Naturally, these inconsistencies are much more pervasive throughout the longer time period, where some of the TAC groups of the earlier years bear little resemblance to the species compositions of the present TAC groups on which future caps will be based. Distributional differences between both time periods seem to favor the 1995 through 1997 period for the AFA catcher fleet as a whole, perhaps because the contingent of AFA qualified vessels made up a lesser portion of the total pool of harvesters in the earlier years than it has in more recent times. Changes in pollock season length over time and related bycatch rates are also likely variables that may have had a role in the different outcomes.

In addition to both time periods, the Council requested that traditional catch be presented in terms of all catch of a particular species, including amounts accrued as bycatch in the pollock fisheries, or solely those amounts caught when pollock was not targeted. Similarly, there is an option to determine the above catch amounts as percentages of the total catch for each species or as percentages of each species' TAC. Generally, the combination that yields the highest sideboard caps results from using the groundfish catch in all fisheries as a percentage of catch for the years 1995 through 1997. As with catcher processor sideboards, the Council also reviewed information on historical levels of retained and discarded catch.

Table 3 provides estimates of the future Pacific cod sideboard caps under each of the three alternatives using 1995-97 data. The difference between the smallest and largest cap is over 5,700 mt, based on current TACs.

Table 3: Estimates of future BSAI catcher vessel Pacific cod caps under the various scenarios, based on the years 1995-97

Species by TAC Grouping	CV Inshore 92 Vessels	CV to IN/MS 14 Vessels	CV to MS 7 Vessels	CV to CP 7 Vessels	All AFA CVs 120 Vessels
All targets / Total catch					
Percent of TAC	73.58%	7.80%	2.46%	9.15%	92.99%
Estimates of available cap (mt)	30,696	3,244	1,023	3,806	38,679
Non-pollock targets / Total catch					
Percent of TAC	66.26%	6.20%	2.03%	7.88%	82.37%
Estimates of available cap (mt)	25,281	2,400	815	2,937	31,433
Non-pollock targets / TAC					
Percent of TAC	63.65%	5.96%	1.95%	7.57%	79.13%
Estimates of available cap (mt)	26,475	2,479	811	3,149	32,914

Note: The percentages refer to the portion of the overall trawl CV allocation.

As in the crab sideboard section, there is a sub-option to apply the groundfish sideboards to all AFA qualified vessels versus just those vessels which have joined a cooperative. As written, catcher vessel eligibility under AFA does not depend on a specific listing of the vessel under section 208 as much as it does on meeting the qualifying criteria, so that applying the sideboards to all eligible vessels has a far reaching effect that may not have been anticipated by individuals who purposely chose to be removed from section 208 when the bill was drafted. At this point it is difficult to fully distinguish between the effects of these alternatives since there is no reliable way to anticipate who will join a cooperative, especially given the range of options currently under consideration. Nonetheless, some likely impacts could be anticipated. If the sideboard caps were assigned to vessels eligible to join cooperatives, catcher vessel operators with small pollock histories who would have otherwise foregone membership in a cooperative might instead join if they perceive a more secure share of the groundfish catch by doing so. On the other hand, if the caps apply only to cooperative members, catcher vessels could compete in the open access fishery for pollock without being constrained by the sideboard caps imposed on cooperatives. Some vessel owners will likely decide that the sideboard caps are too onerous, when compared to the benefits derived from cooperative membership.

Another sub-option applies the above sideboard limits separately to three classes of AFA catcher vessels depending on their pollock catch averaged over 1995 through 1997 (vessels that caught less than 5,000 mt, 3,000 mt, or 1,000 mt, respectively). Assuming that vessels with lesser pollock catches and proportionately higher catches of other species would be a disadvantaged minority in any cooperative where the main bargaining chip is total pollock catch, this sub-option could level the playing field. Operating under a separate

cap could allow these vessels to retain a more representative share of their traditional groundfish catch. The resulting estimates show that for the inshore sector, 16 vessels with less than 1,000 mt of annual pollock catch would be allowed to harvest about 7.5 percent of the Pacific cod cap, 40 vessels with less than 3,000 mt of pollock catch 27.5 percent, and 57 inshore vessels with < 5,000 mt of pollock history 54 percent. It is unknown if the vessels in these categories would be better off under the sub-caps.

There are six alternatives that could govern the temporal assignment of groundfish sideboards, and a number of these are also subject to sub-options which identify particular sectors. The first is to simply apply the sideboards throughout the entire year. Under this scenario, AFA catcher vessels would have no opportunity to harvest at levels above their traditional catch histories. Alternatively, a second option stipulates that the caps be apportioned quarterly or semi-annually according to the times of year they were earned. Quarterly divisions of catch history may be important for flatfish species if prices are strongly influenced by the quantity of product reaching the market.

A third option would subdivide the Pacific cod cap among vessels that had, on average, fished a majority of pollock during the "A" seasons of 1995 through 1997, and vessels which traditionally targeted other groundfish. The Pacific cod cap would be split according to each group's collective share and applied only prior to March 1 of each year, thus reapportioning some of this species to vessels which traditionally targeted groundfish other than pollock. Sub-dividing the Pacific cod cap in this way would likely benefit the nine catcher vessels that harvested a greater proportion of catch in the non-pollock fisheries prior to March 1. They would have access to 4 - 5 times as much Pacific cod as the other 111 vessels during the early part of the year.

A fourth option would make groundfish sideboards effective only during "normal" pollock seasons, defined either by 1998 open access dates or 1999 season dates modified by Stellar sea lion concerns, which are still being developed. Proponents of this option claim that there would be no more impacts from cooperatives warranting special protection during the off seasons for pollock than there were historically. The sideboard caps would be based on amounts harvested when the pollock season was open. This option may allow the AFA catcher vessels to harvest amounts of groundfish in excess of their traditional catch.

The fifth option, which exempts catcher vessels that deliver to motherships from the sideboards prior to February 1, would allow this sector to take advantage of the time between the January 20th trawl gear opening in the BSAI and the February 1 start of their pollock "A" season. While the opportunity for these vessels to exceed their traditional catch in other groundfish likely exists during this time window, there is insufficient data on which to base reliably estimated catch rates.

The sixth and final option would exempt each catcher vessel sector from sideboard caps for the number of days in excess of five that a particular sector's pollock season is closed during the month of February. Should the closure length between the Stellar sea lion modified pollock season's increase beyond five days in February, this option would allow the AFA pollock fleet to compete with the non-AFA fleet for non-pollock species. Again, the potential would arise for the AFA fleet to exceed its traditional catch of sideboard species.

Proposed alternatives for the enforcement and monitoring of sideboards include options to do so by vessel class and sector or by individual cooperative. While logistical considerations dictate a preference for the former, applying caps on an almost fleet-wide basis may frustrate the efforts of cooperatives to fish rationally since they would have to compete against each other for an overall cap. On the other hand, there are confidentiality issues that would have to be addressed if the sideboards were applied at the cooperative level. Once the sideboards are reached for a particular species, determining which fisheries close as a result will likely depend

on the method employed for determining the caps. For example, if the sideboards are based only on AFA catcher vessel's non-pollock catch, then groundfish closures subsequent to attainment of the caps will likely prevent AFA vessels from harvesting their pollock allocation.

PSC for the BSAI fisheries will be allocated based on historic groundfish catch ratios. Groundfish catch ratios were suggested as the preferred method of allocating PSC caps because the Council was attempting to develop a system that would not reward vessels if they had high bycatch levels in past years.

The historic groundfish catch ratios will be applied to all PSC species, so AFA catcher vessels would be capped at 49 percent of halibut and crab species allocated to the Pacific cod target fishery. Estimated percentages for each PSC target fishery grouping and an estimate of the future halibut allocations are provided in Table 4 below.

Table 4: Percent of future BSAI PSC caps based on catch history ratios of AFA catcher vessels to all vessels, for the years 1995-97, by PSC target fishery definition

PSC Target Categories	AFA Catcher Vessels - All Target Fisheries				
	CV Inshore 92 Vessels	CV to IN/MS 14 Vessels	CV to MS 7 Vessels	CV to CP 7 Vessels	All AFA CVs 120 Vessels
Percent of Future Year's PSC Allocation					
Atka mackerel/Pollock/Other Groundfish[2]	32%	7%	2%	3%	44%
Yellowfin Sole	10%	1%	0%	1%	12%
Pacific Cod[1]	38%	4%	1%	5%	49%
Rock sole/Other flatfish	13%	2%	1%	1%	17%
Future Year's Halibut Allocation (mt) based on 1999 PSCs and the Percentages Above					
Atka mackerel/Pollock/Other Groundfish[2]	80.0	17.5	5.0	7.5	110.0
Yellowfin Sole	100.5	10.5	0.0	10.5	121.5
Pacific Cod[1]	589.0	62.0	15.5	77.5	744.0
Rock sole/Other flatfish	103.5	16.0	8.0	8.0	135.5

Source: NMFS Blend data for the years 1995-97 for denominator, and Fishtickets and NORPAC Observer data 1995-97 for the numerator.

Notes:

1) Only 1997 data were used for the Pacific cod fishery.

2) Estimates for the Atka mackerel/Pollock/Other Groundfish category do not reflect the changes that have occurred in the pollock fishery for 1999.

GOA Groundfish

Groundfish sideboards for GOA flatfish fisheries were developed separately. Those will be based on halibut PSC caps and/or historical flatfish harvests. For species other than flatfish, caps will be set according to AFA catcher vessel's traditional catch of each species. Traditional catch has been specified by the Council as the percentage of total catch from 1995 through 1997, and as in the BSAI sideboards, these values may be apportioned quarterly relative to when they were caught. For Pacific cod, the AFA catcher vessels would be capped at approximately 20 percent of the Central and Western GOA TACs. Pollock caps would be about 50 percent in all areas except the Shumagin District, where they would be close to 75 percent. Typically all other species caps would remain at less than 15 percent.

PSC in the Gulf of Alaska would be allocated as sideboard caps only for flatfish, based on the alternatives in this analysis. The deep and shallow water flatfish complexes in the GOA have historically been limited by halibut bycatch. Therefore, limiting the amount of halibut that AFA catcher vessels can use in these fisheries

should effectively limit their catch of the target species. Limiting only the halibut PSC for these fisheries, and not the target catch, will allow the AFA catcher vessels to harvest more flatfish than their historical average if they are able to use the entire PSC cap and reduce their ratio of halibut to target catch. This was not considered to be a problem by some members of industry, because traditionally a portion of the flatfish TACs in the Gulf goes unharvested. However, the Council also considered limiting GOA flatfish based on the historical harvests of these species.

Initial estimates indicate that the catcher vessel sideboard caps would equal about 10 percent of the halibut allocated to the deep water complex, and about 20 percent of the shallow water complex allocation. These rates equate to about 92 and 212 mt of halibut in those fisheries, respectively. Releasing the halibut cap by quarter, in proportion to the AFA vessel's historic catch, would result in about 11 percent of the deep water complex halibut allocation being released in the first quarter, 67 percent in the second quarter, 18 percent in the third quarter, and four percent in the final quarter. Distribution of the shallow water complex halibut cap would be approximately equal across all four quarters of the year.

The Council's Preferred Alternatives for catcher vessel sideboards, as approved in June 1999, are detailed in Chapter 11 and in a later section of this Executive Summary.

Chapter 8

Chapter 8 examines the impacts of imposing limits on processing of groundfish in the GOA, crab in the BSAI, and non-pollock groundfish in the BSAI. The limits would affect processors eligible to participate in pollock cooperatives authorized by the American Fisheries Act (AFA). The analysis presented in Chapter 8 examines the language in the AFA, analyzes the current structure of the industry, and develops 10 specific options for implementing processing limits. The analysis then calculates estimates of the limits based on the structure of the industry and the different options as specified. The analysis ends by drawing conclusions regarding the effectiveness of the options in fulfilling the mandates of the AFA.

The AFA stipulates that the Council shall submit measures by July of 1999 to "protect processors not eligible to participate in the directed pollock fishery from adverse effects as a result of this Act or fishery cooperatives in the directed pollock fishery." The AFA provides specific guidelines for crab processing limits and provides the basis of the 10% Ownership Rule (below) which defines AFA entities.

> If a company has a 10 percent or more ownership stake in an AFA-eligible processing facility, then all other processing facilities in which that company has 10 percent ownership will also be considered part of the AFA entity. For purposes of the analysis, the lease of a facility will be considered ownership of that facility.

The analysis of ownership develops organization charts for the 15 entities that were found to encompass all of the processing facilities that, according the to AFA, will be eligible to process pollock in directed fisheries. The analysis used a literal interpretation of the 10% Ownership Rule to develop the entities. Organization charts for several entities that are not associated with AFA facilities are also provided, including charts for four of the six CDQ organizations. Currently, two of the CDQ organizations, Bristol Bay Economic Development Corporation and Norton Sound Economic Development Corporation, have ownership interests in AFA facilities and are included in the 15 AFA entities. The table below summarizes the findings of the organizational analysis of AFA facilities, companies, and entities.

Summary of Eligible Facilities, Companies, and Entities under the AFA

	Entities	Companies	Inshore Facilities	Catcher Processors	Motherships	Total Facilities
AFA Facilities	15	18	9	21	3	**33**
Facilities in AFA Companies	15	20	20	32	10	**62**
Facilities in AFA Entities	15	35	29	44	10	**83**

Notes:
1/ The row labeled AFA Facilities includes all of the processing facilities are eligible under the AFA to process BSAI pollock from directed fisheries.
2/ The row labeled "Facilities in AFA Companies" includes all facilities owned by companies that own at least one AFA facility.
3/ The row labeled "Facilities in AFA Entities" includes all facilities associated with entities that own at least one AFA-eligible facility. The row includes several facilities that may be, or may not be, included within AFA entities, depending on the implementation of the 10% Ownership Rule.
4/ The table does not include the nine catcher processors from §209 of the AFA.
5/ The table includes the entity that comprises the only catcher processor eligible from §208(e)(21) of the AFA and the only shore plant eligible from §208(f)(1)(B) of the AFA.

Processing limits could be applied in a number of different ways. The analysis identifies three levels at which processing limits could be applied:

1. A single overall limit for each species
2. Sector level limits for each species
3. Individual limits for each species

Within each of these three levels there are at least three layers of the AFA eligibility:

1. Plants and vessels that are AFA-eligible
2. Companies that own AFA-eligible plants and vessels
3. Entities that combine AFA companies under the 10% Ownership Rule

The analysis specifically examines processing limits in terms of each of the three layers of AFA eligibility for each of the three levels at which processing limits and an additional option for individual company limits apply only to AFA-eligible facilities. The 10 options analyzed in Chapter 8 are specified below.

Option 1: Overall Processing Limits Applied to All AFA Facilities

Option 2: Overall Processing Limits Applied to All Facilities in AFA Companies

Option 3: Overall Processing Limits Applied to All Facilities in AFA Entities

Option 4: Sector-Level Processing Limits Applied to All AFA Facilities

Option 5: Sector-Level Processing Limits Applied to All Facilities in AFA Companies

Option 6: Sector-Level Processing Limits Applied to All Facilities in AFA Entities

Option 7: Individual Processing Limits Applied to Each AFA Facility

Option 8: Individual Processing Limits Applied to All AFA Companies

Option 9: Individual Processing Limits Applied to the AFA Facilities within Each AFA Company

Option 10: Individual Processing Limits Applied to All AFA Entities

The table below shows the TAC percentages that would be allowed under the processing limit options. The table is based on processing histories from 1995 through 1997.

Summary of Processing Limit Options Based on Processing Histories from 1995 through 1997

	Percent of Total Processing					
Bering Sea and Aleutian Islands Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Rockfish**	
Limits on AFA Facilities only	13.04	33.73	23.48	38.75	18.74	
Limits on AFA Companies	13.93	36.82	26.09	42.19	25.99	
Limits on AFA Entities	15.01	54.26	39.07	51.09	43.53	
Gulf of Alaska Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Pollock**	**Rockfish**
Limits on AFA Facilities only	9.94	6.66	4.55	35.55	46.73	8.11
Limits on AFA Companies	16.86	21.87	8.48	44.31	58.27	25.03
Limits on AFA Entities	19.48	32.37	20.93	51.27	67.10	37.20
Bering Sea and Aleutian Islands Crab						
	Bairdi	**Blue King**	**Brown King**	**Opilio**	**Red King**	
Limits on AFA Facilities only	61.09	16.61	55.08	19.7	57.43	
Limits on AFA Companies	65.15	74.05	59.93	61.67	69.37	
Limits on AFA Entities	66.90	74.56	59.93	63.31	70.20	

Notes:

1. Total processing limits for each species do not change regardless of whether limits are applied as overall limits, sector-level limits, or individual limits. If the number of affected facilities is expanded to include all processing within AFA companies, or to include all processing within AFA entities, then the limits increase accordingly.
2. All limits include the processing history of the nine catcher processors listed in §209 of the AFA.
3. Entities limits include all documented linkages as well as facilities that would possibly be linked to AFA entities, depending on the application of the 10 percent rule and further investigation.
4. The limits shown in the table do not include the entity that comprises the only catcher processor eligible from §208(e)(21) of the AFA and the only shore plant eligible from §208(f)(1)(B) of the AFA.

Comparison of Overall Limits, Sector Limits and Individual Limits

As indicated above, the total amount of processing included under the limits does not change if they are applied as overall limits, sector-level limits or as individual limits. Therefore from the perspective of non-AFA processors, there does not appear to be significant differences if the processing limits are implemented as overall limits, sector limits, or individual limits.

If overall or sector-level limits are imposed, AFA processors are likely to experience an intensified race for crab and groundfish other than BSAI pollock. The intensified race for fish can be avoided if processing limits are imposed at the individual level. Although individual limits will not constitute an allocation and individual AFA processors will face continued competition from non-AFA processors, AFA processors will not need to compete with other AFA processors. Individual limits will also allow AFA processors more flexibility (than with overall or sector-level limits) to allocate their processing capacities and other resources, and allow them to realize more of the potential benefits of the AFA.

With overall or sector level processing limits, it is likely that NMFS will have to devise means to close "directed processing" while allowing AFA processors to continue to process bycatch amounts of limited species. If processing limits are imposed on individual processors, NMFS may be able to shift some of the monitoring burden onto the processors themselves and make enforcement a post-season process involving fines and sanctions for those processors that exceed their limits.

Comparison of Limits Applied to AFA Facilities, AFA Companies, and AFA Entities

Processing limits applied to AFA facilities will be restrictive, but not as restrictive as limits applied to companies or entities. If limits are applied only to AFA facilities owners would not be constrained from using AFA profits to increase their non-pollock processing shares at other facilities in which they may have an interest.

Processing limits applied to AFA companies rather than to AFA facilities will be more effective in limiting the ability of owners of AFA facilities to increase their shares of non-pollock processing. The effectiveness of processing limits on AFA companies depends largely on the ability to define AFA companies. Processing limits applied to AFA entities, as defined by the 10% Ownership Rule, would appear to be more effective than limits imposed on AFA companies. Under the 10% Ownership Rule, AFA owners that wish to make new capital investments in non-pollock processing would be limited to investments in salmon and herring fisheries, or to investments that lead to an ownership interest of less than 10 percent of the processors in which they are investing. In addition, because of the limits AFA processors would bring, existing owners may not welcome new investment associated with AFA profits.

Imposing processing limits on AFA entities will have some unintended and negative consequences. Processing limits imposed on AFA entities will create significantly more paperwork for NMFS and the processing industry than the other options. This additional burden will be time-consuming and expensive, and may be viewed by many as a significant intrusion of government into private affairs of industry. Imposing processing limits on entities will also create other unintended consequences by limiting the activities of processors that may not be able to experience any of the benefits of the AFA. These consequences are perhaps most easily understood from the perspective of non-pollock processing companies that have become equity partners with CDQ organizations that, in perhaps unrelated actions, have also invested in AFA facilities.

Conclusion

In conclusion, it appears that processing limits imposed on individuals offer as much protection to non-AFA processors as overall limits or sector-level limits, may not be any more costly to implement or enforce, and would allow AFA processors to realize more of the benefits of the AFA. Crab processing sideboards will be implemented for year 2000 as prescribed by the AFA (and as recommended by the Council in October 1999, with minor variations). The Council did not take action on groundfish processing sideboards in 1999, given the possibility of ambiguous results if processing limits are applied to AFA entities. To fulfill its mandate to protect non-AFA processors, the Council is continuing to study processor sideboards along with excessive share caps for BSAI pollock processing, and is scheduled to take action on these issues in April 2000. Future actions on groundfish processing sideboards (or crab) would be implemented by follow up regulatory amendment.

Chapter 9

This chapter discusses several implementation issues which will likely be critical to the Council's decisions on overall co-op structure and sideboard monitoring. While many of these issues are not yet fully resolved, some major points of consideration include:

* Implementation of catcher vessel cooperatives will be significantly more complex than the single offshore co-op in 1999, for pollock allocations and particularly for sideboard limits.

* Monitoring pollock catch based on directed fishing allocations will require a different management approach - essentially, for catcher vessel inshore deliveries, that means any catch occurring during the open season will be considered as directed harvest.

* Allocation of pollock to specific co-ops based on catch history of participating vessels will require development of an official catch record and an opportunity for appeal. Such a program likely cannot be in place in time for year 2000 allocations, and appeals and corrections to the official catch record may have to wait until 2001.

* Catch data on groundfish (species composition), discard, and PSC species is insufficient to determine quota allocations (or catch limits) to specific vessels in a complete and reliable manner. Catch history information for groundfish may be sufficient, particularly if groundfish sideboards are managed in aggregate across co-ops. Discards likely cannot be included. PSC limits should be based proportional to groundfish catch.

*Although efforts are ongoing to address confidentiality concerns, individual catch histories from State fish tickets cannot be released to vessel owners in time for their use in year 2000 co-op negotiations.

* Regarding sideboard limitations for groundfish, crab, and PSC, it will be extremely difficult for NMFS to manage at the co-op level through traditional in-season management techniques. Responsibility for in-season management and closure will likely be borne by the co-ops themselves. Additionally, sideboard management, at the co-op level, particularly for PSC species, will require the same type of monitoring and observer coverage levels that are associated with the multi-species CDQ program.

This chapter also addressed the following issues:

AFA Catcher Vessel Lists

Chapter 9 includes lists of the catcher vessels that are expected to be eligible under the AFA. The vessels are sub-divided into four classes depending where they are qualified to make deliveries.

Compensation for Inshore Catcher Vessels

A number of catcher vessels qualified under AFA to deliver to the inshore sector have accrued significant amounts of their historical pollock catch from deliveries to offshore sectors. Since AFA does not preclude inshore sector catcher vessels from entering into the mothership sector, vessels meeting the eligibility criteria can make use of their offshore pollock histories to the extent that these were delivered to motherships. However, there is no mechanism that allows these same vessels to likewise bring their pollock history delivered to catcher/processors into the cooperative pool, despite language in the Act calling for "fair and equitable" consideration of such landings. Industry has presented a change to Section 210(b)(1)(B) that would allow each inshore cooperative's pollock pool to increase by the amount of pollock history that member catcher vessels had delivered to catcher/processors. Increasing the aggregate pool of pollock effectively compensates members with a substantial share of their harvest to catcher/processors by taxing the rest of the cooperative. However, depending on the catch histories of member catcher vessels, the burden of the compensation scheme may be disproportionately distributed among the different cooperatives.

A total of 66,764 mt of pollock were delivered to catcher/processors by 42 inshore sector catcher vessels. Applying the compensation formula fleet-wide across all inshore catcher vessels would yield an adjustment of 5.6 percent of each vessels catch history. There is also a sub-option that would require minimal landings to catcher processors for each of the 42 vessels before they would be eligible for compensation.

An option that would exclude a vessel from being compensated for deliveries to catcher/processors, based on their inshore catch history, was also included in this chapter. If the option that only compensated catcher vessels with less than 2,000 mt of inshore catch was selected, only 12 vessels would be included and the total adjustment would be just over 2 percent.

Using Best 2 of 3 Years to Determine Pollock Catch History

A brief discussion of allowing catcher vessels to use their best 2 of 3 qualifying years to determine their pollock catch history has been included. Using the best 2 of 3 years will increase the amount of pollock a vessel can take into a cooperative if they had inconsistent catches during the qualifying years, and reduce the amount of pollock to catcher vessels that had consistent catches during the qualifying period.

AFA Loan Repayment

The AFA requires that members of the inshore sector begin repaying the Federal loan in the year 2000, independent of whether the inshore sector is fishing under cooperatives. The payments are based on the pounds of pollock harvested. A payment rate of 0.6 cents per pound was established under the AFA.

Chapter 10

This chapter contains additional information regarding monitoring of mothership and catcher processor allocations and sideboards, including scale and observer requirements and associated costs.

Chapter 11

The Council's preferred alternative for harvesting sideboards, and several other non-sideboard issues are presented in this chapter. Action by the Council on groundfish processing sideboards was delayed April 2000 to be considered in conjunction with BSAI pollock excessive processing share caps.

Catcher/Processor Harvest Sideboards

Catcher/processors will be limited to the percentage of BSAI catch that was landed, relative to the TAC, by the 29 vessels listed in sections 208(e) lines 1-20 and section 209 of the AFA. Sideboard caps based on landed catch do not give catch history credit for discards which occurred at-sea. Atka mackerel in the central and western Aleutian Islands are the only exceptions to this rule. Their sideboard percentages were explicitly defined in the AFA.

Pacific cod sideboard caps were estimated to be 9,290 mt., yellowfin sole 33,610 mt., central Aleutian Islands Atka mackerel 1,191 mt., western Aleutian Islands Atka mackerel 2,497 mt., other flatfish 4,593 mt., rock sole, 3,188 mt., and flat head sole 1,438 mt., based on 1999 TACs. These estimates, particularly for flatfish species, are reduced over those in place for 1999. Therefore, it is possible that using landed catch may reduce the caps on some species to a level that will not allow for a directed fishery in 2000, even though directed fisheries were allowed under the 1999 sideboard caps.

PSC caps for the AFA catcher/processor fleet will be calculated the same way in 2000 as they were for 1999. The caps were calculated to be 8.4 percent of the halibut apportionment for trawl vessels, 0.7 percent of the red king crab, 15.3 percent of the *C. opilio*, 14.0 percent of the *C. bairdi* in zone 1, and 5.0 percent of the *C. bairdi* in zone 1.

Catcher Vessel Sideboards

Catcher vessel sideboard caps were developed for the BSAI non-pollock groundfish species, GOA groundfish species, BSAI crab species, scallops, and PSC species covered under the Council's FMPs. Two exemptions were defined by the Council. Both exemptions apply to vessels that landed less than 1,700 mt. of pollock annually in the BSAI. These vessels were exempted from the sideboard caps in the BSAI Pacific cod fishery. They were also exempted from GOA sideboard caps for Pacific cod, pollock, and other groundfish fisheries they participated in between 1995-97 sideboard cap restrictions. For purposes of this section of the analysis, the exempt vessels' catch history was not included in the calculation of the sideboards for those species. **Note that additional Council action is scheduled for December 1999 relative to these sideboard exemptions.**

Crab sideboards were developed at the species/area level, and different qualification criteria were defined for each fishery. The AFA vessels were also prohibited from selling, leasing, transferring, or stacking crab LLP licenses. A summary of the crab sideboard restrictions are provided in the table below. These restrictions will apply to all catcher vessels eligible to join cooperatives.

Fishery	Qualification Criteria	# of Qualified Vessels	% of GHL
Bristol Bay red king crab	Capped at their weighted average catch from years 91, 92, 93, 96, and 97	41	12.8 %
C. opilio	Must have fished *C. opilio* in at least four years from 1988-97.	5	n/a
*C. bairdi**	Must have fished *C. bairdi* in 1995 or 96	21	6.5 %
St. Matthew blue king crab	Made landing in this fishery in 95, 96,or 97	1	Conf.
Prib. red & blue king crab	Made landing in this fishery in 95, 96,or 97	4	1.2 %
AI red & brown king crab	Made landing in at least one of the last two years the fishery was open	0	n/a

* No directed fishing will be allowed until the stock is rebuilt.

Note: All restrictions apply to AFA vessels that are also LLP qualified for that species/area endorsement.

Scallop sideboards only apply to one vessel if it opts to join a pollock cooperative. That vessels will be capped at its percentage of the overall scallop harvest in 1997. That percentage (estimated to be 7.6 percent) will be applied to the upper end of the state-wide GHL. At a projected GHL of 860,000 pounds, the cap would be 65,600 pounds.

BSAI groundfish catcher vessel sideboards will be based on the landed catch of AFA qualified catcher vessels, and be expressed as a percentage of TAC available in those years (1995-97). The caps will apply to all catcher vessels eligible to join a cooperative. Only the AFA catcher vessels that qualify for the exemption discussed earlier will be allowed to harvest Pacific cod outside of the cap.

Estimates of BSAI groundfish caps are presented in Table 11.5. That table shows that Pacific cod is projected to be capped at 24,628 mt., yellowfin sole 12,587 mt., other flatfish 7,304 mt., flathead sole 3,220 mt., rock sole 2,601 mt., and arrowtooth flounder 6,658 mt., based on 1999 TACs. NMFS will need to determine prior to the start of the 2000 fishery, which of these species can support directed fisheries.

PSC caps will be based on the ratio of landed catch in each non-pollock target fishery to the TAC, and will be applied only to halibut and crab PSC species. The cap shall not be subdivided among catcher vessel sectors. Preliminary estimates indicate that the AFA catcher vessels will be allowed to harvest up to 34 percent of the halibut and crab PSC caps allotted to the Pacific cod fishery, 7 percent of the apportionment to the yellowfin sole fishery, 4 percent of the apportionment to the rock sole/other flatfish/flathead sole fishery, and 1 percent on the apportionment to the Atka mackerel/other groundfish fisheries.

GOA groundfish sideboard caps apply to all FMP species, including pollock. Like in the BSAI, the caps will be based on landed catch as a percentage of TAC for the years 1995-97. All vessels eligible to participate in a cooperative will be bound by the caps, except those specifically excluded through the 1,700 mt. landings exemption. Table 11.8 shows a complete list of the estimated caps. The largest caps are for pollock, Pacific cod, and shallow water flatfish. The only other species projected to have more than a 1,000 mt. cap, under 1999 TAC levels, are POP and arrowtooth flounder.

PSC caps in the GOA will be based on the ratio of groundfish landed to TAC in the deep and shallow-water PSC groupings. Preliminary estimates indicate that the AFA fleet would be capped at 34 percent of the halibut apportioned to the shallow-water complex and 7 percent of the deep-water complex. Given current PSC caps, this equals approximately 410 mt. of halibut.

Compensation for Inshore Catcher Vessels in the BSAI Pollock Fishery

Two compensation measures were passed by the Council. The first allows catcher vessels with more than 499 mt. of pollock deliveries to catcher/processors from 1995-97 to count that catch just as if it were delivered inshore. The second allows catcher vessels to use their best 2 of 3 years catch history, after adding in compensation from deliveries to catcher/processors.

Other AFA Actions

The AFA mandated that catcher/processors carry two observers and use NMFS certified scales to weigh fish. Those requirements were included in this package. This package also includes a discussion of the items the Council will require to be contained within cooperative agreement packages submitted to the Council and NMFS each year, as well as cooperative reports from the preceding year's fishery.

Chapter 12

This chapter addresses the proposed actions' consistency with other applicable law, including E.O 12866, Regulatory Flexibility Act, Magnuson-Stevens Act, and National Standards. Because the basic intent of the proposed sideboard measures is to preserve the status quo distributions of harvest and processing across industry sectors, it does not appear that such actions would be inconsistent with any of the applicable laws. However, among the alternatives there are those that would have differential impacts relative to both the directly affected entities (AFA harvesters and processors) and indirectly affected entities (non-AFA harvesters and processors). Certain alternatives and options for sideboards would likely be considered to have significant impacts on small entities (under the Regulatory Flexibility Act) relative to other alternatives.

The Council's Preferred Alternative represents a trade-off between impacts to directly affected entities and indirectly affected entities. A conclusion of non-significance, relative to the IRFA, cannot be made based on the available information; however, the Council's actions included measures to mitigate impacts to small entities, including exemptions from the sideboard restrictions for certain catcher vessels involved.

1.0 INTRODUCTION AND BACKGROUND

1.1 Purpose and Need for Action

In October 1998 Congress passed the American Fisheries Act (AFA) which, among other things, divided the Bering Sea and Aleutian Islands (BSAI) pollock fisheries among four sectors (Community Development Quota (CDQ) program, inshore, offshore, and motherships) and stipulated the eligible harvester and processors which would be allowed to participate in this fishery for the duration of the Act, scheduled to expire at the end of 2004. The AFA also included the retirement/buyout of nine vessels from the offshore sector to be funded by a $75 million loan to the inshore sector, and it specified provisions by which vessels and processors could establish pollock fishery cooperatives within each sectors' allocation. Finally, the AFA contained several provisions either mandating or allowing Council action to enact measures to protect other fisheries from the potential impacts of the provisions of the Act or from pollock fishery cooperatives. The basic intent of these 'sideboard' measures is to restrict the pollock harvesters and processors from using the operational advantages provided by the AFA (and co-ops) to increase their participation in other, non-pollock fisheries.

For reference, the full text of the Act is contained in Appendix I. This amendment package will focus on the sideboard measures and associated issues, and they are detailed in the following sections along with the Council's specific alternatives and options for applying the sideboards. In addition to the sideboard measures, other sections of this analysis address inshore cooperative formation and the impacts of the rules as specified in the AFA. For the offshore sector, co-ops were formed for the 1999 fisheries and sideboards for 1999 for that sector were approved by the Council in November of 1998, based on guidelines specified in the AFA. Sideboard provisions for this sector for year 2000 and beyond need to be established by the Council as part of this amendment package. Additionally, the AFA provides for the formation of co-ops in the inshore and mothership sectors beginning in year 2000 and requires the Council to develop sideboard measures for those sectors (harvesting and processing). Other provisions of the Act, including excessive share caps for harvesting and processing, are being developed separately.

1.2 Alternatives Considered and Approved

In December 1998 the Council developed an initial list of sideboard measures for consideration, including harvest sideboards for the offshore sector, harvest sideboards for the catcher vessels, and processing sideboards for all sectors. These sideboards would apply to all AFA-eligible harvesters and processors, or at least to those participating in pollock co-ops. Following review of an initial analysis prepared by Council staff, the Council finalized that list of alternatives and options for a formal analysis to be reviewed at the April 1999 meeting, with final action scheduled for June 1999. While the AFA contains specific provisions for the calculation and application of sideboards in some cases, it allows the Council to enact measures as it deems necessary to protect other fisheries, including measures which go beyond the provisions contained in the Act. As such, the list of alternatives includes those listed by the AFA as well as additional alternatives submitted by industry and approved by the Council for analysis. The full list of alternatives considered and approved is shown below.

This includes a description of the alternatives specified in April 1999 broken out by major section (catcher processor sideboards; catcher vessel sideboards for crab, scallop, and groundfish; processor sideboards; and other AFA related actions), followed by the Council's PREFERRED ALTERNATIVE for each of these sections. The suite of alternatives and options are analyzed in various sections of the document, again broken out by major category. Because the Council's final decision included a wide mix of elements and options from the list of alternatives, Chapter 11 provides an analysis specific to the Council's Preferred Alternatives which

were approved at the June and October 1999 meetings. **Note that the Council deferred action on groundfish processor sideboards until April 2000, and the Council may also consider changes to the inshore cooperative structure in February 2000. Final action on portions of the catcher vessel sideboards (exemptions from certain Gulf of Alaska sideboards for certain vessels) is scheduled for December 1999.**

CATCHER PROCESSOR SIDEBOARDS

For the year 2000 and beyond, the Council initiated an analysis for the 20 + 9 vessels listed in the AFA of their bycatch in both the directed pollock and non-pollock fisheries (95, 96, 97) and associated PSC levels. The catch histories of the 20 listed vessels and the 9 vessels which are removed from the fishery and the catch in the pollock and non-pollock target fisheries will be treated separately. This will allow the Council to include either all catch or only catch in the non-pollock target fisheries (for either the 20 or 29 vessels) in the caps set for 2000 and beyond.

Sub-options:

1. The caps would close both the pollock and non-pollock groundfish fisheries when reached.
2. The caps would close only the non-pollock groundfish fisheries when reached (only pelagic pollock fisheries would remain open).

Include a review of vessel specific PSC rates in addition to average PSC bycatch ratio for the 20 +9 AFA catcher/processors relative to non-AFA vessels.

Add to Table 6.9 a fourth column which illustrates a retrospective analysis of PSC needs of the 20 + 9 AFA catcher/processors using a performance-based pelagic definition.

Include discussion paper establishing chinook PSC sideboard for co-op pools in pollock, on a pro-rata basis, based on final Council action on chinook bycatch caps. (Note: The chinook bycatch option was included in the AP minutes only under catcher vessel sideboards. For consistency, staff has also included this option under the catcher/processor sideboard section).

PREFERRED ALTERNATIVE

Groundfish:

1. Non-pollock groundfish caps (other than Atka mackerel in the central and western Aleutians) for listed vessels will be established on the basis of the percent of landed groundfish catch relative to TAC (of the original 29 vessels) in the pollock and non-pollock fisheries in 1995, 96, and 97 (for Pacific cod, 1997 only; for POP in the Aleutians, 1996 and 1997).
2. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.

PSC Caps:

1. Total PSC cap for listed vessels will be established on the basis of percentage of PSC removals in the non-pollock groundfish fisheries in 1995, 96, and 97.
2. NMFS will allow for directed fishing of non-pollock species such that the total PSC removals do not exceed the PSC cap.

3. The listed vessels' PSC caps will not be apportioned and will be managed under open access season apportionment closures.

Catcher processor sideboards for both groundfish and PSC caps are a package and disapproval of any component would be disapproval of the whole package and returned to the Council for further action.

CATCHER VESSEL CRAB SIDEBOARDS

Participation in a co-op is defined as ANY use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

Initiate analysis of the following options to mitigate impact of possible spillover effects of AFA on other fisheries:

Options For Section 208 Vessels:

1. No crossover allowed into any crab fisheries.
2. No crossover allowed in the Tanner crab fishery only (opilio and bairdi).
3. No crossover allowed into opilio unless vessel fished opilio in 1996 or 1997.
4. No crossovers at the endorsement level.
5. Allow crossovers only into red king crab fisheries only (excludes brown and blue king crab).

   Sub-options:
   a. Vessels which qualified based on bycatch of bairdi in red king crab would be restricted to bycatch of bairdi in the red king crab fishery (applied to #2 & #4 above).
   b. Only Section 208 catcher vessels that join a co-op (applies to #1-5 above and #6 below).
   c. Allow crossovers for vessels with crab landings in each of the three years (1995, 96, and 97) (applies to #1 and #2 above).
   d. Prohibit any vessel participating in an AFA co-op from lease, transfer, or sale of any license limitation program (LLP) permit.

   Duration sub-options:
   a. Permanent, based on participation in a co-op.
   b. Only for year vessel is involved in co-op.
   c. Duration of AFA

6. Measures that would restrict pollock co-op vessels to their:

   Option a. Aggregate traditional harvest including a restriction to the percentage of crab harvest in all species between 1995, '96, and '97.
   Option b. Average catch history 1995, '96, and '97 on a species-by-species and vessel-by-vessel basis.
   Option c. No sale, lease, or stacking of vessel catch history in any crab fishery.

PREFERRED ALTERNATIVE

A. Crab Sideboards shall apply to all AFA vessels.

B. Bristol Bay Red King Crab (BBRKC)

1. These AFA vessels that hold a BBRKC endorsement shall be capped at their 5-year (91-97, excluding 94-95) weighted average share. These vessels shall be managed in the aggregate.
2. This share of future catch shall apply to the pre-season BBRKC GHL.

C. Opilio — AFA LLP Alternative 9 Tanner crab endorsed vessels may participate in the opilio fishery if they harvested opilio in more than 3 of 10 years (88-97).

D. Bairdi

1. AFA qualified vessels that receive an LLP endorsement are excluded from participating in the directed bairdi fishery, except as follows: If and when the bairdi rebuilding goal is reached, the only AFA vessels allowed to participate would be those with catch history in 1995 or 96. These vessels would be capped at their aggregate historic catch for 1995-96.

2. If there is a BBRKC fishery where bairdi bycatch is allowed, the AFA Tanner crab endorsed vessels may retain bycatch bairdi.

E. AFA LLP Alternative 9 vessels which hold a LLP endorsement for either the St. Matthews or Pribilof king crab, and had a landing in that fishery in 1995, 96 or 97, may participate in that fishery. For Adak red king crab and brown crab fisheries a qualified vessel which had a landing in the last two years the fishery was open may participate in those fisheries.

F. Prohibit the sale, lease, transfer or stacking of crab LLP licenses or endorsements by AFA-eligible catcher vessels.

Additionally, a committee will be formed to workout implementation issues relating to crab sideboards. This committee will likely meet during July and is scheduled to have a report available for the joint Council/BOF meeting to be held in August.

CATCHER VESSEL SCALLOP SIDEBOARDS

1. Participation in a co-op is defined as any use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

2. Measures that would restrict pollock co-op vessels to their aggregate traditional harvest in the scallop fishery in the years:

Option a. 1996 and '97.
Option b. 1997 only

Sub-options:

a. Based on percentage of statewide catch
b. Based on percentage of PSC cap.

PREFERRED ALTERNATIVE

1. Participation in a co-op is defined as any use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

2. Measures that would restrict pollock co-op vessels to their aggregate traditional harvest in the scallop fishery in 1997 based on a percentage of the upper end of the state-wide guideline harvest level. The cap would be this percentage applied to the upper end of the state-wide guideline harvest level established each year.

CATCHER VESSEL GROUNDFISH SIDEBOARDS

BSAI

Participation in a co-op is defined as ANY use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

To Whom Restrictions Apply

Restrictions should apply to all non-pollock FMP fisheries.

Sideboards apply to all Section 208 eligible vessels.

Sub-options:

a. Applies to Section 208 vessels only if they join a co-op.
b. Create sub-sideboard cap for catcher vessels with average pollock landings from 1995-97, which were less than:
   1. 1,000 mt
   2. 3,000 mt
   3. 5,000 mt

When the CV Restrictions Should Apply

5. Harvest levels should be restricted only during the same time periods as the normal open access pollock fishery

Sub-options:

a. Use 1998 open access season dates by sector as a base reference
b. Use 1999 sea lion modified season dates.

2. Exempt those CVs that fish for motherships from BSAI groundfish sideboards prior to February 1 each year.

3. Exempt each CV sector from BSAI groundfish sideboards for the number of days in excess of 5 that each CV sector's pollock season is closed by regulation during the month of February.

4. Limit fishing to the season (or quarter - or half year) in which the catch history was earned.

5. At all times during the fishing year.

6. AFA qualified pollock catcher vessels, that during pollock A season historically had a majority of their catch in pollock, would be limited prior to March 1 of each year to the collective share of the cod fishery that these same vessels collectively harvested historically (1995, 96, 97) prior to March 1.
   1. Apply and monitor by vessel class and sector
   2. Apply and monitor by individual co-op.

   (This would effectively subdivide the P. cod cap between AFA vessels that harvested mostly pollock during the A season and those that did not).

Nature of CV Restrictions

Absolute harvest amounts expressed in percentage of TAC in metric tons.

Determination of "Traditional Harvest Level"

5. The definition of "traditional" in non-pollock fisheries will be determined by catch history:
   a. On basis of percentage of groundfish harvest in non-pollock fisheries by species by fishery.
   b. On basis of percentage of total groundfish harvest by species by fishery.
   c. On basis of percent of TAC in non-pollock fishery by species by fishery.

   Option A: Apply one time frame equally to all groundfish targets
   Sub-option 1: Use average catch history in the years 1995, 96, and 97.
   Sub-option 2: Use catch history based on years 1992-97.

Pollock: Initiate qualitative discussion on ability for Secretary to use the best 2 out of 3 years to determine overall denominator for total pollock pool and numerator for each co-op.

Determination of "Aggregate"

Option A: Apply and monitor by the vessel class and sector.
Option B: Apply and monitor by individual co-op.

Compensation

Further address in a discussion paper, options for compensation to inshore catcher vessels with catch history delivering to catcher processors that is no longer available to them under AFA. Additionally, examine inserting a clause replacing language in §210(b)(1) to add an option for determining catch history for catcher vessels on the basis of the best two of three years in 1995, 1996, 1997.

As provided by Section 213(c)(3) of AFA, the AP recommends the following change to Section 210(b)(1)(B) to allow a catcher vessel with catch history, based on deliveries to catcher processors that is otherwise lost:

under AFA, to bring that catch history to the inshore sector cooperative while sharing the burden among all members of the inshore sector.

> "*. . . the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) to harvest the aggregate percentage of the directed fishing allowance under Section 206(b)(1) in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of pollock harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) in the directed pollock fishery for processing by the inshore component, together with the amount harvested by such vessels for processing by catcher/processors in the offshore component during 1995, 1996 and 1997, relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component together with the aggregate total amount harvested by all catcher vessels (excluding those eligible under 208(b)) for processing by catcher/processors in the offshore component during such years and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) from harvesting in the aggregate in excess of such percentage of such directed fishing allowance.*"

The analysis should breakout the 42 vessels by:

a. deliveries of 250 mt
b. deliveries of 500 mt
c. deliveries of over 1,000 mt
d. deliveries of over 2,000 mt
e. deliveries of over 3,000 mt
f. deliveries of over 5,000 mt

(Vessels that do not meet these harvest requirements may not be eligible for compensation in the inshore sector.)

Management of Non-Pollock fisheries

Vessels limited to target fishing for non-pollock species during those times when the open access target fishery for the non-pollock species is open.

Assigning PSC Caps for Co-op Catcher Vessels in Non-Pollock Fisheries

Determine PSC caps based on catch history ratios (1995, 1996, and 1997) rather than VIP rates.

a. A review of vessel specific PSC rates for eligible vessels, compared to non-eligible vessels.
b. Average bycatch rates of eligible vessels, compared to non-eligible vessels.
c. A retrospective analysis of PSC needs for eligible vessels using a performance-based pelagic pollock definition.

1. PSC and non-pollock groundfish caps would apply to all fisheries as true caps (i.e., when reached these vessels would stop fishing for all groundfish species).
2. The caps would only close the non-pollock target fisheries.

Include discussion paper establishing chinook PSC sideboard for co-op pools and/or sectors in pollock, on a pro-rata basis, based on final Council action on chinook bycatch caps.

GOA

1. Apply the following sideboards to AFA Section 208 eligible catcher vessels.
   Sub-option: Applies only to vessels participating in a co-op.

6. Any non-pollock catch limitations for AFA Section 208 vessels are aggregate caps not quotas or allocations.

7. Vessel catch history consists of the years 1995, '96 and '97.
   Sub-option: Fishery is released seasonally by quarter proportionally to when caught during qualifying years.

4. Gulf of Alaska flatfish sideboards to be halibut bycatch driven. Historic target catch should be multiplied by the average halibut bycatch rate and current mortality rate to determine the halibut mortality available to AFA vessels. These amounts should be separated between deepwater and shallow water complexes.

5. Gulf of Alaska groundfish target fisheries: Target catch of each groundfish species available to AFA Section 208 vessels should be limited to the average catch, by target species, based on the average catch history.

PREFERRED ALTERNATIVES

BSAI Groundfish Sideboards

1. Shall be based on vessel catch between 1995-97.
2. Shall be based on non-pollock catch in pollock and non-pollock targets, as a ratio of the AFA vessels' catch to TAC.
3. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.
4. Shall apply to all AFA eligible vessels regardless of participation in a co-op.
5. Shall apply at the AFA CV sector level in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each co-op, and facilitate the formation of an interco-op agreement to monitor the subdivision of the caps at the co-op level. NMFS shall require each co-op agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.
6. Shall be applied throughout the year, except:
   a. Mothership sector qualified AFA vessels (21 vessels) CV trawl P. cod sideboards shall be lifted March 1;
   b. Vessels with less than 1700 mt of annual average landed pollock catch history shall be exempt from the catcher vessel trawl P. cod sideboard cap.

BSAI PSC Sideboard Caps

1. Shall be based on the ratio of catch in each non-pollock target to the PSC cap for that target, and shall represent an aggregate cap (as with the AFA CP sector).
2. Attainment by the entire fleet of any PSC cap in any target fishery will close directed fishing to all trawl vessels, even if the AFA vessels have not attained their aggregate PSC cap.
3. PSC species limited to crab and halibut.

GOA Groundfish Sideboards

1. Shall be based on vessel landed groundfish catch between 1995-97.
2. Shall be based on non-pollock landed groundfish catch in non-pollock targets as a ratio of the AFA vessels' catch to TAC.
3. Shall be based on the landed pollock catch in the pollock target as a ratio of the AFA vessels' catch to TAC, and shall be apportioned seasonally.
4. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.
5. Shall apply to all AFA vessels.
6. Shall apply at the AFA-eligible catcher vessel sector level in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each co-op, and encourage the formation of an inter-co-op agreement to monitor the sub-division of the caps at the co-op level. NMFS shall require each co-op agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.
7. Shall be applied throughout the year except vessels with less than 1700 mt of annual average pollock landed catch history shall be exempt from pollock and cod sideboards and from those Gulf groundfish fisheries in which they participated in 1995, 1996, or 1997.

GOA PSC Sideboards Caps

1. Shall be based on the ratio of catch in each non-pollock target to the PSC cap for that target, and shall represent an aggregate cap, sub-divided into deep and shallow water flats.
2. Attainment by the entire fleet of any PSC cap in any target fishery will close directed fishing to all trawl vessels, even if the AFA vessels have not attained their aggregate PSC cap.
3. Shall be apportioned seasonally.

PROCESSOR SIDEBOARDS (Crab and Groundfish)

(For review in April 1999) an analysis be initiated examining options to mitigate potential adverse impacts from AFA on non-pollock processors including:

1. Restricting vessels used for processing in the inshore sector to a single geographic location.
2. Measures to restrict pollock processor activity in non-pollock fisheries to no more than historic levels including options using years 1995, 96 and 97.

In order to further the analysis mandated by the AFA:

1. Analysis should evaluate impacts at both the facility and corporate level throughout the BSAI and GOA.
2. Crab sideboard limits should include all Council alternatives.

The analysis should consider the following:

1. list the adverse effects that the measures are aimed at protecting,
2. quantify how the measures will protect the non-eligible processor from the adverse effects, and
3. consider whether adverse effects have a high probability of occurring as opposed to being just perceived as a possibility of occurrence,

before any protective measures are implemented.

NOAA GC has provided an opinion that the Council is restricted under the Act from allowing additional pollock processors except when the TAC increase by 10 percent over 1997 levels, or one of the processors suffers a total or constructive loss (Section 208(f)(2)). The discussion provided by NOAA GC will be included in the amendment package.

PREFERRED ALTERNATIVE (Crab Processing Sideboards)

1. Adopt a single aggregate processing cap that would apply to all processing facilities owned by inshore or mothership sector AFA entities if they receive pollock from a cooperative.

   A. NMFS will determine which processing facilities are owned by inshore or mothership AFA entities using the "limited 10% rule"

   B. Owners of inshore or mothership AFA pollock facilities that process crab under the Council's jurisdiction would be required to identify to NMFS as part of their processing permit requirements any processing facilities in which the owner has 10% or more interest using the limited 10% rule.

2. A processing facility is any plant or US documented vessel that processes crab under the jurisdiction of the North Pacific Fishery Management Council.

3. Only the limited 10% rule will be used in determining AFA entities for purposes of the historic processing cap.

4. AFA catcher processors would not be subject to additional processing sideboards.

5. The historic processing cap would be determined annually based on the average of the 1995-1997 processing history of US documented processing vessels and processing plants owned by inshore and mothership AFA entities at the start of the fishing year.

A. If an inshore or mothership AFA entity sells a crab processing facility to a non-AFA entity, or if a processing vessel is no longer US documented, the 1995-1997 average processing history of that plant or vessel is removed from the historic processing cap. Likewise, if an inshore or mothership AFA entity buys a non-AFA processing plant or US documented vessel, then the 1995-1997 average processing history of that plant or vessel is added to the historic processing cap.

B. The historic processing cap would be determined based on the percentage of the catch processed by inshore or mothership AFA entities.

C. There would be no cap for undeveloped species or species without a current GHL.

D. The cap would apply year around.

PREFERRED ALTERNATIVE (Groundfish Processing Sideboards)

Single Geographic Location

Clarify that AFA eligible inshore processors may only receive BSAI pollock at the same physical location at which that inshore processor received BSAI pollock during the qualifying years 1996 and 1997.

Additional action by the Council on groundfish processing sideboard alternatives has been deferred to the April 2000 meeting, where they will also decide on BSAI pollock processing excessive share caps. Chapter 8 of this analysis evaluates several alternatives for both groundfish and crab and has been retained as part of this amendment package.

AFA CONFORMANCE MEASURES (originally Amendments 62/62 now included in this package)

BSAI Pollock Allocations

Alternative 1: No action.

Alternative 2: Change the current inshore/offshore directed pollock allocations in the Bering Sea/Aleutian Islands FMP to conform with those allocations mandated by the American Fisheries Act of 1998. **(Preferred)**

GOA Pollock Allocations Sunset Date

Alternative 1: No action.

Alternative 2: Extend the sunset date of the current pollock and Pacific cod allocations in the GOA FMP to conform with the date mandated for the Bering Sea/Aleutian Islands area in the American Fisheries Act of 1998. **(Preferred)**

Replacement Vessels in the BSAI Directed Pollock Fisheries

Alternative 1: No action.

Alternative 2: Change restrictions in the BSAI FMP to conform with replacement requirements for eligible vessels under the American Fisheries Act of 1998. **(Preferred)**

OTHER AFA ACTIONS (From June or October 1999)

While not part of the overall rulemaking associated with this Amendment package, the following additional recommendations of the Council are included here for reference and context.

Compensation in Shoreside Sector Co-ops

1. Provide compensation to vessels with offshore history greater than 499 tons (as per Table 10.5).
(ii) Utilize the best 2 of 3 years to determine the share of the inshore pollock allocation each vessel brings to a co-op.

1999 Co-op Agreements

Request that NMFS prepare a preliminary report on the 1999 co-ops for the October 1999 Council meeting and a final report for the February 2000 meeting. The report should specifically assess:

1. The effectiveness of pollock co-ops in reducing bycatch (all species).
2. The effectiveness of management measures to protect other fisheries from adverse impacts caused by the AFA or pollock co-ops.
3. A discussion of how transfers within co-ops may affect issues 1 and 2 above.
4. Utilization and recovery rates by species and product categories.
5. Method of monitoring and enforcement.

The report should include the most specific catch and bycatch information available on an individual vessel level to help the co-op and the Council realize the public disclosure requirements for such information envisioned in Section 210(a)(1)(A) of the AFA.

Confidential Catch & Bycatch

As described in the NMFS' January 28, 1999, discussion paper, the Council requests NMFS to begin to develop the regulatory infrastructure to provide disclosure of:

1. Vessel identification.
2. Harvest amounts by species including prohibited species and harvest rates of species.

Further, the Council initiated an analysis to consider use of a dual form of fish tickets to be used by NMFS and ADF&G that would not fall under the State of Alaska's confidentiality regulations.

The Council requests that ADF&G initiate efforts to change AS 16.05.815 to allow for the release of confidential data as provided by Section 210(a)(1)(B) and Section 211(d) of the AFA.

The Council urges NMFS to make testing of its new system to capture catch delivery information from shoreline operation a top priority for implementation this summer. The Council will write a letter to the Secretary of Commerce highlighting the need for NMFS to budget additional staff and resources to improve our catch and bycatch reporting systems in order to aid the Council's ability to comply with the bycatch reduction mandates that were included in the Magnuson-Stevens Act.

Co-op Discussion Paper

Initiate a qualitative analysis of the economic and policy issues associated with formation of processor/catcher vessel (and mothership/catcher vessel) cooperatives under the AFA, including the alternatives outlined in the independent catcher vessel proposal with a preliminary report to the Council in June 1999 and a final report in September 1999. **(Additional analyses pending for Council review in February 2000)**

Performance Report on 1999 Cooperatives

The Council requests that cooperatives annually must prepare a report containing the information listed below for the Council. A preliminary report covering activities through November 1 by December 1, with a final report by January 30th.

1. Allowed catch and bycatch in pollock and all sideboards by whatever method is used to determine those allocations.
2. Actual catch and bycatch in pollock by vessel and sideboarded fisheries by whatever method is used to determine those sideboards.
3. Method used to monitor fisheries in which cooperative vessels participated
4. Actions taken by cooperatives to enforce vessel or aggregate catches that exceed allowed catch and bycatch in pollock and all sideboarded fisheries.

These would be in addition to other requirements of the AFA or NMFS management. Additionally the Council requests NMFS to initiate an analysis (reg package) per Section 211(d) of the AFA to disclose catch and bycatch information (on a vessel by vessel basis) for all groundfish fisheries in the BSAI and GOA.

1.3 Organization of the Document

This document is structured as follows: Chapter 2 provides a summary of the current status of groundfish, herring, halibut, and crab stocks in both the BSAI and the GOA. Chapter 3 contains the Environmental Assessment (EA) which discusses the proposed actions with regard to potential biological impacts and NEPA compliance. Chapter 4 discusses the definitions of 'inshore component' and 'offshore component' under the AFA and the Magnuson-Stevens Act, and how those definitions affect the implementation of AFA sideboard provisions, as well as implementation of the sector allocations. Council decision points are raised in that discussion, including the issue of 'single geographic location' as it relates to processor sideboard alternatives.

Chapter 5 provides a discussion of co-op agreements, including required provisions of the AFA and four specific alternatives raised by the Council which may require Council decisions or direction. Chapter 6 begins the analysis of the sideboard alternatives and is focused on the offshore (catcher processor) fleet. Chapter 7 deals with catcher vessel sideboards, and is further divided into two main sections - sideboard limits in crab fisheries, and sideboard limits in groundfish fisheries. Chapter 8 is devoted to the processor sideboard measures and includes several Council decision points in addition to the basic alternatives outlined by the Council in February. Foremost among these decision points is the issue of plant vs company vs sector level

application of sideboard caps, and the issue of defining the 'entity' to which a particular sideboard applies (in terms of ownership linkages). These decisions have been made with regard to crab processing, but have been deferred to April 2000 with regard to groundfish processing.

Chapter 9 is a significant discussion of monitoring and implementation issues related to the formation of co-ops and the application of sideboard limits. This Chapter discusses the regulatory infrastructure necessary for co-op implementation and the in-season management considerations with regard to the level at which sideboards can be managed. Many of the options being considered by the Council are potentially affected by the monitoring and implementation issues raised in this discussion. Following on that, Chapter 10 contains a further analysis specific to monitoring of the mothership and offshore sectors, including scale and observer requirements.

Chapter 11 details the Council's recommendations and provides a summary analysis of the PREFERRED ALTERNATIVES identified by the Council. Most of the Council's preferred alternatives and options are addressed elsewhere in the document, while some are explicitly addressed in Chapter 11. Because the list of alternatives and options is lengthy and complex, they are brought together and evaluated collectively in Chapter 11.

Chapter 12 summarizes the proposed actions' consistency with other applicable laws including: EO 12866 (a Regulatory Impact Review summary); National Standards; Sections 303(a)(9) and 303(b)(6) of the Magnuson-Stevens Act; and the Regulatory Flexibility Act. Chapters 13 contains a list of preparers, agencies consulted, and other information sources.

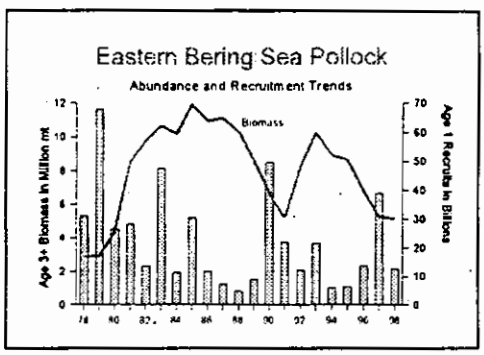
2.0 STATUS OF STOCKS AND UNIQUE MANAGEMENT ASPECTS

Restrictions on fishing effort pursuant to provisions of the American Fisheries Act may stabilize effort on groundfish species and crab species. However, biological and economic impacts depend to some extent on current and future abundance of groundfish, crab, and PSC species such as herring and halibut. A status report on major groundfish target species, major crab stocks, and other PSC species is provided below. This information is summarized from the Stock Assessment and Fishery Evaluation Reports (NPFMC 1998). Where applicable, species specific management measures (such as gear allocations) are highlighted.

2.1 BSAI Commercial Groundfish Stocks

Pollock

Three stocks of pollock inhabit the BSAI area: the eastern Bering Sea, Aleutian Islands, and Aleutian Basin stock. Exploitation and abundance of these stocks are very different. The eastern Bering Sea pollock stock increased to a peak in 1985, and has since declined and stabilized at about the Bmsy level. The 1999 projected exploitable biomass is 7,040,000 mt. An $F_{40\%}$ harvest strategy (F=0.30) resulted in an ABC for 1999 of 992,000 mt, based on Model 2. Assuming median recruitment, the adjacent time series of eastern Bering Sea pollock spawning biomass and ABCs are projected by Model 1 based on an $F_{40\%}$ harvest strategy (Ianelli et al. 1998). Biomass is expected to increase with recruitment of a strong 1996 year-class.



The Aleutian Islands pollock stock is considerably smaller than the eastern Bering Sea and Aleutian Basin stock. Biomass in the Aleutian area as estimated by the bottom trawl survey has declined drastically from a peak of 778,666 mt in 1983 to only 106,000 mt in 1998. A harvest strategy based on natural mortality (F=0.75M) resulted in an ABC for 1999 of 23,800 mt. However for 1999, the Council recommended that no directed fishing for pollock occur in the AI area given current low abundance and the importance of pollock as prey for steller sea lions.

Projected biomass and ABC (mt) of eastern Bering Sea pollock (Model 1), based on F40% harvest strategy.

Year	Spawning Biomass	ABC
1999	1,720,000	1,013,000
2000	2,015,000	1,107,000
2001	2,260,000	1,287,000
2002	2,351,000	1,417,000

The Aleutian Basin pollock stock is at low levels. Biomass in the Aleutian Basin area is estimated by the hydroacoustic survey in the Bogoslof area. Biomass in the Bogoslof area declined from 2,400,000 mt in 1988 to only 54,000 mt in 1994. An increase was observed in 1995, and the projected 1999 exploitable biomass is 403,000 mt. This stock has historically contributed to the Donut Hole fishery, which provided catches of 1.0 to 1.4 million mt during the years 1986 through 1989. No directed fishing has occurred on this stock since 1991.

The BSAI pollock TAC has been allocated among fishing sectors. The first inshore/offshore Amendment 18 allocated the pollock TAC 35% inshore and 65% offshore, with a catcher vessel operational area established for the pollock 'B' season. Additionally, 7.5% of the pollock TAC was allocated to the community development program of Western Alaska. These allocations were extended under Amendment 38. The Community Development quota was increased to 10% of the pollock TAC beginning in 1999 under the American Fisheries

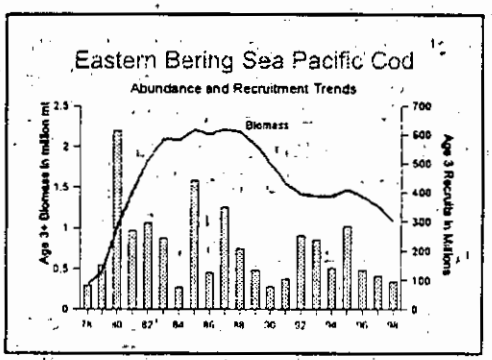
Act. The American Fisheries Act also changed the pollock allocation to 50% catcher vessels delivering inshore, 40% to catcher processors offshore, and 10% to catcher vessels delivering to motherships.

The pollock fishery has been affected by management measures designed to protect Steller sea lions. In 1990, roe-stripping of pollock was prohibited, and the Bering Sea pollock fishery was divided into roe and non-roe fishing seasons. Beginning in 1998, 100% retention was required for pollock. In December 1998, NMFS issued a biological opinion that the pollock fishery jeopardized the recovery of Steller sea lions. In response, the Council took emergency action to prohibit pollock fishing within 10 nautical miles of numerous rookeries and haulouts, reduce the catch of pollock within critical habitat areas, prohibit pollock fishing in the Aleutian Islands area, and create four pollock seasons in the Bering Sea to spread out effort over time.

Measures have also been implemented to reduce bycatch in the pollock fishery. Bycatch limits for chum salmon (42,000), chinook salmon (48,000), and herring (1%) trigger hotspot area closures that affect the pollock fisheries in particular. Regulations were recently adopted to prohibit the use of bottom trawl gear for directed pollock fishing to reduce bycatch of halibut and crabs. The bycatch limit for chinook salmon will be incrementally reduced to only 29,000 salmon by the year 2003.

Pacific cod

The BSAI Pacific cod stock increased to high levels in the mid 1990's, then declined. The 1999 exploitable biomass was projected to be 1,210,000 mt. An $F_{40\%}$ harvest strategy (F=0.29), adjusted downward by a risk-averse optimization procedure, resulted in an ABC for 1999 of 177,000 mt. The cod stock is projected to decline in the near term as a result of below average year-classes in recent years.



Under Amendment 46, two percent of the BSAI Pacific cod TAC is reserved for jig gear, 51 percent for fixed gear, and 47 percent for trawl gear. The trawl apportionment will be split between catcher vessels and catcher processors 50/50. Amendment 24 regulations allow seasonal apportionment of the Pacific cod TAC allocated to vessels using hook-and-line or pot gear. Seasonal apportionments will be divided among trimesters and established through the annual specifications process. Any unused TAC from the jig gear quota will become available to fixed gear on September 15.

Projected age 3+ biomass and ABC (mt) of Pacific cod in the BSAI.

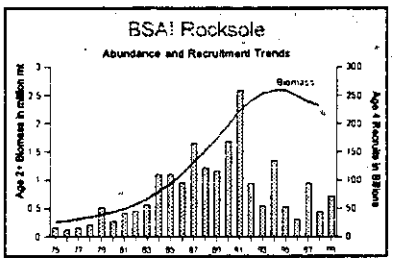
Year	Biomass	ABC
1999	1,213,000	177,000
2000	1,072,000	164,000
2001	1,021,000	152,000
2002	1,019,000	145,000

Flatfish

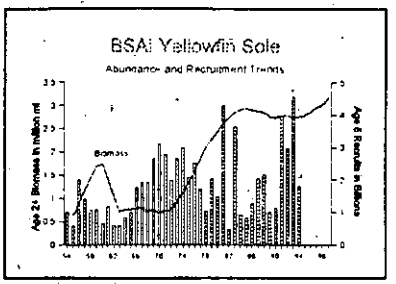
Flatfish species comprise a large proportion of groundfish exploitable biomass in the BSAI. Dominant species include yellowfin sole and rock sole. Other abundant or commercially important BSAI flatfish species include arrowtooth flounder, flathead sole, Alaska plaice, and Greenland turbot. Biomass of most BSAI flatfish stocks is relatively high and has increased as a result of good recruitment and low exploitation. For many flatfish species, recruitment in more recent years has been low:

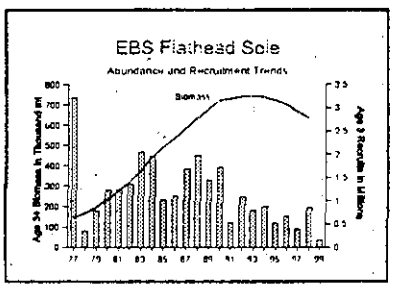
Catch specifications (mt) for BSAI flatfish fisheries, 1999.

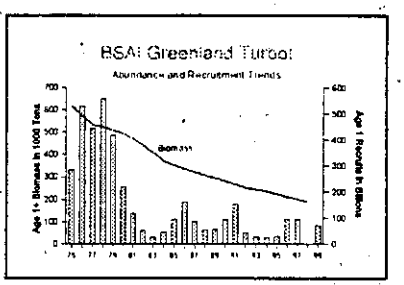
Species	Exploitable Biomass	ABC	TAC
yellowfin sole	3,180,000	212,000	207,980
rock sole	2,320,000	309,000	120,000
arrowtooth	819,000	140,000	134,354
flathead sole	636,000	77,300	77,300
other flatfish	618,000	154,000	154,000
Greenland turbot	177,000	14,200	9,000



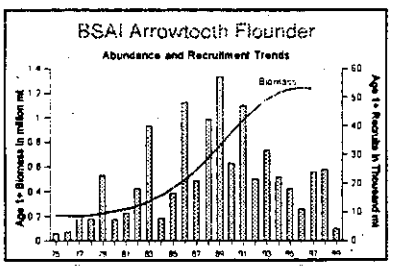
consequently, stock declines are expected in coming years. Fisheries have been unable to fully harvest the exploitable biomass of any of the flatfish species or complexes due to halibut and crab bycatch limits and conservative quotas. The current catch specifications for BSAI flatfish stocks is summarized in the adjacent table.





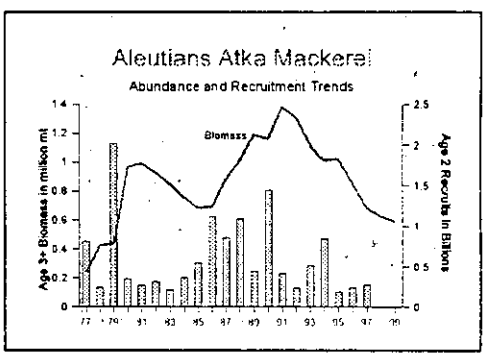


Unlike biomass of other flatfish species in the BSAI, biomass of Greenland turbot is at low levels and declining. Biomass has declined due to poor year classes from 1981-1997. Catch has also declined from a peak of 57,000 mt in 1981 to only about 9,000 mt in 1998. Biomass is projected to continue declining due to poor recruitment. Greenland turbot were harvested almost exclusively (>90%) by trawl gear until the early 1990's when longlines became the dominant gear type for this species. No halibut bycatch has been apportioned for a directed trawl fishery since 1996, effectively prohibiting this gear type from targeting turbot.



Atka Mackerel

Atka mackerel are found in quantity along the Aleutian Islands, and to a lesser extent in the western Gulf of Alaska. Biomass in the Aleutian Islands area is based on model estimates which incorporate the NMFS bottom trawl surveys. Biomass increased from 1977 to a peak in 1992, and has since declined. Catches increased from 15,000 mt in 1989 to 104,000 in 1996. The projected 1999 BSAI exploitable biomass is 595,000 mt, with an ABC of 73,300 mt. The most recent assessment suggests that this stock will continue to decline in the near term. Atka mackerel in the Gulf of Alaska are essentially from the same stock as the BSAI. No reliable estimate of biomass exists for GOA Atka mackerel, but the population is clearly significantly smaller than found in the Aleutian Islands. The 1999 GOA Atka mackerel ABC was set at 600 mt.

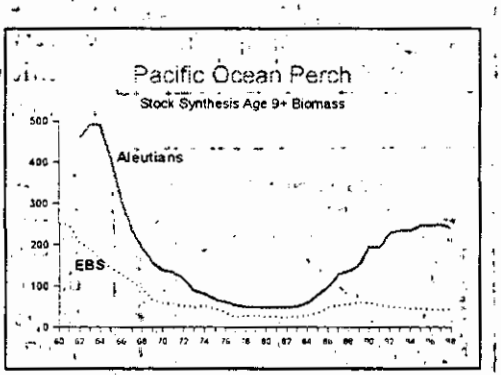


Amendment 34 established a gear allocation for Atka mackerel, beginning in 1998. A total of 1% of the Eastern Aleutian Islands/Bering Sea subarea TAC is allocated to jig gear. Once the jig fleet takes its 1% allocation, their allocation will increase to 2% for future years.

Management measures have also been taken to reduce the impacts of an Atka mackerel fishery on Steller sea lions. Atka mackerel are an important prey for Steller sea lions. In June 1998, the Council adopted regulations to disperse the Atka mackerel fishery, both temporally and spatially, to reduce localized depletions of Atka mackerel. The TAC will now be equally split into two seasons, and the amount taken within sea lion critical habitat will be limited.

Pacific Ocean Perch

Pacific ocean perch are the dominant species of red rockfish in the north Pacific, and are caught primarily along the Aleutian Islands, and to a lesser extent in the eastern Bering Sea and Gulf of Alaska. Biomass has greatly increased following heavy exploitation by foreign fleets prior to 1978. Above average year classes in the early 1980's has boosted the AI perch exploitable biomass from the early 1980's though the late 1990's. Exploitation has been relatively low during this period, with catches less than 10,000 mt per year. The projected 1999 exploitable biomass is 236,000 mt, with an ABC of 13,500 mt. Biomass of Pacific ocean perch in the Aleutian Islands area is projected to remain stable in coming years.



Other Rockfish

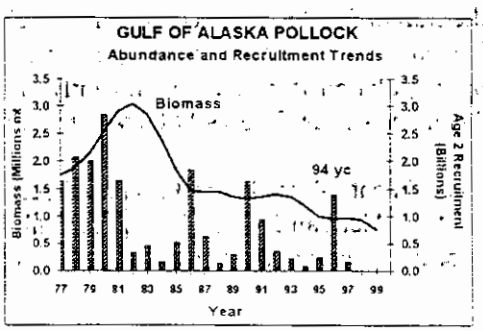
Numerous species of rockfish inhabit the BSAI, and are managed by species complex. Shortraker and rougheye rockfish are managed as one unit in the Aleutian Islands. The projected 1999 exploitable biomass of shortraker/rougheye is 46,500 mt, with an ABC of 965 mt. Northern and sharpchin are also managed together with a projected 1999 exploitable biomass of 94,000 mt, with an ABC of 4,230 mt. In the eastern Bering Sea, all other species are managed together as "other red rockfish." The projected 1999 exploitable biomass of other red rockfish is 11,600 mt, with an ABC of 267 mt. The "other rockfish" complex is composed of thornyheads and other *Sebastes* species. The 1999 ABCs for "other rockfish" are 369 mt in the eastern Bering Sea and 685 mt in the Aleutian Islands area. Abundance trends for these species are not available.

Amendment 53 allocated the AI shortraker/rougheye TAC between trawl and fixed gear fisheries. Thirty percent of the TAC is allocated to fixed gear and 70% to vessels using trawl gear.

2.2 GOA Commercial Groundfish Stocks

Walleye Pollock

Pollock in the Gulf of Alaska (GOA) are managed as a single stock, that is separate from the Bering Sea and Aleutian Island pollock stocks. For 1999, exploitable biomass (age 3+) in the GOA was projected at 738,000 mt. Catch specifications were the following: ABC=100,920 mt (includes Western Central and Eastern Gulf ABC), TAC=100,920 mt. Pollock are of medium relative abundance and are harvested at 100% of ABC. The 1994 year-class is forecast to be above average, and has been observed primarily in



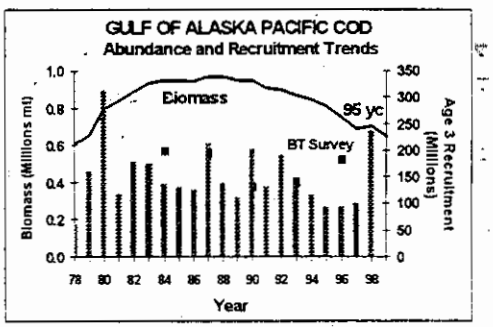
Shelikof Strait. Preliminary information suggests weak year-classes in 1995 and 1996, and a moderate 1997 year-class. Under these recruitment scenarios of year class strength, the spawner biomass is expected to decline though 2003.

The pollock fishery has been affected by management measures designed to protect Steller sea lions. In 1990, roe-stripping of pollock was prohibited. Beginning in 1998, 100% retention was required for pollock. In December 1998, NMFS issued a biological opinion that the pollock fishery jeopardized the recovery of Steller sea lions. In response, the Council took emergency action to prohibit pollock fishing within 10 nautical miles of numerous rookeries and haulouts, reduce the catch of pollock within critical habitat areas, and spread out effort over time. In 1993, the Council apportioned 100% of GOA pollock to the inshore sector. Beginning in 1998, 100% retention was required for pollock.

Pacific Cod

Pacific cod, also known as grey cod, are moderately fast-growing and short-lived fish. The 1999 exploitable biomass (age 3+) was projected to be 648,000 mt. The 1999 specifications were: ABC = 84,400 mt and TAC = 67,835. The difference between TAC and ABC was that some TAC was set aside as the guideline harvest level for State of Alaska pot and jig fisheries. Pacific cod are of medium relative abundance and are fully exploited. The stock is projected to decline as a result of poor year-classes produced from 1990-1994. Preliminary indications of the 1995 year class indicate it may be above average, however.

The Pacific cod stock is exploited by a multiple-gear fishery, principally by trawls and smaller amounts by longlines, jigs, and pots. A state water fishery for pot and jig gear began in 1997, with a guideline harvest level set at 15% of the federal quota in the Western and Central areas and 25% in the Eastern area. The state fishery ramped up to 20% in the Western Area and Kodiak and Chignik subareas of the Central area for 1999. The state GHLs are allowed to ramp up to 25% of the federal quota when area guideline harvest levels are achieved. For trawl fisheries in the EEZ, cod harvests have been constrained by halibut bycatch limits.



In 1993, the Council apportioned 90% of GOA Pacific cod TAC to the inshore sector and 10% to the offshore sector. Beginning in 1998, the IR/IU program was implemented, requiring full retention of all Pacific cod caught.

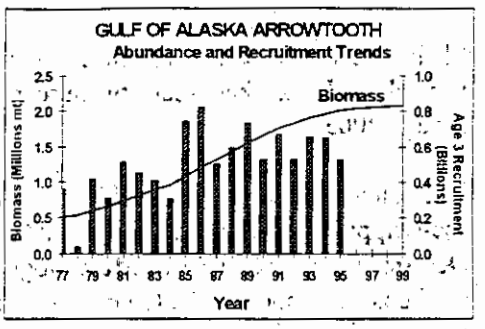
Flatfish

The flatfish assemblage has been divided into several categories for management purposes. Catch limits for flatfish are specified separately for flathead sole, rex sole, arrowtooth flounder, the deep water flatfish complex (Dover sole, Greenland turbot, and deep-sea sole), and the shallow water flatfish complex (rock sole, yellowfin sole, Alaska plaice, and other flatfish). Summary information for the flatfish assemblages is provided in the adjacent table.

Catch specifications (mt) for GOA flatfish fisheries, 1999.

Species	Biomass	ABC	TAC
deepwater flats	78,000	6,050	6,050
rex sole	72,000	9,150	9,150
shallowwater flats	315,000	43,150	18,770
flathead sole	206,000	26,110	9,040
arrowtooth	2,127,000	217,110	35,000

Far and away the dominant flatfish species in the Gulf of Alaska is arrowtooth flounder. Arrowtooth flounder biomass in the GOA appear to be at peak levels, but is lightly exploited. Arrowtooth flounder are presently of limited economic importance. Little to no effort is directed at catching this species, although commercial interest is growing. Prior to 1996, they frequently served as "ballast" against allowable retainable bycatch of other species.



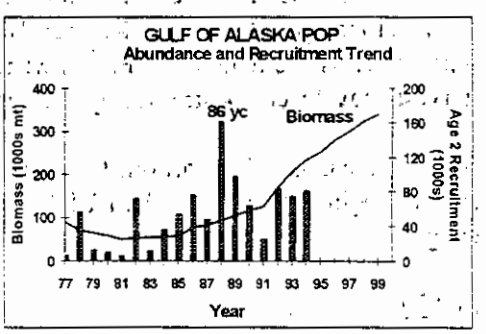
Rockfish

At least 30 rockfish species of the genus *Sebastes* inhabit the Gulf. Since 1988, rockfish have been divided into three management assemblages based on their habitat and distribution: slope, pelagic shelf, and demersal shelf rockfish. In 1991, the slope assemblage was divided into three management subgroups: Pacific ocean perch (POP), shortraker/rougheye rockfish, and all other species of slope rockfish. In 1993, a fourth management subgroup, northern rockfish, was also created. In 1997, black rockfish and blue rockfish were removed from the pelagic shelf complex, and designated for management by the State of Alaska. In 1998, a prohibition on trawling in the Gulf of Alaska east of 140° W. longitude affected rockfish trawl fisheries that are now prohibited in the East Yakutat/Southeast Outside portion of the Eastern Area. Summary information for the slope, pelagic shelf, and demersal shelf rockfish assemblages is provided below.

Rockfish assemblages in the Gulf of Alaska.

Slope Rockfish	Pelagic Shelf Rockfish	Demersal Shelf Rockfish
Pacific Ocean Perch	Dusky	Canary
Shortraker/Rougheye	Widow	China
Northern	Yellowtail	Copper
Other rockfish		Quillback
- harlequin		Rosethorn
- sharpchin		Tiger
- redstripe		Yelloweye
- many others		

Slope Rockfish - The primary commercial rockfish species in the Gulf of Alaska is Pacific Ocean Perch (commonly referred to by its acronym POP). For 1999, exploitable biomass was projected to be 242,300 mt. Catch specifications for 1999 were the following: ABC = 13,120 mt, TAC = 12,590 mt. POP are at medium abundance after reaching a low point in the mid 1980's. A rebuilding plan for POP was implemented in 1995, and the stock was considered rebuilt in 1997. Relatively strong recent year-classes appear to have contributed to increased abundance.



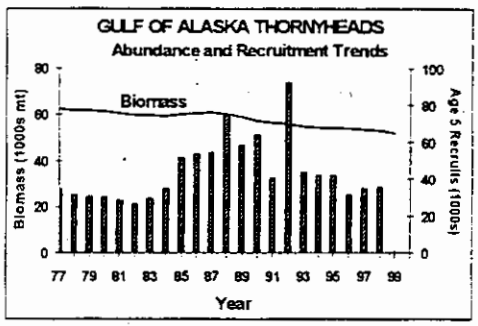
Pelagic Shelf Rockfish - The pelagic shelf rockfish (PSR) assemblage in the Gulf includes three species: dusky rockfish, widow rockfish, and yellowtail rockfish. This assemblage was separated from slope rockfish in 1988. The PSR exploitable biomass for 1999 is projected at 54,220 mt. Catch specifications were: ABC = 4,880 and TAC = 4,880.

Demersal Shelf Rockfish - The demersal shelf rockfishes (DSR) assemblage is comprised of seven species of shallow, nearshore, bottom-dwelling rockfishes: canary rockfish, China rockfish, copper rockfish, quillback rockfish, rosethorn rockfish, tiger rockfish, and yelloweye rockfish. Yelloweye rockfish accounts for 90% of all DSR landings. Density is estimated using line transect techniques in the Eastern Gulf. ABC/TAC

recommendations for the entire assemblage are keyed to adult yelloweye abundance. The exploitable biomass estimate is based on the lower 90% confidence interval and is 25,031 mt for 1999 in Southeast Outside. The 1999 ABC is 560 mt, determined by applying F=M=0.02 to this biomass and adjusting for the 10% of other DSR species. DSR were excluded from the Council license limitation program because ADF&G planned to initiate an analysis for a separate DSR license limitation program. In February 1999, the Council adopted an amendment requiring full retention of all DSR caught off Southeast Alaska.

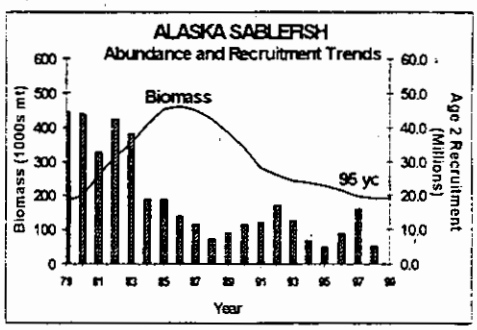
Thornyhead Rockfish

The thornyhead rockfish assemblage consists of two species: shortspine and longspine thornyheads. The current assessment for thornyheads is based on a size-based, age-structured model. The 1999 estimate of exploitable biomass for thornyheads is 53,216 mt. Assuming average recruitment when fished at the $F_{40\%}$ rate, thornyheads are expected to decline. For 1999, the ABC was specified at 1,990 mt. The abundance of this complex is relatively high and recent harvests have been between 50-90% of the ABC. Due to the long-lived nature of this species, the overall harvest rate recommendation is low at about 4% of the total age 5+ biomass.



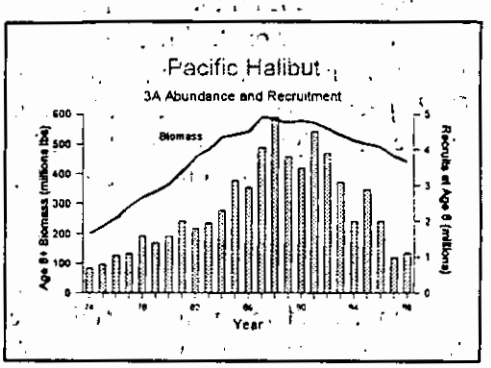
Sablefish

The sablefish resource of the Bering Sea, Aleutian Islands, and Gulf of Alaska are considered one stock. However, the resource is managed by discrete regions to distribute exploitation throughout its range. Large catches of sablefish (up to 26,000 mt) were made in the Bering Sea during the 1960's, but have since declined. Smaller catches have been made in the Aleutian Islands area, peaking at 3,800 mt in 1987. The projected 1999 exploitable biomass is 17,000 mt in the Bering Sea, with an ABC of 1,340 mt. In the Aleutians, projected 1999 biomass is 26,000 mt with ABC specified at 1,860 mt. The GOA ABC was set at 12,700 mt. Biomass of the sablefish stock off Alaska is projected to decline somewhat in coming years.



It is important to note that the TAC for sablefish is apportioned among gear types. In the Bering Sea, 50% of the sablefish is allocated to trawl gear, and 50% to fixed gear. In the Aleutians region, 25% is allocated to trawl gear, and 75% to fixed gear. Longlined pots are a legal gear type for sablefish in the Bering Sea and Aleutian Islands, but not in the Gulf of Alaska. Sablefish in the Western and Central Gulf of Alaska is allocated 80% to hook-and- line gear and 20% to trawl gear. In the Eastern Gulf of Alaska, the sablefish TAC is allocated 95% to hook-an-line gear and 5% to trawl gear. The fixed gear apportionment of the sablefish TAC is managed under the IFQ program, which began in 1995. Twenty percent of the fixed gear allocation is reserved for use by CDQ participants. Important state water sablefish fisheries occur in Chatham Strait, Clarence Strait, Prince William Sound, and the Aleutians.

2.3 Pacific Halibut Stock

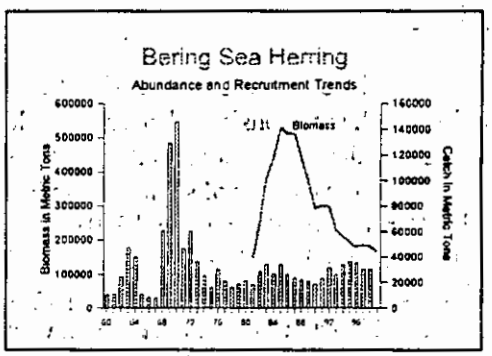


Large year-classes produced in the late 1970's and into the mid-1980's resulted in a buildup of halibut biomass to current high levels. The 1999 total exploitable biomass was projected to be 568.25 million pounds (258,000 mt). Over half of the biomass is found in areas 3A and 3B (central and western Gulf of Alaska). Recruitment of 8 year-olds appears to have fallen off after a strong 1987 year-class recruited in 1995. Declines in halibut biomass should be expected in the near term.

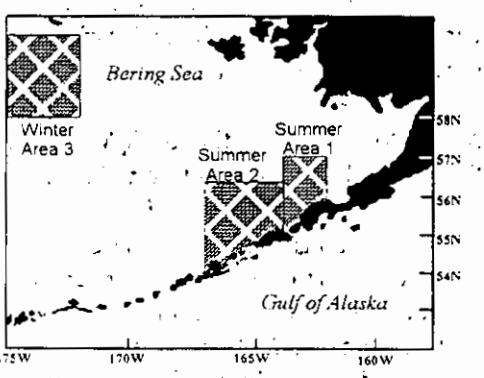
The directed halibut longline fishery is prosecuted under the halibut/sablefish individual fishing quota (IFQ) program, which began in 1995. The Pacific halibut stock is managed by the International Pacific Halibut Commission (IPHC), who sets the annual catch specifications. The 1999 total IFQ TAC for all areas (2C to 4E) was established at 58.39 million pounds.

Limits are placed on halibut taken as bycatch in groundfish target fisheries. In the Bering Sea, 900 mt of halibut mortality is allocated to longline fisheries as bycatch, and 3,775 mt of mortality allocated as trawl bycatch. In 1998, the Council adopted a provision to reduce trawl halibut mortality by 100 mt as part of the regulation prohibiting the use of bottom trawl gear for pollock fisheries.

2.4 Pacific Herring Stock



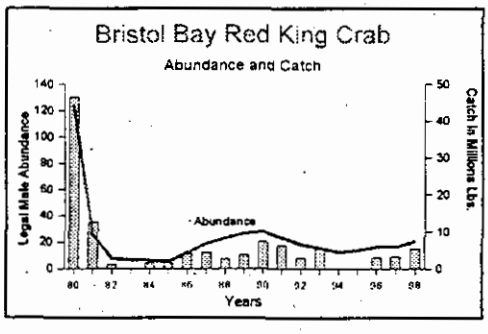
Pacific herring fisheries are managed by the State of Alaska. Fisheries occur in specific areas of the Bering Sea and Gulf of Alaska when fish come inshore to spawn. In the Bering Sea, catches peaked dramatically in 1970 at more than 108,000 mt, then declined to about 19,000 mt in 1977. Since then, catches have risen steadily to about 35,000 mt per year. In the Gulf of Alaska, catches peaked at over 100,000 mt in 1936. Following years of reduced catches in the late 1960's, herring catches have increased in recent years.



Herring are also taken incidental to groundfish trawl fisheries, particularly in the pollock fishery. In the Bering Sea, the herring PSC limit for trawl gear is determined each year as part of the TAC specification process. Bycatch of herring is limited to 1% of the estimated eastern Bering Sea adult biomass, and the limit is further apportioned by target fishery. If a fishery reaches its herring apportionment, then that fishery is prohibited from fishing in specified Herring Savings Areas. These Herring Savings Areas are depicted in the adjacent figure.

2.5 Major Bering Sea Crab Stocks

Bristol Bay Red King Crab

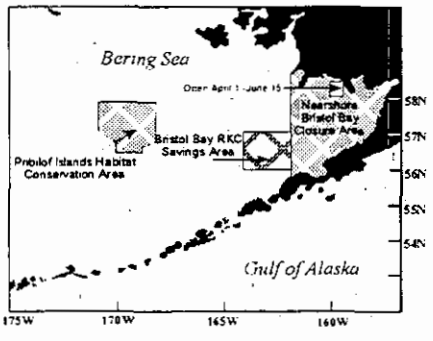


After declining abundance throughout the 1960s and reaching a low during the years 1970-1972, recruitment to the Bristol Bay red king crab stock increased dramatically. New all-time record landings were established in each year from 1977 to 1980. Declining recruitment, fishing pressure, and probably increased incidence of disease and predation led to an abrupt decline in fisheries in 1981 and 1982. These precipitous declines led to a closure of the Bristol Bay fishery in 1983. In 1984, the stock showed some recovery and a limited fishery was reestablished. Between 1984 and 1993, the fishery continued at levels considerably below those of the late 1970's. Throughout the 1980s and 1990s there was little sign of a large year-class in this stock. Because the abundance of female crab was below threshold, the Bristol Bay red king crab fishery was closed in 1994 and 1995, as was the fishery for Tanner crab in Zone 1 east of 163° West longitude. The fishery reopened in 1996, and catches have increased to 16.4 million pounds in 1998. A large year-class (presumably the 1990 year-class) is entering the fishery, and should provide stable catches for the next couple of years.

PSC limits for Zone 1 red king crab.

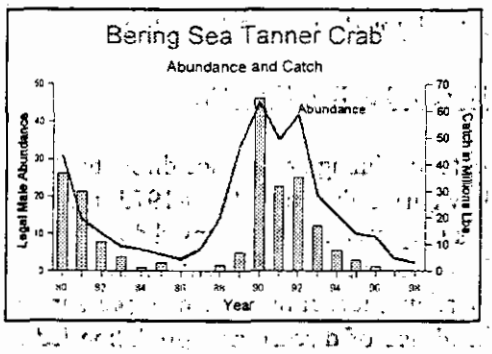
Crab Abundance	PSC Limit
Below threshold or 14.5 million lbs of effective spawning biomass (ESB)	35,000
Above threshold, but below 55 million lbs of ESB	100,000
Above 55 million lbs of ESB	200,000

Crab abundance affects groundfish fisheries because bottom trawl fisheries in specific areas are closed when prohibited species catch (PSC) limits of C. bairdi Tanner crab, C. opilio crab, and red king crab are taken. Amendment 37 established a stairstep procedure for determining PSC limits for red king crab taken in Zone 1 trawl fisheries. PSC limits are based on abundance of Bristol Bay red king crab as shown in the adjacent table. Given NMFS and ADF&G's 1998 abundance estimate for Bristol Bay red king crab, a Zone 1 PSC limit was established at 200,000 red king crabs for 1999. Note that in 1998, the Council adopted a provision to reduce red king crab bycatch by an additional 3,000 crab as part of the regulation prohibiting the use of bottom trawl gear for pollock fisheries.



Several areas have been closed to trawling to reduce potential adverse impacts on crab and other resources. The Pribilof Islands Conservation Area is closed to all trawling year-round to protect blue king crabs. Fishing is prohibited with non-pelagic trawling in the Red King Crab Savings Area (162° to 164° W, 56° to 57° N) year-round. This area is known to have high densities of adult red king crab. To allow some access to productive rock sole fishing areas, the area bounded by 56° to 56° 10' N latitude would remain open (with a separate bycatch limit) during the years when the directed crab fishery is open. To protect juvenile red king crab and critical rearing habitat, all trawling is prohibited on a year-round basis in the nearshore waters of Bristol Bay, except for one small area that remains open to trawling during the period April 1 to June 15 each year.

Tanner Crab



The Bering Sea Tanner stock has undergone two large fluctuations. Catches increased from 5 million pounds in 1965 to over 36 million pounds in 1980. The 1980 peak catch was followed by a collapse resulting in low landings (<0.5 million lbs) from 1981-1985, and finally no fishery in 1986 and 1987. The fishery reopened in 1988, and landings increased to over 60 million pounds in 1990. A decline followed, and the fishery has been closed since 1996.

This stock is currently at very low abundance. The 1998 estimates of legal males and large females are the lowest in the history of the NMFS bottom trawl survey. Based on overfishing definitions adopted under Amendment 7, the bairdi stock is below the established minimum stock size threshold, and consequently has been declared "overfished". A rebuilding plan has been adopted by the Council. Although the near-term outlook for this stock is bleak, some signs of recruitment are beginning to appear in the NMFS survey data.

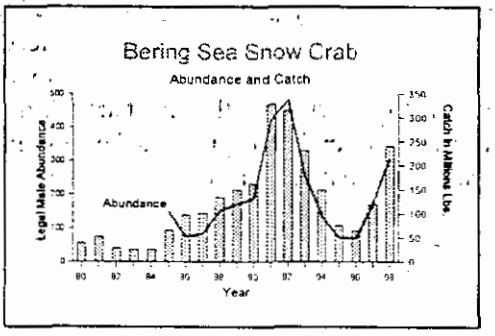
Amendment 41 PSC limits adopted for bairdi Tanner crab.

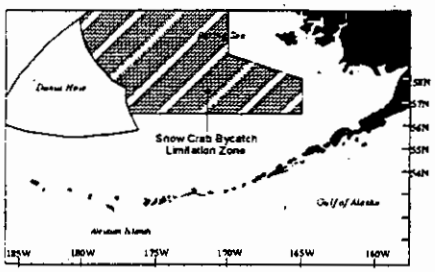
Zone	Abundance	PSC Limit
Zone 1	0-150 million crabs	0.5% of abundance
	150-270 million crabs	750,000
	270-400 million crabs	850,000
	over 400 million crabs	1,000,000
Zone 2	0-175 million crabs	1.2% of abundance
	175-290 million crabs	2,100,000
	290-400 million crabs	2,550,000
	over 400 million crabs	3,000,000

For groundfish trawl fisheries, separate Tanner (C. bairdi) crab PSC limits are set for Zone 1 and Zone 2. These limits may be further allocated among the pollock/mackerel/other species, Pacific cod, rock sole, turbot/sablefish/arrowtooth, rockfish, and yellowfin sole fisheries. When a fishery exceeds its PSC limit in one zone, trawling is closed for that zone for the remainder of the year. Under Amendment 41, PSC limits for bairdi in Zones 1 and 2 are based on total abundance of bairdi crab as indicated by the NMFS trawl survey. Based on 1998 abundance (156.5 million crabs), the PSC limit for C. bairdi in 1999 was 750,000 crabs in Zone 1 and 1,878,000 crab in Zone 2. Note that in 1998, the Council adopted a provision to reduce bairdi crab bycatch by an additional 50,000 crab as part of the regulation prohibiting the use of bottom trawl gear for pollock fisheries.

Snow Crab

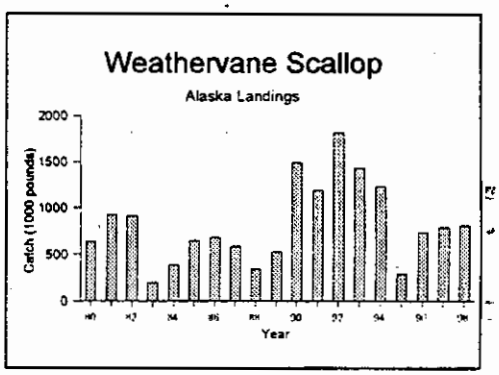
Catch of Bering Sea snow crab *(C. opilio)* increased from under 1 million pounds in 1974 to over 315 million pounds in 1992. The 1992 peak catch was followed by reduced landings through 1996. The stock quickly rebounded with good recruitment, however, and landings increased to 250 million pounds in 1998. The 1999 fishery opens on January 15 with a guideline harvest level of 196 million pounds. The abundance of this stock has peaked, and is expected to decline rapidly in the coming year or two. The snow crab stock is below the established minimum stock size threshold, and consequently has been declared "overfished". A rebuilding plan has been adopted by the Council. Based on length frequency data from the NMFS trawl survey, there does not appear to be any significant level of recruitment forthcoming.





Under Amendment 40, PSC limits of snow crab (C. opilio) for groundfish trawl fisheries are based on total abundance of opilio crab as indicated by the NMFS survey. The snow crab PSC cap is set at 0.1133% of the Bering Sea snow crab abundance index, with a minimum PSC of 4.5 million snow crab and a maximum of 13 million snow crab. Snow crab taken within the "C. Opilio Bycatch Limitation Zone" accrue towards the PSC limits established for individual trawl fisheries. Upon attainment of a snow crab PSC limit apportioned to a particular trawl target fishery, that fishery is prohibited from fishing within the snow crab zone. The 1998 survey indicated a total population of 3.23 billion crabs. Therefore the 1999 snow crab PSC limit was established at 4,500,000 crabs. Note that in 1998, the Council adopted a provision to reduce snow crab bycatch by an additional 150,000 crab as part of the regulation prohibiting the use of bottom trawl gear for pollock fisheries.

2.6 Alaska Scallops



Weathervane scallops have been the target of a very small fishery since the late 1960's. The overall magnitude of the weathervane scallop resource off Alaska is thought to be very limited based on survey and fishery information. Although Amendment 6 establishes OY at 0 to 1.24 million pounds of shucked meats, catches are constrained by crab bycatch limits. Recent landings have been in the order of 800,000 pounds.

Scallop stocks in Alaska have been managed under a federal fishery management plan (FMP) since July 26, 1995. In June 1995, the Council adopted a 3-year vessel moratorium to restrict new entry into the scallop fishery while a more comprehensive plan was being developed. The moratorium was approved as Amendment 2, and became effective August 1, 1997. Amendment 3 deferred all management (except limited access) to the State. Regulations include permits, registration areas and districts, seasons, closed waters, gear restrictions, efficiency limits, crab bycatch limits, scallop catch limits, inseason adjustments, and observer monitoring. In February 1999, the Council adopted Amendment 4, which will establish a permanent license limitation program for the scallop fishery.

3.0 ENVIRONMENTAL EFFECTS OF THE ALTERNATIVES

An environmental assessment (EA) as described by the National Environmental Policy Act (NEPA) of 1969 is used to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) will be the final environmental documents required by NEPA. If the analysis concludes that the proposal is a major Federal action significantly affecting the human environment, an environmental impact statement (EIS) must be prepared.

The environmental impacts generally associated with fishery management actions are effects resulting from (1) harvest of fish stocks which may result in changes in food availability to predators and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices, e.g., effects of gear use and fish processing discards; and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear.

An analysis of the effects of groundfish fishing on the ecosystem, social, and economic environment is contained in the Final Supplemental Environmental Impact Statement on the Groundfish Total Allowable Catch Specifications and Prohibited Species Catch Limits (NMFS 1998a). Descriptions of the affected environment are given in the SEIS (NMFS 1998a). Substrate is described at section 3.1.1, water column at 3.1.3, temperature and nutrient regimes at 3.1.4, currents at 3.1.5, groundfish and their management at 3.3, marine mammals at 3.4, seabirds at 3.5, benthic infauna and epifauna at 3.6, prohibited species at 3.7, and the socioeconomic environment at 3.10. Additionally, the status of each target species category, biomass estimates, and acceptable biological catch specifications are presented both in summary and in detail in the annual GOA and BSAI stock assessment and fishery evaluation (SAFE) reports. The projections for fishing year 1999 are contained in the 1998 SAFE reports (NPFMC 1998a; 1998b.) Chapter 2 of this document summarizes the current status for the major species in both the BSAI and GOA.

This Environmental Assessment tiers off the SEIS (NMFS 1998a) which analyzed the effects of groundfish fisheries being promulgated in the EEZ and displayed fishery induced impacts on all aspects of the ecosystem. NMFS notes that in a July 8, 1999, order, amended on July 13, 1999, the court in Greenpeace, et al., v. NMFS, et al., Civ No. 98-0492 (W.D. Wash.) held that the SEIS did not adequately address aspects of the GOA and BSAI groundfish fishery management plans other than TAC setting, and therefore was insufficient in scope under NEPA. In response to the Court's order, NMFS is currently preparing a programmatic SEIS for the GOA and BSAI groundfish fishery management plans. Notwithstanding the less expansive scope of the 1998 SEIS, NMFS believes that the discussion of impacts and alternatives in the SEIS is directly applicable to the proposed action to be analyzed in this EA. Therefore, this EA adopts the discussion and analysis in the SEIS (NMFS 1998a), as well as in the emergency rule to implement reasonable and prudent Steller sea lion protection measures in the pollock fisheries of the BSAI and GOA EA (NMFS 1999a), the regulatory amendment to implement the revised and final reasonable and prudent Steller sea lion protection measures in the pollock fisheries of the BSAI and GOA (NMFS 1999b), and discussion presented in the Revised Final Reasonable and Prudent Alternatives for the Pollock fisheries in the Bering Sea and Aleutian Islands and Gulf of Alaska with Supporting Documents (NMFS, 1999c).

Environmental issues attributable to promulgation of the rules implementing the American Fisheries Act are focused on those associated with increased dispersion of the pollock fisheries in time and space as a result of pollock fishery cooperatives. These issues are addressed in the draft EA prepared to support the revised final reasonable and prudent alternatives (RFRPAs) for the pollock fisheries in the Bering Sea and Aleutian Islands

and Gulf of Alaska (NMFS 1999e). The conduct of the pollock fisheries under the pollock fishery cooperatives authorized under the AFA will further promote the objective of the revised RFRPAs to spatially and temporally distribute the pollock fisheries. Impacts of this dispersion on issues typically considered for groundfish fishery management actions are discussed below.

A summary of the effect of the AFA on the pollock fishery is excerpted from section II.E. of the RFRPAs (NMFS 1999c) as follows:

> Implementation of the American Fisheries Act (AFA) which began in 1999, ... has had a profound effect on the conduct of the Bering Sea pollock fishery and a lesser effect on the Gulf of Alaska pollock fishery. Under the AFA the catcher/processor sector was reduced from 30 to 21 vessels, a 30% reduction in potential harvesting capacity relative to 1998. And, the catcher/processor sector has made further reductions in fleet size through cooperative agreements. In 1999, only 16 vessels participated in the first two seasons and only 12 vessels have participated to date in the third and fourth seasons which means that the 1999 catcher/processor fleet was approximately half its pre-AFA size. The effect has been an elimination of the Olympic-style race for fish and a dramatic moderation of daily catch rates for the catcher/processor sector of the fleet, which takes 40% of the Bering Sea pollock quota.
>
> The provisions of the AFA affecting the inshore and mothership sectors of the fleet will not be fully implemented until 2000 and are expected to have a similar dramatic effect on the prosecution of the pollock fishery in those sectors. Regulations are currently under development, and are intended to be in place in 2000, that would facilitate the formation of fishery cooperatives in the inshore and mothership sectors of the Bering Sea pollock industry. If the inshore and mothership sectors of the industry are able to successfully form cooperatives in 2000, we anticipate a significantly greater temporal dispersion of the fishery, especially during the summer and fall months as the Olympic-style race for fish is eliminated. The moderation of aggregate daily catch rates is expected to be most dramatic during the summer and fall months because some inshore processors traditionally convert to salmon processing during the summer months and will wish to delay pollock operations until late summer, after the salmon fishing seasons are over. However, other inshore processors are not geographically situated to process salmon and have indicated an interest in beginning their pollock operations much earlier in the summer. Consequently, the formation of cooperatives in the inshore sector is expected to provide for a more natural dispersion of inshore pollock operations over time and space as the different inshore operations pursue different business objectives and chose to fish at different times of the year.
>
> To prevent a spillover of effort from the Bering Sea to the Gulf of Alaska, the AFA places limits on the ability of Bering Sea vessels to fish in the Gulf of Alaska. Under the AFA, the Council has recommended a complex suite of restrictions on Bering Sea catcher vessels in the Gulf of Alaska pollock fisheries. In addition, under the Steller sea lion RPAs, the Council has recommended additional restrictions such as trip limits and a prohibition on crossing between the Bering Sea and Gulf of Alaska during the same fishing season. The combined effects of all of these measures is expected to significantly slow the pace of the Gulf of Alaska pollock fisheries in a manner consistent with the RPA principle of temporal dispersion. While it is difficult to project with precision the effects these changes will have on the pace of Gulf of Alaska pollock fisheries, the possible magnitude of such changes can be estimated. The combined effects of the Council's recommendations with respect to limiting participation by Bering Sea vessels in the Gulf of Alaska is expected to discourage or prevent all but a few Bering Sea-based catcher vessels from continuing to fish in the Gulf of Alaska. Historically (in 1995-1997) Bering sea-based catcher vessels have accounted for approximately 75% of the pollock landings in areas 610 and 620 of the GOA, and more than 50% of pollock landings in area 630 and 640. If the bulk of this effort is removed from the Gulf of Alaska due to

the combination of AFA and Steller sea lion measures, pollock seasons in the western half of the Gulf of Alaska (610 and 620) could last 2 to 3 times longer than in prior years and pollock seasons in the eastern half of the Gulf of Alaska (areas 630 and 640) could double in length.

3.1 Food-web Interactions

The marine food-web of North Pacific marine fishes are complex (Livingston and Goiney 1983). Numerous species of plankton, phytoplankton, invertebrates, mollusks, crustaceans, forage fish, demersal, mid-water, and pelagic fish, marine mammals, seabirds, and humans combine to comprise the food-web present in the BSAI and GOA. Environmental changes as well as human exploitation patterns can effect changes to trophic interactions. Fishing causes direct changes in the structure of fish communities by reducing the abundance of target or by-catch species, then these reductions may lead to responses in non-target species through changes in competitive interactions and predator prey relationships. Indirect effects of fishing on trophic interactions in marine ecosystems may also occur. Current debates on these topics include comparing relative roles of 'top down' (predator) or 'bottom up' (environmental and prey) control in ecosystems and the relative significance of 'donor controlled' dynamics (in which victim populations influence enemy dynamics but enemies have no significant effect on victim populations) in the food webs (Jennings and Kaiser 1998.)

The Bering Sea ecosystem has been changing throughout its recorded history. Changes are recorded primarily in terms of large and sometimes sudden population fluctuations (National Research Council 1996). The eastern Bering Sea fish assemblage probably became pollock-dominated in the late 1960s and early 1970s, and a similar shift probably occurred in the western Bering Sea as well.

Decisions related to how much and what combinations of fish are harvested each year are made during annual total allowable catch (TAC) determinations. Impacts associated with harvest quotas are evaluated in separate NEPA documents, most recently in the SEIS (NMFS 1998a) and the 1999 TAC EA (NMFS 1998b). This EA assesses the implementation of AFA pollock allocations and cooperatives and considers rules affecting allocation of the harvest. These rules do not directly impact or change total allowable harvest levels.

However, the BSAI pollock co-op structure authorized under the AFA, as well as sideboard harvest limitations proposed for other BSAI and GOA fisheries under the AFA and the Steller sea lion RFRPAs would allow for further temporal and spatial distribution of exploitation rates of pollock and other species. These effects are supportive of the principles and objectives developed by NMFS under Endangered Species Act consultations on the Alaska pollock fisheries (NMFS 1998c) and ensuing RFRPAs (NMFS 1999c). A basic premise of the RFRPAs is to reduce competition between the pollock fisheries and Steller sea lions for pollock, a predominant prey species in the Steller sea lion diet. This is accomplished primarily through a reduction in pollock exploitation rates during time periods and in areas critical or important to Steller sea lion foraging success. Because the AFA rules could promote further reductions in pollock and other fish species exploitation rates, the proposed action and alternatives to it have the potential to positively impact marine tropic interactions to the extent these species are major prey species in the ecosystem.

3.2 Biological Diversity

The concept of biological diversity is generally used to denote the variety of living things in an ecosystem. The most widely used definition of biological diversity (Norse et al 1986) considers three levels: genetic, species, and ecosystem diversity. The proposed action and its various alternatives affect allocation of harvest and not total harvest. The exploitation rates of pollock under the AFA and the Steller sea lion RFRPAs would be managed to be more reflective of pollock biomass distribution throughout the year and to reduce competition

with Steller sea lions for pollock. These dispersion effects on pollock exploitation rates lead to the conclusion that the action would not be expected to negatively impact biological diversity. In fact, the preferred alternative is expected to have a positive impact on biological diversity to the extent that AFA-related fishery co-op agreements enable greater flexibility in the conduct of the pollock fisheries to better respond to changes in pollock biomass distribution and allow fishery participants to more effectively meet the principles and objectives established under the RFRPAs for spatial and temporal dispersion of the pollock fisheries.

3.3 Seabirds

As stated in the SEIS (NMFS 1998a page 562 through 573), information voids for various aspects of seabird ecology make it difficult to predict impacts of fishery management on seabirds. Lacking are diet and foraging ecology information for most seabird species during autumn, winter, and early spring; the seasons of greatest activity by the pollock trawl fishery. Also lacking are oceanographic and food-web information relative to seabird diet and foraging.

Seabirds are known to feed on age 0 and age 1 Walleye pollock, however, most species of seabirds feed largely or exclusively on forage species other than pollock (capelin, sand lance, juvenile herring, Myctophids, Pacific saury, juvenile cods, jellyfish, large zooplankton, and other invertebrates.) Direct competition does not occur because the size of pollock targeted for harvest in the fisheries are larger than any taken for food by seabirds. Impacts may, however, accrue to the prey-sized fish (pollock as well as other prey species) from relocated or reduced harvest of their predators, the large pollock, which in turn may result in localized areas of either increased or decreased abundance of prey-sized fish.

Seabird populations usually are limited by their food supply to a much greater degree than by other factors. If the management measures employed cause a change in forage abundance or availability they could cause a large-scale, long-term changes in seabird populations. Not enough information exists, however, to estimate whether changes in seabird forage abundance or availability will occur as a result of these proposed management measures. Whether the proposed management measures will have a positive, negative, or even measurable impact on seabird populations cannot be estimated from information currently available.

Food consumption by seabirds depends not only on forage stocks in their feeding areas, but also on the availability of stocks to the birds. All seabirds forage on concentrations of prey, which are created by prey schooling behavior or by physical processes in the water column. Different seabirds species require different foraging conditions and have different strategies for adapting to changes. When conditions are not suitable for foraging, even a large stock of prey may be unavailable to birds. Relationships between forage availability and stock sizes are virtually unknown at present. For instance, fishery independent physical factors (such as strength of upwellings) may influence both forage production and its availability to seabirds; other factors that make prey available to birds (such as schooling behavior) may partially be determined by stock sizes; and still other factors (such as water column stratification) may vary independently of stocks. Neither the no action alternative nor the proposed management measures will affect physical oceanographic conditions in any way.

3.4 Prey Species

The following species groups are included in the forage fish category established in 1998: Osmeridae (capelin, eulachon, and other smelts), Myctophidae (lanternfishes), Bathylagidae (deep-sea smelts), Ammodytidae (Pacific sand lance), Trichodontidae (Pacific sand fish), Pholidae (gunnels), Stichaeidae (pricklebacks, warbonnets, eelblennys, cockcombs, and shannys), Gonostomatidae (bristlemouths, lightfishes, and

anglemouths), and the Order Euphausiacea (krill). Only the species included in the new forage fish category established in 1998 in amendments 36 and 39 to the BSAI and GOA FMPs are discussed in this section.

Bycatch amounts of some of the forage species have been recorded in BSAI and GOA groundfish fisheries in previous years. Smelts have been recorded more regularly than some of the other groups, and no reporting previous to 1998 has been done for species such as Euphausiacea and Gonostomatidae. Forage species catch under status quo management is estimated in Tables 4-25 through 4-35 of the SEIS (NMFS 1998a.) Data in rows under the target fishery heading "Pelagic Pollock" and "Bottom Pollock" are applicable to the proposed management measures. The proposed action to prohibit use of nonpelagic trawl gear in the BSAI directed pollock fishery (FMP amendment 57) may result in a slight increase in the "Pelagic Pollock" catch proportional to the reduction in "Bottom Pollock" catch of pollock. Based on information in Tables 4-25 and 4-35 of the SEIS indicating no differences in forage species catch in the pelagic and bottom trawl pollock fisheries, and given that 98.5 percent of the pollock catch in the directed fishery already is taken with pelagic trawl gear (NMFS 1999f), NMFS does not anticipate changes in the catch of forage species resulting from any spatial or temporal change in the pollock fisheries resulting from this action or any of its alternatives.

3.5 Target Species

The proposed action and alternatives to it would result in similar relative impacts to target species as the status quo fisheries. That is, sea lion protective measures that will be implemented under a separate action will generally dictate when and where pollock harvests may occur and the same amount of total harvest will occur from the same management areas. Likewise, the same species of fish will be harvested at the exploitation levels determined in the TAC setting process and the sex ratio and size of fish harvested would be similar. However, under fishery co-ops promoted under the preferred alternative, the spatial and temporal locations from which fish are harvested are expected to more closely reflect the biomass distribution of pollock. This effect assumedly reflects a positive influence on how fisheries are conducted relative to potential impacts on Bering Sea pollock. Similar but less predictable effects may occur for other species harvested by AFA vessels to the extent that fishery co-ops are able to promote a more rationalized approach to the harvest of sideboard species for which directed fishing by AFA vessels would be authorized. Given that sideboard amounts of non Bering pollock are not allocations, but rather harvest limits that must be competed for with non AFA vessels, the benefits accruing from AFA sideboard limits in rationalizing non pollock target fisheries likely will be limited.

3.6 Fishing Gear Impacts

The otter trawl is the principal gear used in the directed pollock fisheries in the GOA and BSAI. Amendment 57 (to the FMP for Groundfish Fishery of the BSAI) prohibiting nonpelagic trawl gear was passed by the Council and the new regulation on the fishery is expected to be effective by mid 2000. Beginning in 1999, however, nonpelagic trawl gear is being prohibited in the BSAI pollock fishery through allocation of zero mt of pollock to nonpelagic trawl gear. Pelagic trawls may, however, be fished on the bottom and, in some cases, may come in contact with and disturb substrate. No data are available predicting the reduction in amount of contact with benthic substrates by use of only pelagic trawl gear or whether reducing contact with benthic substrate in the pollock fishery alone is enough to comprise a measurable reduction of impacts that have accrued from other fisheries that will continue to use bottom trawl gear i.e., the Pacific cod, rock sole, yellowfin sole, and Atka mackerel fisheries.

The proposed action or alternatives to the proposed action are not expected to result in either more or less habitat disturbance than accrues from status quo directed pollock trawl fishing except to the extent that local disturbances become less intense as the pollock fishery becomes more dispersed temporally and spatially.

3.7 Bycatch of Prohibited Species

Halibut, herring, crab, and salmon are among the prohibited species taken in the fisheries subject to the proposed actions. The proposed action would not change existing PSC limits for these species. However, Bycatch rates of prohibited species could be reduced under the AFA to the extent that pollock fishery cooperatives and the rules that are implemented to manage co-op fisheries provide incentives to slow harvest rates and fish in a manner that reduces incidental catch rates of prohibited species by AFA vessels. A separate proposed ban on bottom trawling has the potential to reduce bycatch of halibut and crab (at some potential cost in terms of increase in salmon and herring bycatch), but that is an independent action.

PSC limits for the AFA vessels are proposed to be either reflective of historical percentage of PSC bycatch (for AFA catcher processors) or be proportional to the groundfish quotas (AFA catcher vessels). Therefore, the PSC limitations imposed on AFA vessels are simply a subset of the overall PSC caps for the groundfish fisheries. Any amount not taken under these limits is still subject to being taken by the non-AFA vessels fishing in the other groundfish fisheries.

As with target species catch discussed previously, none of the alternatives would directly change existing PSC limits. However, the expectation exists that pollock co-ops could provide the infrastructure to promote reduced prohibited species bycatch rates and overall bycatch amounts experienced by AFA co-op vessels given the latitude these vessels have in self-management of co-op specific pollock allocations.

3.8 Impacts to Marine Habitat

An assessment of impacts to habitat described as Essential Fish Habitat (EFH) is required in the interim final rule (IFR) (62 FR 66531, December 19, 1997) implementing the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act. These requirements are:

1) a description of the proposed action;
2) an analysis of the effects, including cumulative effects, of the proposed action on EFH, the managed species, and associated species, such as major prey species, including affected life history stages;
3) the Federal agency's view of the action on EFH; and
4) proposed mitigation, if applicable.

Amendment 55 to the *Gulf of Alaska Groundfish,* Amendment 55 to the *Groundfish in the Bering Sea/Aleutian Islands Area,* Amendment 8 to the *Bering Sea Aleutian Islands Crab,* and Amendment 5 to the *Scallop Fisheries Off Alaska* Fishery Management Plans contain descriptions of EFH for the subject fishery management areas. The fishery management plan species with EFH descriptions associated with this proposed action are: arrowtooth flounder, Alaska plaice, dusky rockfish, flathead sole, Pacific cod, Pacific ocean perch, rock sole, dover sole, rex sole, sablefish, Atka mackerel, shortraker rockfish, rougheye rockfish, skates, sculpins, sharks, octopus, squid, thornyhead rockfish, yellow-eye rockfish, walleye pollock, yellowfin sole, and forage fish (eulachon, capelin, sand lance, sand fish, Myctophids, euphausiids, pholids, stichaeids).

The proposed action is a complex of regulatory changes affecting distribution patterns of harvest among existing users. Descriptions of the action are in section 1, 5, 6, 7, 8, 9, 10, and 11 of this document. The complex of actions does not directly change the total amount of fish harvested or the species of groundfish harvested or taken as bycatch. To the extent fishing for pollock is conducted under fishery co-ops authorized under the AFA, fishing effort could be further dispersed in time and space relative to the status quo fishery. Therefore, it is this federal agency's view that this action is not expected to have an adverse impact on habitat

described as essential to any fish species in these management areas. Given this determination and the assumption that dispersion of fishing effort could have a beneficial impact on marine habitat, this agency does not see a need for additional management measures directed toward mitigating marine habitat impacts in connection with this action.

3.9 Endangered Species Act Considerations

The Endangered Species Act of 1973 as amended (16 U.S.C. 1531 *et seq*; ESA), provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by the NMFS for most marine mammal species, marine and anadromous fish species, and marine plants species and by the USFWS for bird species, and terrestrial and freshwater wildlife and plant species.

The designation of an ESA listed species is based on the biological health of that species. The status determination is either threatened or endangered. Threatened species are those likely to become endangered in the foreseeable future [16 U.S.C. § 1532(20)]. Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range [16 U.S.C. § 1532(20)]. Species can be listed as endangered without first being listed as threatened. The Secretary of Commerce, acting through NMFS, is authorized to list marine fish, plants, and mammals (except for walrus and sea otter) and anadromous fish species. The Secretary of the Interior, acting through the USFWS, is authorized to list walrus and sea otter, seabirds, terrestrial plants and wildlife, and freshwater fish and plant species.

In addition to listing species under the ESA, the critical habitat of a newly listed species must be designated concurrent with its listing to the "maximum extent prudent and determinable" [16 U.S.C. § 1533(b)(1)(A)]. The ESA defines critical habitat as those specific areas that are essential to the conservation of a listed species and that may be in need of special consideration. Federal agencies are prohibited from undertaking actions that destroy or adversely modify designated critical habitat. Some species, primarily the cetaceans, which were listed in 1969 under the Endangered Species Conservation Act and carried forward as endangered under the ESA, have not received critical habitat designations.

Federal agencies have an affirmative mandate to conserve listed species (Rohlf 1989). One assurance of this is Federal actions, activities or authorizations (hereafter referred to as Federal action) must be in compliance with the provisions of the ESA. Section 7 of the Act provides a mechanism for consultation by the Federal action agency with the appropriate expert agency (NMFS or USFWS). Informal consultations, resulting in letters of concurrence, are conducted for Federal actions that have no adverse affects on the listed species. Formal consultations, resulting in biological opinions, are conducted for Federal actions that may have an adverse affect on the listed species. Through the biological opinion, a determination is made as to whether the proposed action poses "jeopardy" or "no jeopardy" of extinction to the listed species. If the determination is that the action proposed (or ongoing) will cause jeopardy, reasonable and prudent alternatives may be suggested which, if implemented, would modify the action to no longer pose the jeopardy of extinction to the listed species. These reasonable and prudent alternatives must be incorporated into the Federal action if it is to proceed. A biological opinion with the conclusion of no jeopardy may contain a series of management measures intended to further reduce the negative impacts to the listed species. These management alternatives are advisory to the action agency [50 C.F.R. § 402.24(j)]. If a likelihood exists of any taking[1] occurring during promulgation of the action, an incidental take statement may be appended to a biological opinion to provide

[1] the term "take" under the ESA means "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" [16 U.S.C. § 1538(a)(1)(B)].

for the amount of take that is expected to occur from normal promulgation of the action. An incidental take statement is not the equivalent of a permit to take.

Twenty-three species occurring in the GOA and/or BSAI groundfish management areas are currently listed as endangered or threatened under the ESA (Table 3.1). The group includes seven great whales, one pinniped, eleven Pacific salmon, three seabirds, and one albatross.

Table 3.1 Species currently listed as endangered or threatened under the ESA and occurring in the GOA and/or BSAI groundfish management areas.

Common Name	Scientific Name	ESA Status
Northern Right Whale	*Balaena glacialis*	Endangered
Bowhead Whale [1]	*Balaena mysticetus*	Endangered
Sei Whale	*Balaenoptera borealis*	Endangered
Blue Whale	*Balaenoptera musculus*	Endangered
Fin Whale	*Balaenoptera physalus*	Endangered
Humpback Whale	*Megaptera novaeangliae*	Endangered
Sperm Whale	*Physeter macrocephalus*	Endangered
Snake River Sockeye Salmon	*Onchorynchus nerka*	Endangered
Short-tailed Albatross	*Phoebastria albatrus*	Endangered
Steller Sea Lion	*Eumetopias jubatus*	Endangered and Threatened [2]
Snake River Fall Chinook Salmon	*Onchorynchus tshawytscha*	Threatened
Snake River Spring/Summer Chinook Salmon	*Onchorynchus tshawytscha*	Threatened
Puget Sound Chinook Salmon	*Onchorynchus tshawytscha*	Threatened
Lower Columbia River Chinook Salmon	*Onchorynchus tshawytscha*	Threatened
Upper Willamette River Chinook Salmon	*Onchorynchus tshawytscha*	Threatened
Upper Columbia River Spring Chinook Salmon	*Onchorynchus tshawytscha*	Endangered
Upper Columbia River Steelhead	*Onchorynchus mykiss*	Endangered
Snake River Basin Steelhead	*Onchorynchus mykiss*	Threatened
Lower Columbia River Steelhead	*Onchorynchus mykiss*	Threatened
Upper Willamette River Steelhead	*Onchorynchus mykiss*	Threatened
Middle Columbia River Steelhead	*Onchorynchus mykiss*	Threatened
Spectacled Eider	*Somateria fishcheri*	Threatened
Steller's Eider	*Polysticta stelleri*	Threatened

[1] The bowhead whale is present in the Bering Sea area only.

[2] Steller sea lion are listed as endangered west of Cape Suckling and threatened east of Cape Suckling.

In summary, species listed under the ESA are present in the action area and, as detailed below, some are negatively affected by groundfish fishing. The NMFS is the expert agency for ESA listed marine mammals. The USFWS is the expert agency for ESA listed seabirds. The proposed action, rule to the American Fisheries Act must be in compliance with the ESA.

Section 7 consultations relevant to promulgation of various aspects of the Alaska Groundfish Fisheries have been done for all the above listed species, some individually and some as groups. See the SEIS, section 3.8, for summaries of previous section 7 consultations and Biological Opinions (NMFS 1998a). Section 7 consultations prepared subsequent to the SEIS include:

1. National Marine Fisheries Service. December 3, 1998 Biological Opinion with amendment dated December 16, 1998. Activities Considered: Authorization of an Atka mackerel fishery under the BSAI groundfish Fishery Management Plan between 1999 and 2002. Authorization of a walleye pollock fishery under the Bering Sea-Aleutian Island groundfish Fishery Management Plan between 1999 and 2002, and Authorization of a walleye pollock fishery under the Gulf of Alaska groundfish Fishery Management Plan between 1999 and 2002 (NMFS 1998c).

2. National Marine Fisheries Service. December 22, 1998 Biological Opinion. Activities Considered: Authorization of BSAI groundfish fisheries based on TAC specifications recommended by the North Pacific Fishery management Council for 1999; and Authorization of GOA groundfish fisheries based on TAC specifications recommended by the North Pacific Fishery Management Council for 1999 (NMFS 1998d).

3. USDI Fish and Wildlife Service. March 19, 1999 Biological Opinion. Activities Considered: Hook-and-line groundfish fisheries in the Gulf of Alaska and Bering Sea/Aleutian Islands Areas on short-tailed albatrosses (USFWS 1999).

The proposed action and alternatives to it being considered for implementation of the American Fisheries Act regulations are not expected to have impacts on endangered or threatened marine mammal or bird species in ways that have not already been considered in the previous Section 7 consultations. Notwithstanding this determination, NMFS has initiated consultation to evaluate the effects of the proposed TAC specifications for the 2000 BSAI and GOA fisheries on listed species and critical habitat. This consultation will analyze the BSAI and GOA groundfish fisheries, other than the BSAI Atka mackerel fishery and the BSAI and GOA pollock fisheries addressed in the December 3, 1998, consultation, to determine whether these fisheries are likely to jeopardize listed species or modify their habitat. This consultation will be completed prior to December 31, 1999. A separate but related consultation on the impacts of the Alaska groundfish fisheries on listed salmonid was initiated in response to the 2000 TAC specification process and also will be concluded prior to the start of the 2000 pollock fisheries. Any influence of the AFA and associated pollock co-ops on listed salmon species will be considered as part of that consultation.

NMFS also has taken steps to initiate a comprehensive consultation under section 7 of the ESA on the groundfish fisheries in the BSAI and GOA that will evaluate the cumulative effects of the fisheries over a multi-year period on listed species and critical habitat (Programmatic Groundfish Fisheries Consultation). This Programmatic Groundfish Fisheries Consultation will be conducted in accordance with the ESA and implementing regulations, and will analyze the individual and cumulative impacts of all activities relating to the groundfish fisheries authorized and managed under the FMPs, and all amendments thereto, to determine whether the cumulative impacts of the groundfish fisheries are likely to jeopardize the continued existence of listed species, including Steller sea lions, or adversely modify critical habitat. Generally, the Programmatic Groundfish Fisheries Consultation will be prepared in coordination with a comprehensive programmatic supplemental Environmental Impact Statement that will address activities authorized and managed under the groundfish fishery management plans and amendments thereto, and that addresses the conduct of the GOA and BSAI groundfish fisheries and the FMPs as a whole. The schedule for completion of the Programmatic Groundfish Fisheries Consultation will correspond to the schedule for the issuance of the programmatic SEIS as the information, evaluations, and conclusions that are required for both documents will be similar in many respects.

3.10 Marine Mammal Protection Act Considerations

Under the Marine Mammal Protection Act, commercial fisheries are classified according to current and historical data on whether or not the fishery interacts with marine mammals. Two groups, takers and non-takers, are initially identified. For takers, further classification then proceeds on the basis of which marine mammal stocks interact with a given fishery. Fisheries that interact with a strategic stock at a level of take which has a potentially significant impact on that stock would be placed in Category I. Fisheries that interact with a strategic stock and whose level of take has an insignificant impact on that stock; or interacts with a non-strategic stock at a level of take which has a significant impact on that stock are placed in Category II. A fishery that interacts only with non-strategic stocks and whose level of take has an insignificant impact on the stocks is placed in Category III.

Species listed under the Endangered Species Act present in the management area were listed above. Marine mammals not listed under the ESA that may be present in the BSAI and GOA management area include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (e.g., *Berardius bairdii* and *Mesoplodon spp.*)] as well as pinnipeds [Pacific harbor seal (*Phoca vitulina*), northern fur seal (*Callorhinus ursinus*), Pacific walrus (*Odobenus rosmarus*), spotted seal (*Phoca largha*), bearded seal (*Erignathus barbatus*), ringed sea (*Phoca hispida*) and ringed seal (*Phoca fasciata*)], and the sea otter (*Enhydra lutris*).

Take of the above listed marine mammals in trawl fisheries has been monitored through observer programs. The subject fisheries (Gulf of Alaska groundfish trawl, and Bering Sea and Aleutian Islands groundfish trawl) are classified as Category III. Steller sea lion, harbor seal, northern elephant seal, Dall's porpoise were species recorded as taken incidentally in the Gulf of Alaska groundfish trawl fisheries according to records dating back to 1990 (Hill et al 1997.) Steller sea lion, northern fur seal, harbor seal, spotted seal, bearded seal, ribbon seal, ringed seal, northern elephant seal, Dall's porpoise, harbor porpoise, Pacific white-sided dolphin, killer whale, sea otter, and walrus were recorded as taken incidentally in the Bering Sea and Aleutian Islands groundfish trawl fisheries according to records dating back to 1990 (Hill et al 1997.)

None of the alternatives considered for implementation of the American Fisheries Act regulations are expected to increase or decrease the participating fisheries rates of incidental takes or other direct interaction with marine mammals.

3.11 Coastal Zone Management Act

Implementation of the emergency rule would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

3.12 EFH Impacts Analysis

The area included in this action includes EFH for all managed species in the BSAI. EFH for these species at each life stage, to the extent that it is understood, is described and identified in four FMP amendments which were approved January 20, 1999. These are: Amendment 55 to the FMP for the Groundfish Fishery of the Bering Sea and Aleutian Islands; Amendment 8 to the FMP for the Commercial king and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands; Amendment 5 to the FMP for Scallop Fisheries off Alaska; and Amendment 5 to the FMP for the Salmon Fisheries in the Exclusive Economic Zone off the Coast of Alaska.

The effects of the pollock fishery on EFH for pollock and other FMP managed species were considered comprehensively in the EFH assessment in the draft EA for the Proposed Rule to Implement Steller Sea Lion Protection Measures for the Pollock Fisheries of the BSAI and the GOA (NMFS 1999e). The effects of other groundfish fisheries on EFH were examined in the EFH assessment in the EA for the 2000 Groundfish Total Allowable Catch Specifications Implemented Under the Authority of the Fishery Management Plans for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area and Groundfish Fishery of the Gulf of Alaska Area (NMFS 1999d). Because fishing for pollock under AFA-endorsed fishing cooperatives would promote dispersion of fishing effort in time and space, EFH impacts could actually be reduced relative to the status quo fishery. Given this premise, nothing in this rule is expected to change in a negative manner the effects of fishing on EFH in ways not considered in previous assessments.

This proposed rule authorizes certain vessels to fish for and process pollock in the BSAI and places restrictions on the participation of such vessels in other groundfish and crab fisheries. Pollock op-ops and AFA groundfish and crab harvest sideboards and restrictions could change the conduct of these fisheries in a manner that disperses fishery effort, reduces overall harvest rates and potentially increased season length of fisheries. To the extent these changes occur, they would be in the direction already assessed under the new Steller sea lion protection measures. The TAC amount harvested and the gear used are not expected to change because of this rule. Taken in the context of the fishery as a whole, this rule is not expected to have an adverse effect on EFH for any managed species in the BSAI and in fact could have beneficial impacts to the extent that fishing effort is further dispersed in time and space relative to the status quo alternative.

3.13 Conclusions

For the reasons discussed above, implementation of the regulations to implement the American Fisheries Act would not significantly affect the quality of the human environment. Therefore, the preparation of an environmental impact statement is not required by section 102(2)(C) of NEPA or its implementing regulations. This Environmental Assessment adopts the discussion and analyses in the SEIS (NMFS 1998a), and incorporates by reference the 1999 Groundfish Total Allowable Catch Specification EA (NMFS 1998b); the draft 2000 Groundfish total allowable Catch Specifications EA (NMFS 1999d), the Emergency Rule to Implement Reasonable and Prudent Steller Sea Lion Protection Measures in the Pollock Fisheries of the BSAI and GOA EA (NMFS 1999a), and Revised Final Reasonable and Prudent Alternatives for the Pollock fisheries in the Bering Sea and Aleutian Islands and Gulf of Alaska with supporting Documents (NMFS 1999c and NMFS 1999e).

Penelope D. Dalton — December 23, 1999

Assistant Administrator for Fisheries, NOAA — Date

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4.0 DEFINITIONS OF INSHORE, OFFSHORE, AND SINGLE GEOGRAPHIC LOCATION

Because certain sector definitions in the AFA are inconsistent with existing definitions, under either the Magnuson-Stevens Act or the Council's inshore/offshore regulations, clarification is required to ensure consistency in the implementation of the provisions of the AFA. Primarily these involve the definitions of "inshore component" and "offshore component", the use of the term "fish" vs "groundfish", and the definition of the term 'shoreside processor' in the AFA. The Council previously requested a discussion of the terms and definitions used for consistency between the AFA and other regulations. The issue of single geographic location for floating processors is related to this discussion and is included herein. The Council raised this issue among the alternatives for processor sideboards and it is a decision point which needs to be resolved as part of the overall AFA amendment package.

4.1 Issues

1. Definitions for the terms "inshore component" and "offshore component" in the American Fisheries Act (AFA) are different from the definitions for these terms used by the North Pacific Fishery Management Council (Council) and NMFS in the original inshore-offshore allocation regime.

2. Differences in the definitions raise certain policy choices in synchronizing the inshore-offshore management regime between the Bering Sea and Aleutian Islands area (BSAI) and the Gulf of Alaska (GOA).

3. Clarification is required regarding the Council's intent to restrict floating processors to a single geographic location (SGL).

4.2 Council Decision Points

The principal policy decision is whether consistency is desirable within and between the definition of "inshore component," as that term is applied in the BSAI and GOA inshore-offshore fisheries. If no, then no further consideration needs to be given to this issue. Staff recommends consistency which raises the following issues for resolution:

Decision point 1: Sunset dates and duration of definitions - should the relevant definitions be of the same duration in the GOA and the BSAI? **The Council is scheduled to take action under Amendments 62/62 to make the overall GOA inshore/offshore regulations sunset at the same time as the BSAI, therefore resolving this question.**

Decision point 2: Should the definitions apply to directed fishing harvests of pollock or GOA Pacific cod in the BSAI and GOA separately or combined?

Staff preference is yes. This decision would resolve any potential confusion about the applicability of the BSAI "inshore" and "offshore" (I-O) definitions in the GOA and vice versa. This decision also would facilitate single I-O definitions that would be consistent in both areas.

Need. The original I-O definitions applied equally in both the BSAI and the GOA. The AFA definitions, however, specifically apply only to I-O fish harvested in the BSAI. In the GOA, those definitions apply to I-O fish harvested in both areas. This inconsistency could be a source of confusion because different I-O definitions would apply to pollock based on the area in which it was harvested.

Effect. The substantive effect of this alternative would apply only to pollock harvests; not Pacific cod, because Pacific cod is an I-O species only in the GOA. Pollock is an I-O species in both areas. Hence, the I-O definitions would apply to pollock regardless of from which area it was harvested.

Decision point 3: Should the "shoreside processor" definition apply to the processing of "fish" or "groundfish," as those terms are defined in the MSA, and groundfish implementing regulations, respectively?

Staff preference is for "groundfish". This decision would resolve a technical inconsistency between the I-O definitions used by the AFA for the BSAI and those used by the Federal groundfish regulations for the GOA. This decision also would facilitate single I-O definitions that would be consistent in both areas.

Need. The AFA definition of "shoreside processor" is slightly different from the one used in the Federal groundfish regulations. This results in different meanings of the term being applied in the BSAI and in the GOA. The differences are that the AFA definition refers to "**fish**" while existing groundfish regulations refer to "**groundfish**" in two places.

Effect. The Magnuson-Stevens Fishery Conservation and Management Act (at section 3) defines "fish" as including all forms of marine animal and plant life other than marine mammals and birds. "Groundfish," on the other hand is defined in the regulations as including only those fish for which harvest limits are annually specified pursuant to 50 CFR 679.20(a). Hence, a processor that processes only salmon and crab harvested in the BSAI, for example, would be a "shoreside processor" under the AFA but not under the regulations at 50 CFR part 679. The effect of choosing the staff preference would be to prevent the provisions of the AFA from applying to salmon and crab harvested in the BSAI, for example. The AFA section 208(f) provisions would be unaffected because pollock is both a "fish" under the MSA and a "groundfish" under the Federal regulations. Consistent application of the term "shoreside processor" would enhance consistent application of the I-O provisions.

Decision point 4: Should the "inshore" and "offshore" definitions apply to all fishing for "groundfish" or to directed fishing for pollock in the BSAI, directed fishing for pollock or Pacific cod in the GOA, or both?

Staff preference is to have the definitions apply only to pollock harvested in a directed fishery for pollock in the BSAI or the GOA, or Pacific cod harvested in a directed fishery for Pacific cod in the GOA. This decision would resolve a technical point of confusion about whether the I-O provisions apply to all groundfish harvests including incidental catch amounts or to only directed fishing for the I-O species. Another potential source of confusion stems from having the I-O definitions apply comprehensively to all groundfish, but only to directed fishing harvests of pollock (or P. cod in the GOA) that are delivered to floating processors inside State waters.

Need. As explained below, this issue stems from an attempt to resolve a problem of accounting for incidental catches of pollock in the BSAI to either the "inshore" allocation or the "offshore" allocation. The agency solution was proposed in the proposed rule for I-O 3 which was drafted before the AFA was signed into law. The AFA drafters provided redundant solutions to this problem, first, by adopting the agency proposal to use the term "groundfish" in the I-O definition, and second, by providing for an "incidental catch allowance." The latter solution obviated the need for the former solution but it was retained in the AFA anyway.

Effect. The effect of the staff preference would be to restore the original I-O definition language which makes the I-O provisions apply only to directed fishing harvests of pollock in the BSAI and the GOA, and directed

fishing harvests of Pacific cod in the GOA. Also, this decision would restore consistency of applying the "inshore" definition among all categories of the inshore component.

Decision point 5: Regarding the issue of inshore floating processors, should they be restricted (or not) to a single geographic location during a fishing year in which they process directed fishing amounts of inshore/offshore species? Should this restriction, if adopted, apply statewide or just within GOA and BSAI areas separately? **Staff has no recommendation on this issue**.

Decision point 6: Should the definition of "shoreside processor" be refined, for purposes of implementing the AFA,

(a) to mean the physical plant of the shoreside processor, and
(b) limit a shoreside processor that qualifies under AFA sec. 208(f) to receive pollock harvested in the BSAI only at the same physical location at which that shoreside processor plants existed during the qualifying years of 1996 and 1997? **Staff preference regarding issue (a) is to define shoreside processor as the physical plant or processing facility, but staff has no recommendation on issue (b). See discussion under section 4.4 below**.

4.3 Background Discussion

The first inshore-offshore allocations of pollock in the BSAI and GOA and Pacific cod in the GOA were established in 1992, pursuant to the partial approval of groundfish fishery management plan (FMP) Amendments 18 (BSAI) and 23 (GOA). Amendments 18/23 resulted in part from the early closure of the GOA pollock fishery in 1989, after several catcher-processor vessels harvested nearly half of the total allowable catch (TAC) for pollock early that year. Most of this TAC was being planned, but not officially reserved, for use by catcher vessels that delivered fish to shore-based processing plants. This "inshore" sector of the industry perceived that they were unfairly preempted from the resource and from carrying out their planned activity by the catcher-processors or "offshore" sector of the industry. The Council's policy response to the preemption argument resulted in three actions which ultimately were approved by NMFS and implemented as separate regulatory programs. These included a prohibition on pollock roe stripping, inshore-offshore allocations and a moratorium on the entry of new vessels.

An argument frequently heard during the inshore-offshore preemption debate was that the real problem was excessive harvesting capacity caused by open or free access to the fishery resource. Although the open access management regime at that time likely contributed to the preemption problem, a policy of limiting access or reducing capacity would not necessarily resolve it. This is due to the superior mobility of catcher/processor vessels relative to catcher vessels. The latter are constrained to fish within a reasonable operating distance from the plants to which they deliver while catcher/processor vessels have a larger potential operating range. Hence, regardless of the open or limited access policy in effect, a catcher/processor vessel could compete with a catcher vessel within that vessel's operating range and then move on to harvest fish outside of the catcher vessel's range. This mobility feature distinguishing the inshore and offshore sectors was then, and continues to be central to the inshore and offshore component definitions which are basic to the practical implementation of the inshore-offshore allocation policy.

The original "inshore" and "offshore" component definitions developed by the Council for Amendments 18/23 were used again in Amendments 38/40, which re-authorized the inshore-offshore allocation policy for the three-year period 1995-1998. The Council again relied on these definitions when it acted in June 1998, to adopt

Amendments 51/51 to re-authorize a revised inshore-offshore allocation policy for 1999-2001. In October 1998, however, the AFA superceded Amendment 51 to the BSAI groundfish FMP with a different inshore-offshore policy and different definition for "inshore" and "offshore" components. Amendment 51 to the GOA groundfish FMP was subsequently approved and implemented by regulations published January 25, 1999 (64 FR 3653) which leads to issue 1 above.

Definition Differences

The inshore component definition currently in effect for the BSAI pollock fisheries by regulation at 50 CFR 679.2 is based on the definition at section 205(6) of the AFA and reads as follows:

"Inshore component in the BSAI" (applicable through December 31, 2004) means the following categories that process groundfish harvested in the BSAI:

(1) Shoreside processors, including those eligible under section 208(f) of the American Fisheries Act; and

(2) Vessels less than 125 ft (38.1 m) LOA that process less than 126 mt per week in round-weight equivalents of an aggregate amount of pollock and Pacific cod.

By contrast, the inshore component definition currently in effect for the GOA pollock and Pacific cod fisheries, also at 50 CFR 679.2, is based on Amendment 51 to the GOA groundfish FMP which was approved by the Alaska Regional Administrator, NMFS, on December 15, 1998, and reads as follows:

"Inshore component in the GOA" (applicable through December 31, 2001) means the following three categories of the U.S. groundfish fishery that process groundfish harvested in the BSAI or the GOA:

(1) Shoreside processing operations;

(2) Vessels less than 125 ft (38.1 m) LOA that process no more than 126 mt per week in round-weight equivalents of an aggregate amount of pollock and Pacific cod; and

(3) Vessels that process pollock or Pacific cod, harvested in a directed fishery for those species, at a single geographic location in Alaska State waters during a fishing year.

Also, the current definitions of "offshore component" as they appear in regulations at 50 CFR 679.2, are slightly different. Again, the definition for "offshore component in the BSAI" is based on the AFA definition of the term and "offshore component in the GOA" is based on the approved Amendment 51 for the GOA groundfish FMP.

"Offshore component in the BSAI" (applicable through December 31, 2004) means all vessels not included in the definition of "inshore component in the BSAI" that process groundfish in the BSAI.

"Offshore component in the GOA" (applicable through December 31, 2001) means all vessels not included in the definition of "inshore component in the GOA" that process groundfish in the BSAI or GOA.

Specific differences between the two "inshore component" definitions and the two "offshore component" definitions are summarized as follows:

- "In the BSAI" or "in the GOA" is added respectively to each definition to distinguish its applicability. These phrases are not in the text of the AFA definitions or in the inshore-offshore proposed rule for Amendments 51/51, but are now necessary due to other differences between the respective definitions.
- The "sunset dates" are different. Section 213 of the AFA provides for the duration of the BSAI inshore-offshore allocations until December 31, 2004. Amendment 51 to the GOA groundfish FMP, as proposed and approved however, ceases to have effect after December 31, 2001.
- The BSAI "inshore" and "offshore" definitions apply only to groundfish harvested in the BSAI. The GOA "inshore" and "offshore" definitions apply to groundfish harvested in the BSAI or the GOA.
- "Single geographic location" (SGL) inshore processors are handled differently. The SGL provisions apply only to processor vessels operating inside State of Alaska (State) waters (0 to 3 miles offshore). For the BSAI, the AFA refers to SGL processors indirectly in the definition by reference to section 208(f). This section of the AFA is not effective until January 1, 2000, and includes SGL processor vessels parenthetically as shoreside processors for purposes of limiting entry into the BSAI pollock processing business. In the GOA, however, the SGL processors are explicitly included in the "inshore component" definition and not as a "shoreside processor."
- "Shoreside processor" as used in the AFA definition differs from the definition in 50 CFR 679.2 in that (a) the AFA uses the word "fish" where the regulation uses the word "groundfish" and (b) the AFA definition remains in effect until December 31, 2004, but the regulation remains in effect until changed by subsequent rulemaking.
- Both inshore definitions use the term "groundfish" but its use introduces confusion to both definitions for different reasons.

4.4 Discussion of Alternatives

The definition differences described above present policy choices that should be made for consistent implementation of the inshore-offshore policy in the BSAI and the GOA combined. Due to these differences, the current inshore-offshore implementing regulations rely on four definitions of "inshore" and "offshore" component; two for the BSAI consistent with the AFA and two for the GOA consistent with approved Amendment 51. This multiplicity of definitions could confound enforcement or produce other unintended effects. A single definition of "inshore component" and of "offshore component" that could be applied consistently to the BSAI and GOA would obviate the need for two definitions "in the BSAI" and two "in the GOA."

Consistency can be realized by amending the BSAI and GOA groundfish FMPs or the AFA or both. Section 213(c)(1) of the AFA provides authority for the Council and NMFS to implement measures that supercede the AFA except for sections 206 and 208. The AFA definitions of "inshore component" and "offshore component" are in section 205 and may be superceded for conservation purposes or to mitigate adverse effects caused by the AFA. A recommendation to supercede a part of the AFA likely would take the form of an FMP amendment. Following is a discussion FMP amendment alternatives.

1. Sunset dates.

(a) Make no change. The inshore-offshore provisions in the BSAI, under section 213(a) of the AFA would be in effect through December 31, 2004, and those in the GOA under approved Amendment 51 would be in

effect through December 31, 2001. This alternative would prevent a common definition for "inshore component" and "offshore component" in both areas.

(b) Amend the GOA groundfish FMP to extend inshore-offshore provisions in the GOA to match the duration of those in the BSAI. This would result in the inshore-offshore definitions for both areas being effective through December 31, 2004. **Preferred** - While two additional alternatives are discussed below, they are both inconsistent with the provisions of the AFA, and the Council has already expressed its preference for alternative (b), and is scheduled to take final action in June to extend the inshore-offshore provisions in the GOA to match the duration in the BSAI under Amendment 62/62.

(c) Supercede section 213(a) of the AFA to make the inshore-offshore provisions in the BSAI to match the duration of those in the GOA. This would result in the inshore-offshore definitions for both areas being effective through December 31, 2001.

(d) Amend the GOA groundfish FMP and supercede section 213(a) of the AFA to remove the duration limits in both areas. This would make the inshore-offshore provisions in both areas consistent in that both would remain effective until changed by subsequent FMP amendments. As part of this alternative, the Council could state a policy of considering inshore-offshore changes at some specified date in the future, but this date would not have to take the form of a "sunset" date in regulations.

2. Application of inshore-offshore definitions to BSAI and GOA areas.

(a) Make no change. The BSAI "inshore" and "offshore" definitions would continue to apply only to groundfish harvested in the BSAI. The GOA "inshore" and "offshore" definitions would continue to apply to groundfish harvested in the BSAI or the GOA. The substantive effect of this alternative would apply only to pollock harvests; not Pacific cod. Only pollock harvests in the BSAI, not pollock harvests in the GOA, would be subject to the definition of "inshore component in the BSAI," but pollock harvests in both areas would be subject to the definition of "inshore component in the GOA." The technical effect would be to prevent a common definition for "inshore component" and "offshore component" in both areas.

(b) Change the GOA definitions to match the BSAI definitions by deleting "the BSAI or" from the GOA inshore and offshore definitions. Again, the substantive effect would apply only to pollock harvests, as above. **Preferred.**

(c) Supercede the AFA definitions of "inshore component" and "offshore component" in section 205 to match the GOA definitions by adding the phrase "or the GOA" to both definitions.

3. "Shoreside processor" definition part 1.

(a) Make no change. This alternative would continue this definition's inconsistency between the BSAI, as it applies to the inshore-offshore provisions of the AFA, and the GOA and BSAI as it applies to all other provisions of the regulations in 50 CFR part 679.

(b) Change the shoreside processor definition at 50 CFR 679.2 to match the AFA definition by changing "groundfish" to "fish." Such a change may have undetermined effects on compliance with record keeping and reporting requirements and with other regulations in which the term "shoreside processor" is used.

(c) Supercede the AFA definition of shoreside processor. This alternative would be implemented by stipulating in the part 679 regulations that, for purposes of implementing the inshore-offshore provisions of the AFA, the meaning of "shoreside processor" is as defined at 50 CFR 679.2, not withstanding the definition at AFA section 205(12). - i.e., would use the term "groundfish". **Preferred.**

4. "Groundfish" used in the inshore-offshore definitions.

(a) Make no change. The term "groundfish" would remain in the inshore and offshore definitions for the BSAI and the GOA. The effect could be ambiguity about which fisheries are subject to the inshore-offshore provisions. Using the term "groundfish" in the definition would indicate that fisheries for all species of groundfish are subject to the BSAI and GOA inshore and offshore policies while other parts of the AFA and GOA Amendment 51 (and the history of the inshore-offshore policy since 1992) indicate that the inshore-offshore provisions apply only to directed fishing harvests of pollock in the BSAI and GOA and Pacific cod harvests in the GOA.

(b) Change the inshore and offshore definition phrase "that process groundfish harvested in the BSAI [or GOA]" to read "that process pollock harvested in a directed fishery for pollock in the BSAI or the GOA, or Pacific cod harvested in a directed fishery for Pacific cod in the GOA, or both." This change would require superceding the inshore and offshore component definitions in section 205 of the AFA and amending the definitions applicable to the GOA. **Preferred.**

(c) Superceding the AFA definitions as described in alternative 5(b) above but not the inshore-offshore definitions applicable to the GOA. This would prevent a common definition of "inshore component" for both areas but would be functional due to the separate allowance for pollock bycatch in the BSAI.

(d) Change the inshore definitions applicable to the GOA as described in alternative 5(b) above but not supercede the AFA definitions. The rationale for this alternative is not immediately apparent.

A technical change in the proposed rule for Amendments 51/51 (63 FR 57996, October 29, 1998) proposed revising the inshore and offshore definitions to indicate that all groundfish processors operating in the BSAI and the GOA must be identified as belonging to either the inshore or offshore component regardless of whether they process pollock harvested in a directed fishery for pollock in the BSAI or GOA or Pacific cod harvested in a directed fishery for Pacific cod in the GOA. Previously, regulations implementing Amendments 18/23 and 38/40 applied the inshore-offshore allocation provisions by definition only to "pollock harvested in a directed fishery for pollock in the GOA or BSAI, or Pacific cod harvested in a directed fishery for Pacific cod in the GOA, or both." This definition caused a catch-accounting problem when bycatch amounts of pollock or GOA Pacific cod were delivered because no third "bycatch" allowance was provided under the Council's original inshore-offshore policy recommendation which applied only to directed fishing for these species. For purposes of counting bycatch amounts of pollock and GOA Pacific cod to either the inshore or offshore allocations, the technical change in the Amendment 51/51 proposed rule would have classified all groundfish processors as either "inshore" or "offshore." Closures of either the inshore or offshore component would apply only to directed fishing for pollock or GOA Pacific cod, however, as no inshore-offshore allocation exists for, say, yellowfin sole.

The AFA drafters adopted the same logic, but also provided for a separate allowance "...for the incidental catch of pollock by vessels harvesting other species of groundfish..." (AFA section 206(b)). The AFA, therefore, provides two solutions to one bycatch accounting problem. Clearly, the inshore-offshore allocations of pollock made by the AFA apply only to directed fishing for pollock. The AFA definitions of "inshore" and "offshore"

are made unnecessarily broad by using the term "groundfish." For purposes of implementing approved Amendment 51 in the GOA, the proposed technical change was adopted in the final inshore-offshore implementing regulations (64 FR 3653, January 25, 1999).

In the GOA, the broader term "groundfish" may be needed because neither the AFA nor GOA Amendment 51 provide for a bycatch allowance of pollock and Pacific cod caught in the GOA. This argument is weak, however. The allocation of pollock is entirely to the inshore component in the GOA, and any bycatch by the offshore component in the GOA would have to be deducted from the inshore allocation. No question is raised as to which allocation of pollock are pollock bycatches to be deducted. For Pacific cod in the GOA, the 10 percent allocation to the offshore component provides an ability to count the bycatch of Pacific cod by the offshore component against the offshore allocation. Hence, the need for the term "groundfish" in the GOA inshore and offshore definitions is questionable.

Finally, the term presents potential confusion in conjunction with the SGL category which is limited only to pollock or Pacific cod harvested in directed fisheries those species. The result is a definition of "inshore component in the GOA" that applies broadly to all groundfish harvested in the BSAI or GOA, but one part of the definition pertaining to SGL processor vessels is limited to directed fishery harvests of inshore-offshore species. This internal inconsistency is potentially misleading and confounding in its application.

5. Floating processors.

(a) Make no change. This alternative would reference floating processors indirectly as included in the definition of "inshore component in the BSAI" while explicitly including floating processors in the definition of "inshore component in the GOA."

(b) Eliminate or change restrictions on floating processors. Current implementing regulations require a processor vessel operating inside State waters to be at the same geographic location whenever it processes pollock harvested in a directed fishery for that species in the BSAI or pollock and Pacific cod harvested in a directed fishery for those species in the GOA. Further, regulations at sec. 679.7(a)(7) prohibit a floating processor from operating under the "inshore component in the BSAI" and the "inshore component in the GOA" definitions during the same fishing year. Elimination of these restrictions would allow such processor vessels to move to different locations within State waters to process inshore-offshore species. Alternatively, such vessels could be limited to operating in State waters adjacent to either the BSAI or GOA but not both during the same fishing year. In this event, a processor vessel would not necessarily be limited to processing pollock or GOA Pacific cod wherever it was located.

Including State water processing vessels in the original inshore definition was designed to recognize that, like processing plants physically situated on shore, catcher vessels delivering to processor vessels operating in State waters were limited in their scope of operation. State-waters processor vessels faced the same potential preemption by the offshore catcher/processors and motherships as did the onshore plants. A State-waters processor vessel, however, has more mobility than an onshore processing plant, and could have some advantage over the onshore plant by moving closer to the grounds being fished by its catcher vessels. Therefore, for equity within the inshore sector, the Council recommended and NMFS implemented the single location restrictions on State-waters processing vessels. Hence, the SGL term which was used also by drafters of the AFA. Since 1992, the single location restriction applied only to the processing of pollock, or GOA Pacific cod, taken in directed fisheries for those species. Processing bycatch amounts of those species when the inshore directed fisheries were closed did not require a State-waters processor vessel to be in the same location as it was when it processed directed fishery harvests of the inshore-offshore species.

Arguably, provisions of the AFA now make the SGL restrictions unnecessary. These provisions include specified inshore-offshore allocations, the expressed authority to form co-operatives with catcher vessels, and the processor limitations at AFA section 208(f). Together, these provisions suggest that each inshore processing plant and SGL processor vessel will likely have a predetermined amount of the inshore pollock allocation on which to operate during a fishing year. Any processor within the inshore component would have little opportunity to "preempt" another plant in the inshore component by virtue of its location, except with regard to the ex-vessel price it could offer to independent catcher vessels. Removing all restrictions, however, may be short sighted with regard to State-waters processor vessels moving between the BSAI and the GOA pollock fisheries.

6. "Shoreside processor" definition part 2.

(a) Make no change. This alternative would make no change to the term "shoreside processor," in the AFA implementing regulations, with respect to (i) the corporate identity of the shoreside processor or (ii) the physical location of the processing plant.

(b) Add to or enhance the definition of "shoreside processor," in the AFA implementing regulations, to:
(i) specify that "shoreside processor" means the physical plant on shore where fish processing is conducted and not only the corporate identity of the shoreside processor, and
(ii limit a shoreside processor that qualifies under AFA sec. 208(f) to receive pollock harvested in the BSAI only at the same physical location at which that shoreside processor plant existed during the qualifying years of 1996 and 1997.

The AFA definitions section (sec. 205) defines the term "shoreside processor" to mean "...any **person** or vessel that receives unprocessed fish..." (emphasis added). The Magnuson-Stevens Act definitions section (sec. 3) defines "person" to mean "...any individual...corporation, partnership, association or other entity...." The question raised by the term "person" in the AFA definition of shoreside processor is whether Congress intended the definition to apply to the physical plant used by the processor or the only to the corporate identity of the shoreside processor. This would be a moot question except for the allowance, under AFA section 208(f)(2), to deliver, on recommendation of the Council and approval by the Secretary, BSAI-harvested pollock to shoreside processors other than those qualified to receive under section 208(f)(1). This section (208(f)(1)) effectively limits the shoreside processors who may receive pollock harvested in the BSAI for processing by the inshore component to only those shoreside processors that processed more than 2,000 mt of pollock during the inshore directed pollock fishery in each of 1996 and 1997 (qualified processors). The following paragraph (sec. 208(f)(2)), however, provides for the delivery of pollock to an unqualified shoreside processor if (a) the TAC for pollock in the BSAI increases by more than 10 percent above the TAC in 1997, or (b) in the event of the actual total loss or constructive total loss of a qualified shoreside processor. Use of the term "person" in the shoreside processor definition, therefore, raises the question of whether Congress intended to equate the actual loss of a processing plant, say by fire or natural disaster, with the constructive loss of a corporation, say by financial disaster.

For this reason, the terms "shoreside processor" and "person" may be sufficiently vague to warrant enhancement of the definition in the AFA implementing regulations. The Council could determine that only the actual physical or constructive total loss of a processing plant, would be sufficient grounds to allow the entry of an otherwise unqualified shoreside processor into the inshore component. In this event, the AFA "shoreside processor" definition drafted for the AFA implementing regulations would specify that, notwithstanding use of the term "person," the term "shoreside processor" means a physical processing plant for purposes of sec. 208(f)(2). On the other hand, the Council could determine to leave this term vague and

to deal with the issue as the need arises. The practical effect of clarifying the term "shoreside processor" to mean physical plant as opposed to the corporate owner of the plant is that petitions to the Council under AFA sec. 208(f)(2) would arise only in the event of actual or constructive total loss of the physical plant of a qualified shoreside processor. Not clarifying the term may open the Council to petitions under sec. 208(f)(2) based on arguments that the corporate owner of a plant suffered constructive total loss.

For database management reasons, NMFS currently issues separate Federal processor permits, required under 50 CFR 679.4(f), to individual processing plants regardless of the fact that two or more plants may have the same corporate owner. NMFS staff would prefer to continue and clarify this approach for purposes of implementing the AFA shoreside processor provisions for consistency in landings data collection, regardless of the total loss implications at the corporate or plant facility level discussed above.

A separate but related question is raised also by lack of clarity in the term "shoreside processor." This question is whether a qualified shoreside processor under sec. 208(f)(1) could expand its scope of operations as a "person" under the "shoreside processor" definition. For example, a qualified shoreside processor could open a new plant at a location different from that at which it became qualified under sec. 208(f)(1). The new plant location could provide a competitive advantage over other shoreside processors in the processing of pollock and non-pollock species. Without further clarifying the definition of "shoreside processor" however, the new plant location could be permissible because the corporate identity of the qualified processor did not change. To prevent such occurrence, the Council could enhance the "shoreside processor" definition by clarifying that, for purposes of implementing sec. 208(f), a qualified shoreside processor may receive deliveries of pollock harvested in the BSAI for processing by the inshore component only at the same physical location at which that shoreside processor plant existed during the qualifying years of 1996 and 1997. The practical effect of such an action would be to prevent a qualified shoreside processor from receiving inshore component pollock at different locations during the effective period of the AFA. The Council, however, may also determine that such an action would be too limiting on the ability of shoreside processors to receive and process pollock profitably. In this event, the Council may choose to make no clarification of the meaning of "shoreside processor" with respect to physical plant or corporate identity. As indicated above, the staff has no preference or recommendation on this aspect of decision point 6(b).

The Council and the Secretary arguably have authority to enhance or clarify the definition of "shoreside processor" for purposes of implementing AFA section 208(f). AFA section 213(c) provides authority to the Council to recommend and to the Secretary to approve measures that supercede the provisions of Title II (the AFA), except for provisions of sections 206 and 208. The "shoreside processor" definition that would be clarified is in AFA section 205. The practical effect of the clarification, if approved, however, would be to limit the application of sec. 208(f) with regard to the identity of eligible shoreside processors as specific physical plants, facilities, or vessels, as opposed to the companies that own them.

5.0 COOPERATIVE AGREEMENTS AND COUNCIL REVIEW

5.1 Requirements of the AFA

The AFA stipulates that co-op contracts must be filed with the Council and the Secretary not less than 30 days prior to the start of fishing. While the AFA does not elaborate on the specific review role of the Council, it does stipulate that certain provisions of the co-op agreements, at a minimum, will be made available to the public by the Council. These minimums include the following:

*Parties to the contract (fishing companies involved)
*List of the vessels involved
*Amount of pollock to be harvested by each party to the co-op
*Amount of other groundfish to be harvested by each member of the co-op

The contracts must also contain provisions for payment of fish taxes to the State of Alaska for all pollock harvested/processed, and for 1999, the co-op agreements for catcher vessels delivering to catcher/processors included restrictions to limit their participation in non-pollock fisheries to 'traditional' levels.

On December 20, 1998 the Council received copies of the contract agreements for the offshore sector co-op participants, including the catcher vessels that deliver offshore. On December 29 the Council forwarded a letter to the Secretary of Commerce which described apparent deficiencies in the co-op agreements, but acknowledged that this is a first-year learning experience and that fishing under these initial co-op agreements should proceed in 1999. The issues noted in the letter centered on the lack of specifics with regard to the harvest of non-pollock species and PSC amounts, as well as how the distribution of catch among co-op members would be affected by transfers within the co-op. In February 1999 the Council discussed these issues and, as part of its overall action on AFA, requested that NMFS prepare a report for review in October 1999 which would describe the specific activities of the co-ops, including:

1. The effectiveness of the pollock co-ops in reducing bycatch,
2. The effectiveness of management measures to protect other fisheries from adverse impacts caused by the AFA or pollock co-ops,
3. A discussion of how transfers within co-ops may affect issues 1 and 2 above.,
4. Utilization and recovery rates by species and product categories, and
5. Methods of monitoring and enforcement.

The report is also expected to include the most specific catch and bycatch information available on an individual vessel level. In requesting this information, the Council recognized that the nature of co-op fisheries would preclude definitive knowledge of all vessels' individual catch and bycatch until after the season is completed. While much of the information required under the AFA can be included in the pre-season agreements, and the Council can make that information available to the public, it appears that the post-season report offers a mechanism to fully implement the intent of the AFA in this regard.

5.2 Council Proposed Requirements

In addition to the requirements of the AFA, the Council has identified other potential rules and regulations pertaining to the development and review of fishery co-op agreements outlined by the AFA. As expressed at the December 1998 meeting, these include:

*Limiting co-op agreements to 1-6 years
*Prohibitnig linkages of membership in co-ops to delivery of non-pollock species
*Requiring disclosure of catch and bycatch statistics
*Requiring contracts be submitted by December 1 (as apposed to 30 days prior to the start of fishing stated in the AFA)

It is unclear whether these requirements could be implemented via regulations, or simply conveyed to the industry as the intent and expectation of the Council. The four issues outlined above do not lend themselves to quantitative analysis; rather, they appear to be policy issues for which the Council needs to express direction. Disclosure of catch and bycatch statistics is already listed in the AFA as a requirement for co-op vessels (and it allows the Council and SOC to make such information available to the public in a manner they deem appropriate). Details of these provisions are being considered within the broader development of a discussion paper already tasked by the Council - to examine disclosure of catch and bycatch pursuant to Section 211(d) of the AFA as it relates to satisfying bycatch reduction provisions of the Magnuson-Stevens Act. This issue is being considered within the context of State and Federal data confidentiality rules which are being addressed on a parallel track.

Limiting duration of co-op agreements

The Council's option included limiting the duration of co-op agreements to a specified time period, from one to six years, with six years representing the full duration of the AFA. At present, it appears that most co-ops envision an annual agreement, or an agreement that is valid until superceded or altered. An annual agreement has the advantage, from the Council's perspective, to allow for an explicit review each year by the Council prior to the start of fishing under such agreement. In the event of longer-term agreements, the Council may want to consider the degree to which such agreements could be altered internally, without coming up for formal review by the Council. Another consideration related to duration of such agreements is the ability of vessels to enter and exit co-ops in mid-year, and thereby change the nature of the co-op and distribution of harvest among remaining co-op participants. If co-ops are limited to one year duration, and must be revised or renewed each year, it may reduce the likelihood and magnitude of changes in co-op participation.

This question seems to be primarily a policy call on the part of the Council and will hinge upon the Council's desire to monitor the details of co-op agreements and potential changes within the co-ops. As such, the Council will likely benefit more from the perspectives of co-op participants than from any attempt at formal analysis.

Prohibiting linkages of membership to delivery of non-pollock species

This proposal would prohibit the co-op from requiring delivery of non-pollock species as a condition of membership in the pollock co-op. This may be moot in that it will be the vessel's decision whether to join a co-op, and the plants themselves will not likely be part of those negotiations, although as currently envisioned the vessels will be required to deliver to a specific processor. The purpose of this proposal appears to be to ensure the catcher vessels latitude in their markets for non-pollock species.

Require contracts to be submitted by December 1

In order to allow ample opportunity to review co-op agreements prior to the start of fishing under such agreements, the Council is considering a requirement that co-op agreements be submitted to the Council and Secretary of Commerce by December 1 of the year preceding fishing under the co-op (as opposed to 30 days prior). This would allow the Council to review and discuss the co-op provisions during their annual December

meeting. Under the current 30-day requirement the Council has little time, and no Council meeting forum to review and discuss the co-op agreements. Given the additional complexities expected with regard to the formation of catcher vessel co-ops, this additional time will have obvious advantages for the Council, as well as allow time for any necessary industry responses to Council concerns.

6.0 AFA CATCHER/PROCESSOR SIDEBOARDS

6.1 Introduction

The American Fisheries Act mandates protections for non-pollock groundfish fisheries in the Bering Sea that may be impacted excessively by the 20 listed pollock catcher processors. Because AFA was not enacted until October 1998, interim groundfish specifications and an emergency rule (forthcoming) are used to implement the catcher/processor restrictions in 1999. Follow-on plan and regulatory amendments are needed for 2000 and beyond and they are the main subject of this chapter of the document.

6.2 American Fisheries Act Provisions

The Act specifies in section 211(b)(2) a not-to-exceed formulation for protecting non-pollock groundfish fisheries in the BSAI, paraphrased as follows:

(A) Non-pollock groundfish harvests by the 20 listed catcher processors cannot exceed the percentage of the harvest available that is equivalent to the total harvest by the 29 listed catcher processors in 1995-1997 relative to the total amount available for harvest in those years.

(B) Prohibited species limits for the 20 listed catcher processors cannot exceed the percentage of the PSC available that is equivalent to the total PSC harvested by the 29 listed catcher processors in 1995-1997 relevant to the total amount available for harvest in those years.

(C) Atka mackerel harvests are limited to 11.5% in the central Aleutians and 20% in the western Aleutians.

The Act also authorizes the Council to go even further than the above provisions to protect non-pollock groundfish fisheries. Section 213(c) authorizes the Council to recommend additional conservation and management measures as necessary to mitigate adverse effects in fisheries caused by the AFA or cooperatives in the directed pollock fishery, so long as any such measures take into account all factors affecting the fisheries and are imposed fairly and equitably to the extent practicable among and within the sectors in the directed pollock fishery.

6.3 Emergency Actions for 1999

In response to the above provisions, the Council recommended various protections at its November meeting as shown in a table in the action memo. These were implemented by NMFS on January 4, 1999, with publication of interim 1999 harvest specifications for BSAI groundfish. A second emergency rule was published to authorize in-season authority to limit harvest of non-pollock groundfish by listed catcher/processors. Table 6.1 (which is Table 3 of the interim specifications) lists the ratios of total catch to available TAC for each species in accordance with the not-to-exceed formulation in the AFA. These ratios are applied to the ITAC to calculate harvest limits for the 20 listed catcher processors. ITAC is essentially 85% of the TAC for each non-pollock species or complex. The remaining 15% is divided equally between the groundfish reserve and the CDQ allocation. Amounts of fish may be made available to any species from the non-specific reserve during the year so long as overfishing does not result.

There are two general exceptions to using 1995-1997 catch histories to limit the 20 catcher processors. The first is for Atka mackerel, for which the percentage is specified explicitly in the AFA (see paragraph (C) above). If their three-year history had been used instead, the percentages would have been reversed, allowing

the 20 vessels about 22% and 10% respectively, in the central and western Aleutians. Secondly, management of a fishery may have changed during 1995-1997. For Pacific cod, the industry and Council agreed to use solely 1997 as the base year because separate catcher-processor and catcher vessel allocations were made beginning in 1997, as noted in footnote 6 to the table.' A similar problem exists in the BSAI Pacific ocean perch fishery where area percentages are based only on 1996-1997 because in 1995 the TAC was allocated for the entire Aleutians area. NMFS notes that under the second emergency rule, directed fishing by the listed catcher processors was limited to Atka mackerel, Pacific cod, and yellowfin sole in 1999.

6.4 Non-pollock Groundfish Sideboards for 2000 and Beyond

The Council has selected several alternatives for 2000 and beyond, all based on 1995-1997. Principle variations among the alternatives arise from (1) using the catch histories of just the 20 eligible catcher/processors versus all 29 listed catcher/processors (20 eligible and 9 ineligible), (2) basing the caps on catch in just non-pollock target groundfish fisheries versus including catches in the pollock target fisheries, and (3) using the total harvest versus the total available TAC. Items (1) and (2) affect the numerator in determining the percentage of a species that will fished by the 20 catcher processors, and item (3) affects the denominator, as will be shown below. Catch histories for 1995-1997 do not include activities in other than the open access fisheries, i.e., excluded are catches by catcher/processors not listed in the AFA, harvest vessels delivering to a processor, CDQ operations, or any catch in the GOA .

6.4.1 Choosing Catch Histories for the Numerator

The Council has specified four options for calculating catch histories to be applied to the numerator in determining the percentage of a species that will be available to the 20 listed catcher processors: the combined harvests of the 20 or 29 listed catcher processors for 1995-1997, mixed and matched with harvests in either the non-pollock fisheries or all target fisheries including pollock. The catch histories for each of the four options are shown in Table 6.2 based on aggregated catches in BSAI target fisheries from 1995-97 NMFS Blend data sets. The rows contain the BSAI TAC fishery groupings. The columns show catch by target fishery, either by the 20 eligible or all 29 listed catcher/processors. As noted earlier, some of the TAC groups changed between 1995 and 1997. For example, two separate categories of trawl Pacific cod are given, reflecting the cod allocation between catcher vessels and catcher processors starting in 1997 (Amendment 46). To resolve this problem, the industry agreed to base the TAC allocation for the 1999 fishery on 1997 only. A similar problem exists in the BSAI Pacific ocean perch fishery where area percentages are based only on 1996-1997 because in 1995 the TAC was allocated for the entire Aleutians area.

Tables 6.3 and 6.4 show the percentages of any future year's TAC for non-pollock target groundfish fisheries in the BSAI that would be available to the 20 eligible catcher processors. Table 6.3 uses 1995-1997 TAC as the base (except for Pacific cod when only 1997 is used), and Table 6.4 uses actual harvest those three years. The tables break out the contributions from the species' target fisheries and from bycatch in the pollock fishery.

Tables 6.5 and 6.6 show some of the same data, but the columns have been reordered to depict the general trend one would expect: percentages increase if bycatch in the pollock fishery is added to catches in the species' target fisheries, and, more significantly, if catches of the 9 ineligible vessels are included.

6.4.2. Choosing the Base for the Denominator

The Council selected two options for consideration as the base for calculating the percentage of a species that will be available for harvest in future years by the 20 eligible catcher processors. Option one would set the denominator equal to the total TACs for 1995-97. Option two would use total catch. The choice of denominators can have a significant impact on the amount of potential harvest, particularly if a TAC is underharvested due to PSC constraints. For example, the yellowfin sole TAC summed over 1995-97 was 527,000 mt. The total harvest was 437,138 mt, limited by halibut bycatch. The 20 AFA-eligible vessels caught 103,996 mt of yellowfin sole in the yellowfin sole target fisheries in 1995-97. Thus, the sideboard expressed as a percentage of the year 2000 yellowfin sole TAC, based solely on their 20-vessel catch history in the target fishery, would be 19.7% based on TAC versus 23.8% based on actual harvest. The difference in percentages is 4.1%. The general decreases in percentage caused by using the larger values of TAC in the denominator rather than the actual catches, are shown in Table 6.7.

6.4.3. Probable Directed Fisheries

Table 6.8 is a snapshot for species that may be able to support a directed fishery for the 20 eligible vessels, due to the higher percentage and/or TAC tonnage. The range of tonnages is calculated using the initial TACs in the NMFS specifications notice for 1999. Three species, yellowfin sole, other flatfish, and rock sole, are based on 1995-1997 data. Pacific cod is based on 1997. Atka mackerel is based on the percentages prescribed in AFA. The ranges of percentages and tonnages show the impacts of using different combinations of values for the numerator and denominator that result from the options being considered by the Council. Values for fisheries where the percentage is generally very small are available in tables 6.5 and 6.6.

Table 6.1: Interim Historical Catch Ratio, 1999 Aggregate Catch Limits, and 1999 Catch Limits for Vessels Listed Under Section 208 of the American Fisheries Act[1]

Target species[2]	Area	1995 - 1997 Total catch	1995 - 1997 Available TAC	1995 - 1997 Ratio[3]	1999 ITAC available to trawl C/Ps	1999 harvest limit[4]
Atka mackerel[5]	Eastern AI/BS	-	-	-	-	-
	Central AI	-	-	0.115	19,040	2,190
	Western AI	-	-	0.200	22,950	4,590
Arrowtooth flounder	BSAI	788	36,873	0.021	13,600	291
Other flatfish	BSAI	12,145	92,428	0.131	76,019	9,989
Flathead sole	BSAI	3,030	87,975	0.034	85,000	2,927
Greenland turbot	AI	31	6,839	0.005	4,208	19
	BSAI	168	16,911	0.010	8,543	85
Other species	BSAI	3,551	65,925	0.054	21,930	1,181
Pacific cod trawl[6]	BSAI	13,547	51,450	0.263	41,948	11,045
Pacific cod perch[7]	BSAI	58	5,760	0.010	1,190	12
	Central AI	95	6,195	0.015	2,933	45
	Eastern AI	112	6,265	0.018	2,610	47
	Western AI	356	12,440	0.029	4,743	136
Other rockfish	AI	95	1,924	0.049	582	29
	BS	39	1,026	0.038	314	12
Rock sole	BSAI	14,753	202,107	0.073	85,000	6,205
Sablefish trawl[8]	AI	1	1,135	0.001	293	0
	BS	8	1,736	0.005	553	3
Sharpchin/Northern	AI	1,034	13,254	0.078	3,596	280
Squid	BSAI	7	3,670	0.002	1,675	3
Shortraker/Rougheye	AI	68	2,827	0.024	314	8
Other red rockfish	BS	75	3,034	0.025	227	6
Yellowfin sole	BSAI	123,003	527,000	0.233	187,000	43,646

[1] The AFA specifies the manner in which the BSAI pollock TAC must be allocated among industry components and prohibits catcher/processors listed under paragraphs 1-20 of section 208(e) from exceeding the historical non-pollock harvest percentages by such catcher/processors and those listed under section 209 relative to the total available in the offshsore component in BSAI groundfish fisheries in 1995, 1996, and 1997. Amounts are in metric tons.

[2] For further definitions of target species see Table 1.

[3] The ratio is calculated by dividing the total catch by the available TAC.

[4] The 1999 harvest limit for listed catcher/processors is calculated by multiplying the historic catch ratio by the 1999 proposed ITAC available to trawl catcher/processors.

[5] In section 211(b)(2)(C) of the AFA, catcher/processors listed in paragraphs 1-20 of section 208(e) are prohibited from harvesting Atka mackerel in excess of 11.5 percent of the available TAC in the Central Aleutian Islands and Bering Sea subarea.

[6] For Pacific cod, 47 percent of the ITAC is allocated to trawl, and of that 50 percent is available for catcher/processors. Separate catcher/processor and catcher/vessel allocations became effective in 1997, therefore only data from 1997 was used to calculate the historic ratio.

[7] Apportionments to western, central, and eastern Aleutian Islands subareas began in 1996, therefore only data from 1996 and 1997 was used to calculate the historic ratio.

[8] 25 percent of the Sablefish ITAC is allocated to trawl in the AI subarea, 50 percent is allocated to trawl in the BS subarea.

Table 6.2: Catch of the Listed AFA Catcher Processors (Eligible and Ineligible) in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Targets		Pollock Targets		All Target Fisheries	
	AFA CP Harvests		AFA CP Harvests		AFA CP Harvests	
	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Atka Mackerel - Central AI	8,305	23,132	5	6	8,310	23,138
Atka Mackerel - Eastern AI	458	601	201	202	659	803
Atka Mackerel - Western AI	535	9,491		146	535	9,636
Arrowtooth Flounder - BSAI	371	787	910	1,901	1,280	2,688
Other Flatfish - BSAI	10,202	12,145	297	462	10,499	12,607
Flathead Sole - BSAI	1,914	3,028	2,878	4,408	4,791	7,435
Greenland Turbot - Aleutian Islands	29	31	2	2	30	33
Greenland Turbot - Bering Sea	111	168	71	96	182	265
Other Species - BSAI	2,237	3,551	1,205	2,048	3,442	5,599
Pacific Cod (Fixed Gear) - BSAI		436			0	436
Pacific Cod (Trawl Gear) - BSAI	16,450	32,487	8,072	13,263	24,522	45,750
Pacific Cod (Trawl Gear, CPs) - BSAI	6,573	13,544	2,399	3,661	8,973	17,205
Pollock (Offshore) - Aleutian Islands	68	307	53,205	63,760	53,273	64,067
Pollock (Offshore) - Bogoslof			532	532	532	532
Pollock (Offshore) - Bering Sea	17,082	23,161	1,101,738	1,408,322	1,118,820	1,431,483
Pacific Ocean Perch - Aleutian Islands	414	613	29	47	444	661
Pacific Ocean Perch - Bering Sea	18	58	28	33	46	91
Pacific Ocean Perch-Central AI	26	95	9	16	34	112
Pacific Ocean Perch - Eastern AI	35	112	29	29	64	141
Pacific Ocean Perch - Western AI	163	356			163	356
Other Rockfish - Aleutian Islands	74	95	2	2	76	97
Other Rockfish - Bering Sea	31	39	3	8	34	47
Rock Sole - BSAI	10,229	14,749	1,978	3,139	12,207	17,888
Sablefish (Trawl Gear) - AI	0	0	0	0	0	0
Sablefish (Trawl Gear) - Bering Sea	6	8	0	0	6	9
Sharpchin/Northern Rockfish - AI	336	1,034	0	1	336	1,034
Squid - BSAI	4	7	810	871	814	877
Shortraker/Rougheye Rockfish - AI	60	68	6	7	66	75
Other Red Rockfish - Bering Sea	69	75	97	99	166	174
Yellowfin Sole - BSAI	103,996	123,003	1,206	2,007	105,203	125,010
Grand Total	179,795	263,180	1,175,713	1,505,068	1,355,508	1,768,247

Source: National Marine Fisheries Service AKR Blend data for 1995-97.

Note: Excludes CDQ harvests

Table 6.3: Percent of TAC Harvested by the Listed AFA Catcher Processors (Eligible and Ineligible) in the Bering Sea and Aleutian Islands (1995-97)

	Non-Pollock Target Fisheries		Pollock Target Fisheries		All Target Fisheries	
	AFA CP Harvests		AFA CP Harvests		AFA CP Harvests	
Species by TAC Grouping	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Atka Mackerel - Central Aleutian Islands	8.06%	22.44%	0.00%	0.01%	8.06%	22.44%
Atka Mackerel - Eastern Aleutian Islands	0.83%	1.09%	0.36%	0.37%	1.19%	1.45%
Atka Mackerel - Western Aleutian Islands	0.57%	10.04%	0.00%	0.15%	0.57%	10.19%
Arrowtooth Flounder - BSAI	1.01%	2.13%	2.47%	5.16%	3.47%	7.29%
Other Flatfish - BSAI	11.04%	13.14%	0.32%	0.50%	11.36%	13.64%
Flathead Sole - BSAI	2.18%	3.44%	3.27%	5.01%	5.45%	8.45%
Greenland Turbot - Aleutian Islands	0.42%	0.45%	0.02%	0.03%	0.44%	0.48%
Greenland Turbot - Bering Sea	0.66%	1.00%	0.42%	0.57%	1.08%	1.56%
Other Species - BSAI	3.39%	5.39%	1.83%	3.11%	5.22%	8.49%
Pacific Cod (Fixed Gear) - BSAI	0.00%	0.11%	0.00%	0.00%	0.00%	0.11%
Pacific Cod (Trawl Gear) - BSAI	6.38%	12.59%	3.13%	5.14%	9.50%	17.73%
Pacific Cod (Trawl Gear, CPs) - BSAI	12.78%	26.32%	4.66%	7.11%	17.44%	33.44%
Pacific Ocean Perch - Aleutian Islands	3.94%	5.84%	0.28%	0.45%	4.22%	6.29%
Pacific Ocean Perch - Bering Sea	0.31%	1.01%	0.48%	0.57%	0.80%	1.57%
Pacific Ocean Perch - Central Aleutian Islands	0.41%	1.54%	0.14%	0.26%	0.56%	1.80%
Pacific Ocean Perch - Eastern Aleutian Islands	0.56%	1.79%	0.47%	0.47%	1.02%	2.25%
Pacific Ocean Perch - Western Aleutian Islands	1.31%	2.86%	0.00%	0.00%	1.31%	2.86%
Other Rockfish - Aleutian Islands	3.86%	4.92%	0.12%	0.12%	3.97%	5.03%
Other Rockfish - Bering Sea	3.02%	3.83%	0.33%	0.76%	3.35%	4.59%
Rock Sole - BSAI	5.06%	7.30%	0.98%	1.55%	6.04%	8.85%
Sablefish (Trawl Gear) - Aleutian Islands	0.02%	0.04%	0.00%	0.00%	0.02%	0.04%
Sablefish (Trawl Gear) - Bering Sea	0.35%	0.47%	0.00%	0.03%	0.35%	0.49%
Sharpchin/Northern Rockfish - Aleutian Islands	2.54%	7.80%	0.00%	0.01%	2.54%	7.80%
Squid - Bering Sea and Aleutian Islands	0.10%	0.19%	22.07%	23.72%	22.17%	23.91%
Shortraker/Rougheye Rockfish - Aleutian Islands	2.11%	2.42%	0.21%	0.24%	2.32%	2.66%
Other Red Rockfish - Bering Sea	2.27%	2.47%	3.19%	3.28%	5.46%	5.74%
Yellowfin Sole - BSAI	19.73%	23.34%	0.23%	0.38%	19.96%	23.72%

Source: National Marine Fisheries Service AKR Blend data for 1995-97.

Note: Excludes CDQ harvests

Table 6.4: Percent of Catch Harvested by the Listed AFA Catcher Processors (Eligible and Ineligible) in the Bering Sea and Aleutian Islands (1995-97)

	Non-Pollock Target Fisheries		Pollock Target Fisheries		All Target Fisheries	
	AFA CP Harvests		AFA CP Harvests		AFA CP Harvests	
Species by TAC Grouping	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Atka Mackerel - Central Aleutian Islands	7.99%	22.26%	0.00%	0.01%	8.00%	22.27%
Atka Mackerel - Eastern Aleutian Islands	0.78%	1.02%	0.34%	0.34%	1.12%	1.37%
Atka Mackerel - Western Aleutian Islands	0.60%	10.69%	0.00%	0.16%	0.60%	10.86%
Arrowtooth Flounder - BSAI	1.09%	2.31%	2.67%	5.59%	3.76%	7.90%
Other Flatfish - BSAI	16.54%	19.69%	0.48%	0.75%	17.02%	20.44%
Flathead Sole - BSAI	3.65%	5.77%	5.48%	8.40%	9.13%	14.17%
Greenland Turbot - Aleutian Islands	0.61%	0.66%	0.04%	0.04%	0.65%	0.70%
Greenland Turbot - Bering Sea	0.68%	1.03%	0.44%	0.59%	1.11%	1.62%
Other Species - BSAI	3.26%	5.18%	1.76%	2.99%	5.02%	8.17%
Pacific Cod (Fixed Gear) - BSAI	0.00%	0.11%	0.00%	0.00%	0.00%	0.11%
Pacific Cod (Trawl Gear) - BSAI	7.06%	13.94%	3.46%	5.69%	10.52%	19.64%
Pacific Cod (Trawl Gear, CPs) - BSAI	13.71%	28.24%	5.00%	7.63%	18.71%	35.87%
Pacific Ocean Perch - Aleutian Islands	4.02%	5.96%	0.29%	0.46%	4.31%	6.42%
Pacific Ocean Perch - Bering Sea	0.38%	1.24%	0.59%	0.69%	0.98%	1.93%
Pacific Ocean Perch - Central Aleutian Islands	0.45%	1.67%	0.16%	0.29%	0.61%	1.96%
Pacific Ocean Perch - Eastern Aleutian Islands	0.57%	1.81%	0.47%	0.47%	1.04%	2.29%
Pacific Ocean Perch - Western Aleutian Islands	1.20%	2.61%	0.00%	0.00%	1.20%	2.61%
Other Rockfish - Aleutian Islands	9.62%	12.26%	0.29%	0.29%	9.91%	12.55%
Other Rockfish - Bering Sea	5.21%	6.61%	0.58%	1.31%	5.79%	7.92%
Rock Sole - BSAI	6.04%	8.71%	1.17%	1.85%	7.21%	10.56%
Sablefish (Trawl Gear) - Aleutian Islands	0.13%	0.32%	0.02%	0.02%	0.15%	0.34%
Sablefish (Trawl Gear) - Bering Sea	1.21%	1.64%	0.01%	0.09%	1.22%	1.73%
Sharpchin/Northern Rockfish - Aleutian Islands	2.69%	8.25%	0.00%	0.01%	2.69%	8.26%
Squid - Bering Sea and Aleutian Islands	0.14%	0.25%	30.20%	32.46%	30.34%	32.71%
Shortraker/Rougheye Rockfish-Aleutian Islands	2.35%	2.69%	0.23%	0.27%	2.58%	2.96%
Other Red Rockfish - Bering Sea	9.03%	9.80%	12.69%	13.02%	21.72%	22.82%
Yellowfin Sole - BSAI	23.79%	28.14%	0.28%	0.46%	24.07%	28.60%

Source: National Marine Fisheries Service AKR Blend data for 1995-97.

Note: Excludes CDQ harvests

Table 6.5: Percent of TAC Harvested by the Listed AFA Catcher Processors (Eligible and Ineligible) in the Bering Sea and Aleutian Islands (1995-97), Reordered to Show Trends in Options by Catch History

Species by TAC Grouping	Non-Pollock Targets 20	All Targets 20	Non-Pollock Targets 29	All Targets 29
Atka Mackerel - Central Aleutian Islands	8.06%	8.06%	22.44%	22.44%
Atka Mackerel - Eastern Aleutian Islands	0.83%	1.19%	1.09%	1.45%
Atka Mackerel - Western Aleutian Islands	0.57%	0.57%	10.04%	10.19%
Arrowtooth Flounder - BSAI	1.01%	3.47%	2.13%	7.29%
Other Flatfish - BSAI	11.04%	11.36%	13.14%	13.64%
Flathead Sole - BSAI	2.18%	5.45%	3.44%	8.45%
Greenland Turbot - Aleutian Islands	0.42%	0.44%	0.45%	0.48%
Greenland Turbot - Bering Sea	0.66%	1.08%	1.00%	1.56%
Other Species - BSAI	3.39%	5.22%	5.39%	8.49%
Pacific Cod (Fixed Gear) - BSAI	0.00%	0.00%	0.11%	0.11%
Pacific Cod (Trawl Gear, CPs) - BSAI[2]	12.78%	17.44%	26.32%	33.44%
Pacific Ocean Perch - Bering Sea	0.31%	0.80%	1.01%	1.57%
Pacific Ocean Perch - Central Aleutian Islands[3]	0.41%	0.56%	1.54%	1.80%
Pacific Ocean Perch - Eastern Aleutian Islands	0.56%	1.02%	1.79%	2.25%
Pacific Ocean Perch - Western Aleutian Islands	1.31%	1.31%	2.86%	2.86%
Other Rockfish - Aleutian Islands	3.86%	3.97%	4.92%	5.03%
Other Rockfish - Bering Sea	3.02%	3.35%	3.83%	4.59%
Rock Sole - BSAI	5.06%	6.04%	7.30%	8.85%
Sablefish (Trawl Gear) - Aleutian Islands	0.02%	0.02%	0.04%	0.04%
Sablefish (Trawl Gear) - Bering Sea	0.35%	0.35%	0.47%	0.49%
Sharpchin/Northern Rockfish - Aleutian Islands	2.54%	2.54%	7.80%	7.80%
Squid - Bering Sea and Aleutian Islands	0.10%	22.17%	0.19%	23.91%
Shortraker/Rougheye Rockfish - Aleutian Islands	2.11%	2.32%	2.42%	2.66%
Other Red Rockfish - Bering Sea	2.27%	5.46%	2.47%	5.74%
Yellowfin Sole - BSAI	19.73%	19.96%	23.34%	23.72%

Source: National Marine Fisheries Service AKR Blend data for 1995-97.
Note: Excludes CDQ harvests

[2]Based only on 1997 catch and TAC, because the trawl TAC was split between catcher/processors and catcher vessels that year.

[3]Central, Eastern, and Western Aleutian Islands POP percentages are based only on 1996 and 1997 catch and TACs, because in 1995 the TAC was allocated for the entire Aleutian Islands area.

Table 6.6: Percent of Catch Harvested by the Listed AFA Catcher Processors (Eligible and Ineligible) in the Bering Sea and Aleutian Islands (1995-97), Reordered to Show Trends in Options by Catch History

Species by TAC Grouping	Non-Pollock Targets 20	All Targets 20	Non-Pollock Targets 29	All Targets 29
Atka Mackerel - Central Aleutian Islands	7.99%	8.00%	22.26%	22.27%
Atka Mackerel - Eastern Aleutian Islands	0.78%	1.12%	1.02%	1.37%
Atka Mackerel - Western Aleutian Islands	0.60%	0.60%	10.69%	10.86%
Arrowtooth Flounder - BSAI	1.09%	3.76%	2.31%	7.90%
Other Flatfish - BSAI	16.54%	17.02%	19.69%	20.44%
Flathead Sole - BSAI	3.65%	9.13%	5.77%	14.17%
Greenland Turbot - Aleutian Islands	0.61%	0.65%	0.66%	0.70%
Greenland Turbot - Bering Sea	0.68%	1.11%	1.03%	1.62%
Other Species - BSAI	3.26%	5.02%	5.18%	8.17%
Pacific Cod (Fixed Gear) - BSAI	0.00%	0.00%	0.11%	0.11%
Pacific Cod (Trawl Gear, CPs) - BSAI[4]	13.71%	18.71%	28.24%	35.87%
Pacific Ocean Perch - Bering Sea	0.38%	0.98%	1.24%	1.93%
Pacific Ocean Perch - Central Aleutian Islands[5]	0.45%	0.61%	1.67%	1.96%
Pacific Ocean Perch - Eastern Aleutian Islands	0.57%	1.04%	1.81%	2.29%
Pacific Ocean Perch - Western Aleutian Islands	1.20%	1.20%	2.61%	2.61%
Other Rockfish - Aleutian Islands	9.62%	9.91%	12.26%	12.55%
Other Rockfish - Bering Sea	5.21%	5.79%	6.61%	7.92%
Rock Sole - BSAI	6.04%	7.21%	8.71%	10.56%
Sablefish (Trawl Gear) - Aleutian Islands	0.13%	0.15%	0.32%	0.34%
Sablefish (Trawl Gear) - Bering Sea	1.21%	1.22%	1.64%	1.73%
Sharpchin/Northern Rockfish - Aleutian Islands	2.69%	2.69%	8.25%	8.26%
Squid - Bering Sea and Aleutian Islands	0.14%	30.34%	0.25%	32.71%
Shortraker/Rougheye Rockfish-Aleutian Islands	2.35%	12.58%	2.69%	2.96%
Other Red Rockfish - Bering Sea	9.03%	21.72%	9.80%	22.82%
Yellowfin Sole - BSAI	23.79%	24.07%	28.14%	28.60%

Source: National Marine Fisheries Service AKR Blend data for 1995-97.

Note: Excludes CDQ harvests

[4]Based only on 1997 catch, because the trawl TAC was split between catcher/processors and catcher vessels that year.

[5]Central, Eastern, and Western Aleutian Islands POP percentages are based only on 1996 and 1997 catches, because in 1995 the TAC was allocated for the entire Aleutian Islands area.

Table 6.7: Difference in Percent of the 2000 TAC the Listed AFA Catcher/Processors Would Receive Based on Calculations using TAC vs. Catch, Reordered to Show Trends in Options by Catch History

Species by TAC Grouping	Non-Pollock Targets 20	All Targets 20	Non-Pollock Targets 29	All Targets 29
Atka Mackerel - Central Aleutian Islands	0.07%	0.06%	0.18%	0.17%
Atka Mackerel - Eastern Aleutian Islands	0.05%	0.07%	0.07%	0.08%
Atka Mackerel - Western Aleutian Islands	-0.03%	-0.03%	-0.65%	-0.67%
Arrowtooth Flounder - BSAI	-0.08%	-0.29%	-0.18%	-0.61%
Other Flatfish - BSAI	-5.50%	-5.66%	-6.55%	-6.80%
Flathead Sole - BSAI	-1.47%	-3.68%	-2.33%	-5.72%
Greenland Turbot - Aleutian Islands	-0.19%	-0.21%	-0.21%	-0.22%
Greenland Turbot - Bering Sea	-0.02%	-0.03%	-0.03%	-0.06%
Other Species - BSAI	0.13%	0.20%	0.21%	0.32%
Pacific Cod (Fixed Gear) - BSAI	0.00%	0.00%	0.00%	0.00%
Pacific Cod (Trawl Gear, CPs) - BSAI[6]	-0.93%	-1.27%	-1.92%	-2.43%
Pacific Ocean Perch - Bering Sea	-0.07%	-0.18%	-0.23%	-0.36%
Pacific Ocean Perch - Central Aleutian Islands[7]	-0.04%	-0.05%	-0.13%	-0.16%
Pacific Ocean Perch - Eastern Aleutian Islands	-0.01%	-0.02%	-0.02%	-0.04%
Pacific Ocean Perch - Western Aleutian Islands	0.11%	0.11%	0.25%	0.25%
Other Rockfish - Aleutian Islands	-5.76%	-5.94%	-7.34%	-7.52%
Other Rockfish - Bering Sea	-2.19%	-2.44%	-2.78%	-3.33%
Rock Sole - BSAI	-0.98%	-1.17%	-1.41%	-1.71%
Sablefish (Trawl Gear) - Aleutian Islands	-0.11%	-0.13%	-0.28%	-0.30%
Sablefish (Trawl Gear) - Bering Sea	-0.86%	-0.87%	-1.17%	-1.24%
Sharpchin/Northern Rockfish - Aleutian Islands	-0.15%	-0.15%	-0.45%	-0.46%
Squid - Bering Sea and Aleutian Islands	-0.04%	-8.17%	-0.06%	-8.80%
Shortraker/Rougheye Rockfish-Aleutian Islands	-0.24%	-0.26%	-0.27%	-0.30%
Other Red Rockfish - Bering Sea	-6.76%	-16.26%	-7.33%	-17.08%
Yellowfin Sole - BSAI	-4.06%	-4.11%	-4.80%	-4.88%

Source: National Marine Fisheries Service AKR Blend data for 1995-97.

Note: Excludes CDQ harvests

[6]Based only on 1997 catch, because the trawl TAC was split between catcher/processors and catcher vessels that year.

[7]Central, Eastern, and Western Aleutian Islands POP percentages are based only on 1996 and 1997 catches, because in 1995 the TAC was allocated for the entire Aleutian Islands area.

Table 6.8: Percentage of future TAC available to 20 AFA catcher processors under various sideboard options for six possible directed fisheries. Tonnage range is derived by using the range of possible percentages multiplied by the 1999 TACs.

Fishery	(TAC or catch)	Non-Pollock Targets 20	All Targets 20	Non-Pollock Targets 29	All Targets 29
Yellowfin sole	TAC	19.7%	20.0	23.3	23.7
	Catch	23.8	24.1	28.1	28.6
	Range		(36,839 - 53,482 mt)		
Pacific cod	TAC	12.8	17.4	26.3	33.4
	Catch	13.7	18.7	28.2	35.9
	Range		(5,369 - 15,069 mt)		
Atka mackerel WAI	TAC	20.0	20.0	20.0	20.0
	Catch	20.0	20.0	20.0	20.0
	Range		(4,590 mt)		
Atka mackerel CAI	TAC	11.5	11.5	11.5	11.5
	Catch	11.5	11.5	11.5	11.5
	Range		(2,190 mt)		
Other flatfish	TAC	11.0	11.4	13.1	13.6
	Catch	16.5	17.0	19.7	20.4
	Range		(8,362 - 15,508 mt)		
Rock sole	TAC	5.1	6.0	7.3	8.9
	Catch	6.0	7.2	8.7	10.6
	Range		(4,335 - 9,010 mt)		

Discard Rates

The Council also requested that information on the discard rates of AFA catcher processors be included in the analysis. Those rates (discards divided by total catch) for the 29 listed catcher/processors are included in Table 6.9. Harvests from the CDQ fishery are not included in these estimates. Discard rates are generally lower for the Atka mackerel, Greenland turbot, Pacific cod, pollock, sablefish, and yellowfin sole species, when compared to other species in the Table.

Table 6.9: AFA Catcher/Processors (all 29) Discard Rates in BS/AI, 1995-97

Species - Area	Targets Fisheries	
	All	Non-pollock
Atka Mackerel - Central Aleutian Islands	3%	3%
Atka Mackerel - Eastern Aleutian Islands	78%	71%
Atka Mackerel - Western Aleutian Islands	7%	5%
Arrowtooth Flounder - Bering Sea and Aleutian Islands	97%	96%
Other Flatfish - Bering Sea and Aleutian Islands	74%	75%
Flathead Sole - Bering Sea and Aleutian Islands	74%	64%
Greenland Turbot - Aleutian Islands	30%	27%
Greenland Turbot - Bering Sea	54%	30%
Other Species - Bering Sea and Aleutian Islands	90%	94%
Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI	28%	12%
Pollock (Offshore) - Aleutian Islands	1%	36%
Pollock (Offshore) - Bering Sea	5%	80%
Pacific Ocean Perch - Aleutian Islands	43%	39%
Pacific Ocean Perch - Bering Sea	87%	98%
Pacific Ocean Perch - Central Aleutian Islands	97%	99%
Pacific Ocean Perch - Eastern Aleutian Islands	62%	60%
Pacific Ocean Perch - Western Aleutian Islands	65%	65%
Other Rockfish - Aleutian Islands	82%	81%
Other Rockfish - Bering Sea	90%	89%
Rock Sole - Bering Sea and Aleutian Islands	65%	60%
Sablefish (Trawl Gear) - Aleutian Islands	61%	60%
Sablefish (Trawl Gear) - Bering Sea	10%	6%
Sharpchin/Northern Rockfish - Aleutian Islands	92%	92%
Squid - Bering Sea and Aleutian Islands	92%	89%
Shortraker/Rougheye Rockfish - Aleutian Islands	44%	40%
Other Red Rockfish - Bering Sea	96%	93%
Yellowfin Sole - Bering Sea and Aleutian Islands	20%	19%
All Fisheries	9%	29%

Source: Blend Data 1995-97

6.4.4 Catch Distribution by Quarter

Concerns have been expressed that setting sideboard caps on an annual basis will allow AFA vessels to change the temporal distribution of their catch within a year. To help prevent this from occurring, some members of industry have asked that the sideboard caps be distributed on a quarterly basis. Such an action would further limit when AFA vessels could harvest those caps.

Prices were one of the reasons that this limit was requested. At least one member of industry indicated in public testimony that the markets for some flatfish species are fairly limited. The first producers to get their product to market get better prices, then as additional product reaches the market, prices are reduced or it is difficult to find a buyer. Verifying the price elasticities of flatfish species is not possible in this analysis.

However, based on the quarterly distributions of catch presented in Tables 6.9 and 6.10, this measure would spread the AFA catcher processors flatfish effort out more evenly between the first and second quarters of the year. This would afford traditional flatfish producers at least some protection they are seeking. Applying semi-annual limits would appear to be much less effective, since most of the AFA catcher/processor's flatfish harvests take place during the first half of the year.

Table 6.10: Distribution of BSAI catch by Quarter for the 20 eligible AFA Catcher/Processors

	Quarter of the year				
TAC Species Groups	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Grand Total
Atka Mackerel - Central AI	81.70%	18.30%	0.00%	0.00%	100.00%
Atka Mackerel - Eastern AI	66.48%	33.41%	0.11%	0.00%	100.00%
Atka Mackerel - Western AI	0.00%	100.00%	0.00%	0.00%	100.00%
Arrowtooth Flounder - BSAI	32.66%	11.60%	41.24%	14.51%	100.00%
Other Flatfish - BSAI	42.10%	40.82%	12.95%	4.12%	100.00%
Flathead Sole - BSAI	41.52%	9.31%	35.14%	14.02%	100.00%
Greenland Turbot - Aleutian Islands	25.37%	74.63%	0.00%	0.00%	100.00%
Greenland Turbot - Bering Sea	6.22%	60.47%	26.27%	7.04%	100.00%
Other Species - BSAI	40.31%	27.21%	25.31%	7.17%	100.00%
Pacific Cod (Trawl Gear) - BSAI	57.82%	19.63%	17.84%	4.71%	100.00%
Pacific Cod (Trawl Gear, CPs) - BSAI	75.95%	12.83%	6.35%	4.87%	100.00%
Pacific Ocean Perch - Aleutian Islands	10.86%	89.14%	0.00%	0.00%	100.00%
Pacific Ocean Perch - Bering Sea	62.29%	3.17%	11.22%	23.32%	100.00%
Pacific Ocean Perch-Central AI	93.73%	6.27%	0.00%	0.00%	100.00%
Pacific Ocean Perch - Eastern AI	99.16%	0.02%	0.00%	0.82%	100.00%
Pacific Ocean Perch - Western AI	0.00%	100.00%	0.00%	0.00%	100.00%
Other Rockfish - Aleutian Islands	82.57%	17.43%	0.00%	0.00%	100.00%
Other Rockfish - Bering Sea	78.37%	14.80%	6.74%	0.10%	100.00%
Rock Sole - BSAI	47.20%	42.99%	8.63%	1.17%	100.00%
Sablefish (Trawl Gear) - AI	15.28%	84.72%	0.00%	0.00%	100.00%
Sablefish (Trawl Gear) - Bering Sea	0.88%	99.12%	0.00%	0.00%	100.00%
Sharpchin/Northern Rockfish - AI	72.48%	27.52%	0.00%	0.00%	100.00%
Squid - BSAI	91.57%	0.30%	5.42%	2.71%	100.00%
Shortraker/Rougheye Rockfish - AI	9.30%	90.70%	0.00%	0.00%	100.00%
Other Red Rockfish - Bering Sea	95.28%	3.99%	0.47%	0.26%	100.00%
Yellowfin Sole - BSAI	35.75%	46.50%	9.26%	8.49%	100.00%

Source: NMFS Blend data 1995-97.

Table 6.11: Distribution of BSAI catch by Quarter for the 29 listed AFA Catcher/Processors

	Quarter of the year				
TAC Species Groups	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Grand Total
Atka Mackerel - Central AI	70.91%	29.09%	0.00%	0.00%	100.00%
Atka Mackerel - Eastern AI	72.35%	27.55%	0.09%	0.00%	100.00%
Atka Mackerel - Western AI	16.19%	83.81%	0.00%	0.00%	100.00%
Arrowtooth Flounder - BSAI	32.47%	10.14%	46.25%	11.14%	100.00%
Other Flatfish - BSAI	36.90%	43.06%	16.27%	3.77%	100.00%
Flathead Sole - BSAI	36.96%	9.49%	41.73%	11.82%	100.00%
Greenland Turbot - Aleutian Islands	30.56%	69.44%	0.00%	0.00%	100.00%
Greenland Turbot - Bering Sea	6.73%	60.19%	27.42%	5.66%	100.00%
Other Species - BSAI	38.54%	26.25%	28.50%	6.71%	100.00%
Pacific Cod (Trawl Gear) - BSAI	62.96%	19.02%	14.41%	3.60%	100.00%
Pacific Cod (Trawl Gear, CPs) - BSAI	78.55%	10.18%	6.28%	4.99%	100.00%
Pacific Ocean Perch - Aleutian Islands	10.97%	89.03%	0.00%	0.00%	100.00%
Pacific Ocean Perch - Bering Sea	66.21%	11.14%	6.59%	16.06%	100.00%
Pacific Ocean Perch-Central AI	88.38%	11.62%	0.00%	0.00%	100.00%
Pacific Ocean Perch - Eastern AI	78.04%	21.58%	0.00%	0.37%	100.00%
Pacific Ocean Perch - Western AI	11.20%	88.80%	0.00%	0.00%	100.00%
Other Rockfish - Aleutian Islands	85.81%	14.19%	0.00%	0.00%	100.00%
Other Rockfish - Bering Sea	75.28%	18.36%	6.18%	0.18%	100.00%
Rock Sole - BSAI	45.49%	38.83%	14.63%	1.05%	100.00%
Sablefish (Trawl Gear) - AI	62.96%	37.04%	0.00%	0.00%	100.00%
Sablefish (Trawl Gear) - Bering Sea	3.09%	94.83%	2.07%	0.01%	100.00%
Sharpchin/Northern Rockfish - AI	52.50%	47.50%	0.00%	0.00%	100.00%
Squid - BSAI	91.82%	0.57%	5.02%	2.59%	100.00%
Shortraker/Rougheye Rockfish - AI	13.87%	86.13%	0.00%	0.00%	100.00%
Other Red Rockfish - Bering Sea	93.41%	4.42%	0.64%	1.53%	100.00%
Yellowfin Sole - BSAI	30.76%	48.31%	11.20%	9.73%	100.00%

Source: NMFS Blend data 1995-97.

6.5 AFA Catcher/Processor PSC Caps for 2000 and Beyond

The same methodology used to determine groundfish sideboards is used to estimate PSC bycatch levels for 2000 and beyond. Again, this approach is based on 1995-1997 and does not include catches made in CDQ fisheries, bycatch from catcher vessels delivering fish, bycatch harvested by non-AFA catcher/processors, or bycatch harvested in the GOA.

PSC amounts available to AFA catcher/processors would be caps and not allocations. Because they are not guaranteed that amount of PSC bycatch, they must compete against other individuals operating in the open access fishery. For example, if the AFA catcher/processors were capped at 25 percent of the yellowfin halibut mortality allowance, the non-AFA vessels in the fleet could take all of the halibut mortality assigned to the yellowfin sole fishery if the AFA processors decided not to enter yellowfin sole at the start of the season. However if the AFA catcher/processors reach their cap, they will be required to stop fishing even if PSC halibut mortality is available to the non-AFA portion of the fleet.

There at least two ways that PSC caps could be apportioned among the AFA catcher/processors. One method would be to determine the entire amount of PSC for each species and let the catcher/processors decide how to apportion it among fisheries. Recall that trawl PSC bycatch is currently divided among the Pacific cod, rockfish, pollock/Atka mackerel/other groundfish, rock sole/other flatfish, Greenland turbot/arrowtooth flounder/sablefish, and yellowfin sole fisheries. Under this option the Council identifies a given percentage of the trawl halibut PSC cap for the AFA catcher/processors and lets them decide in which fisheries to use the PSC. There may be advantages/disadvantages in allowing the catcher/processors to choose which fisheries to use their PSC. The second method would apportion the PSC by target fishery. For example, the catcher/processors would be allocated a percentage of the PSC allocated to the yellowfin sole fishery.

Estimates of PSC harvests are provided based on whether the catch was made by the 20 eligible or 29 listed AFA catcher/processors. They also are calculated based on whether the harvest occurred in the pollock or non-pollock target fisheries. Table 6.12 lists the bycatch of PSC species taken by the AFA catcher/processors. Only herring, halibut, *C. bairdi* Zone 1, *C. bairdi* Zone 2, other Tanner crab, red king crab zone 1, chinook salmon, and other salmon (primarily chum) are included. The other Tanner crab category may need to be treated differently from the other PSC species, because caps by individual fishery were not established until 1999. This analysis has assumed that the 1999 caps were in place from 1995-97, which may tend to skew the resulting caps that are calculated, if the distribution of 'other Tanner' bycatch from 1995-97 does not track well with the target fishery caps established for 1999.

NMFS excluded chinook and other salmon when they developed PSC bycatch caps for the AFA catcher/processors in 1999. NMFS justified excluding chinook salmon because regulations under § 679.21(e)(7)(vii) and (viii) do not provide for fishery specific management of salmon bycatch limits. However, the Council and Advisory Panel have both expressed concerns over excluding chinook salmon from the PSC caps, especially given the Council's recent action to step-down the overall chinook cap from 48,000 to 29,000 fish between 1999 and 2003. The Council's motion which outlined the scope of this analysis specified that only chinook bycatch occurring in the pollock target fisheries would count towards the overall cap. Because of these changes, an option has been included in this analysis that would allow the Council to divide the chinook cap by either AFA sector or cooperative, based on their share of the pollock TAC.

Since the chinook cap applies only to the pollock fleets, and the cap would be divided among the pollock industry relative to their allocation of pollock, any chinook savings achieved by a sector/cooperative will result in overall chinook savings in the pollock fishery. This means that everyone must harvest 100 percent of their

individual caps for the fleet to harvest the entire cap. However, this does not automatically mean that chinook bycatch will be less than the cap over all fisheries in the Bering Sea. It is possible that chinook bycatch in non-pollock target fisheries would increase and makeup the difference, since they are not bound by a cap, but given the relatively small historical bycatch levels in other fisheries, that likely will not occur.

An example at the sector level may help to illustrate why each group must harvest their entire chinook cap for the overall cap to be harvested. Assume that the caps are set at the sector level, and the overall cap is 48,000 fish. That means the inshore sector would be allowed to harvest up to 50 percent of the chinook bycatch cap (24,000 fish), motherships 10 percent (4,800 fish), and the catcher/processor sector 40 percent (19,200 fish). If the inshore sector only harvested 20,000 fish, the catcher/processors and mothership sectors would still only be allowed to catch their cap, which is 24,000 chinook. Therefore, the remaining 4,000 fish must go unharvested in the pollock fishery.

Tables 6.12 and 6.13 report the total amount of each PSC species harvested and the percent of that PSC species harvested as a percentage of the total bycatch cap, respectively, by the AFA catcher processors from 1995-97. Tables 6.14 and 6.15 then report the same information broken down by PSC target groups. This more specific breakdown may be useful if consideration is given to apportioning PSC by fishery.

Table 6.12: PSC Bycatch by the AFA Catcher Processors in the BSAI from 1995-97

	Non-pollock Targets		*Pollock Targets* Reported Catch		All Target Fisheries	
	AFA CPs		AFA CPs		AFA CPs	
PSC Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Halibut Mortality	634	952	251	387	886	1,338
C. bairdi (Zone 1)	348,580	385,676	27,712	62,077	376,292	447,753
C. bairdi (Zone 2)	340,017	406,846	9,617	33,352	349,635	440,198
Red King Crab (Zone 1)	2,963	3,098	3,335	8,240	6,297	11,338
Herring	30	62	995	1,122	1,024	1,184
C. opilio	1,603,406	1,906,083	137,828	300,024	1,741,234	2,206,106
Chinook	1,893	3,879	23,319	28,974	25,212	32,853
O. Salmon	79	222	51,926	60,391	52,006	60,613

Sources: National Marine Fisheries Service AKR PSC Bycatch Data (File Names BS95HALX, BS96HALX, and BS97HALX)

Table 6.13: Percent of PSC Bycatch Harvested by the AFA Catcher Processors in the BSAI from 1995-97

	Non-pollock Targets		Pollock Targets		All Target Fisheries	
	AFA CPs		AFA CPs		AFA CPs	
PSC Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Halibut Mortality	5.60%	8.42%	2.22%	3.41%	7.82%	11.82%
C. bairdi (Zone 1)	12.68%	14.02%	1.01%	2.26%	13.68%	16.28%
C. bairdi (Zone 2)	4.20%	5.02%	0.12%	0.41%	4.32%	5.43%
Red King Crab (Zone 1)	0.63%	0.65%	0.70%	1.74%	1.33%	2.39%
Herring	0.57%	1.20%	19.36%	21.85%	19.94%	23.05%
C. opilio	11.40%	13.56%	0.98%	2.13%	12.38%	15.69%
Chinook	1.39%	2.84%	17.10%	21.24%	18.48%	24.09%
O. Salmon	0.04%	0.11%	24.64%	28.66%	24.68%	28.76%

Source: National Marine Fisheries Service AKR PSC Bycatch Data (File Names BS95HALX, BS96HALX, and BS97HALX)

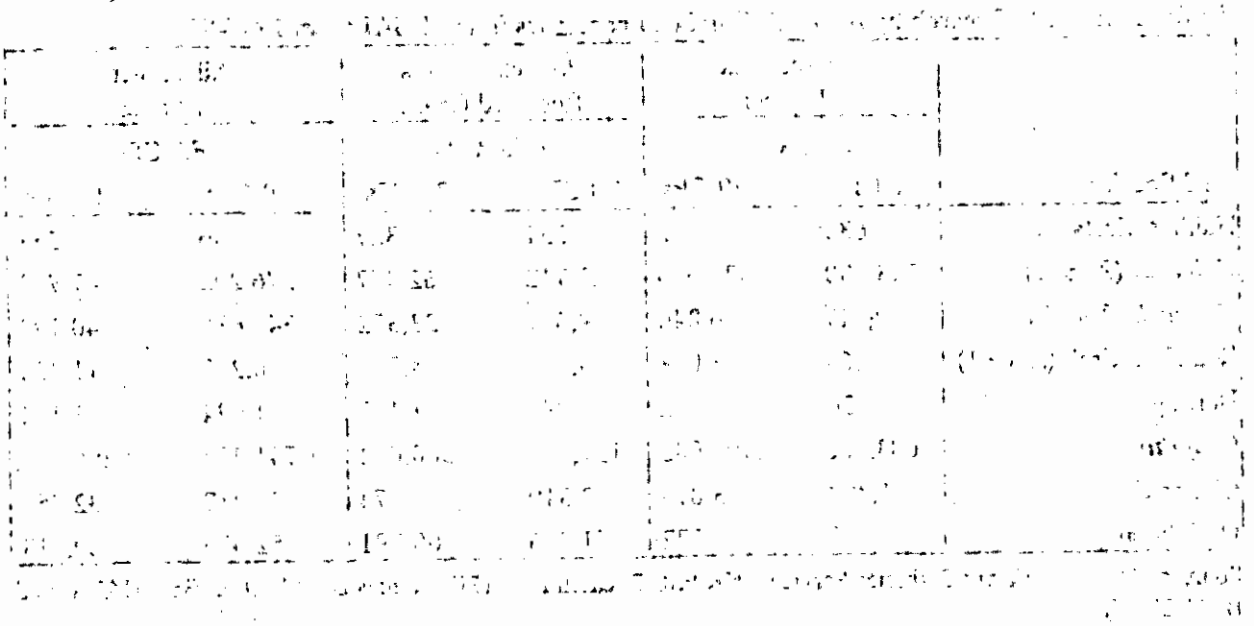


Table 6.14: BS/AI PSC Bycatch by the AFA Catcher Processors from 1995-97 in each PSC Target Grouping

		Non-Pollock Targets AFA CPs		Pollock Targets AFA CPs		All Target Fisheries AFA CPs	
PSC Target	Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Pacific Cod	Tons of Groundfish	20,060	47,838	-	-	20,060	47,838
	Halibut Mortality	84	219	-	-	84	219
	C. bairdi (Zone 1)	2,973	24,940	-	-	2,973	24,940
	C. bairdi (Zone 2)	7,774	18,304	-	-	7,774	18,304
	Red King Crab (Zone 1)	-	-	-	-	-	-
	Herring	2	15	-	-	2	15
	C. opilio	5,687	21,917	-	-	5,687	21,917
	Chinook	1,561	3,517	-	-	1,561	3,517
	O. Salmon	32	120	-	-	32	120
Rockfish	Tons of Groundfish	1,136	1,136	-	-	1,136	1,136
	Halibut Mortality	1	1	-	-	1	1
	C. bairdi (Zone 1)	-	-	-	-	-	-
	C. bairdi (Zone 2)	-	-	-	-	-	-
	Red King Crab (Zone 1)	-	-	-	-	-	-
	Herring	-	-	-	-	-	-
	C. opilio	-	-	-	-	-	-
	Chinook	6	6	-	-	6	6
	O. Salmon	-	-	-	-	-	-
Pollock/	Tons of Groundfish	9,955	35,878	1,175,718	1,505,074	1,185,673	1,540,953
Atka Mackerel/	Halibut Mortality	3	17	251	387	254	403
Other Groundfish	*C. bairdi* (Zone 1)	70	70	27,712	62,077	27,782	62,147
	C. bairdi (Zone 2)	-	-	9,617	33,352	9,617	33,352
	Red King Crab (Zone 1)	-	-	3,335	8,240	3,335	8,240
	Herring	0	0	995	1,122	995	1,122
	C. opilio	-	-	137,828	300,024	137,828	300,024
	Chinook	316	346	23,319	28,974	23,635	29,320
	O. Salmon	47	54	51,926	60,391	51,973	60,445
Rock sole/	Tons of Groundfish	3,640	6,192	-	-	3,640	6,192
Other Flatfish	Halibut Mortality	38	64	-	-	38	64
	C. bairdi (Zone 1)	52,494	56,936	-	-	52,494	56,936
	C. bairdi (Zone 2)	258	5,976	-	-	258	5,976
	Red King Crab (Zone 1)	1,370	1,370	-	-	1,370	1,370
	Herring	-	0	-	-	-	0
	C. opilio	6,283	14,406	-	-	6,283	14,406
	Chinook	1	1	-	-	1	1
	O. Salmon	-	-	-	-	-	-

Table 6.14 continued							
Greenland Turbot/	Tons of Groundfish	118	183	-	-	118	183
Arrowtooth Flounder/	Halibut Mortality	5	32	-	-	5	32
Sablefish	C. *bairdi* (Zone 1)	54	54	-	-	54	54
	C. *bairdi* (Zone 2)	-	-	-	-	-	-
	Red King Crab (Zone 1)	-	-	-	-	-	-
	Herring	-	-	-	-	-	-
	C. opilio	1,492	1,565	-	-	1,492	1,565
	Chinook	-	-	-	-	-	-
	O. Salmon	-	-	-	-	-	-
Yellowfin Sole	Tons of Groundfish	144,887	171,461	-	-	144,887	171,461
	Halibut Mortality	504	618	-	-	504	618
	C. *bairdi* (Zone 1)	293,042	303,729	-	-	293,042	303,729
	C. *bairdi* (Zone 2)	331,986	382,566	-	-	331,986	382,566
	Red King Crab (Zone 1)	1,593	1,729	-	-	1,593	1,729
	Herring	28	46	-	-	28	46
	C.	1,589,944	1,868,195	-	-	1,589,944	1,868,195
	Chinook	9	9	-	-	9	9
	O. Salmon	-	49	-	-	-	49

Source: National Marine Fisheries Service AKR PSC Bycatch Data (File Names BS95HALX, BS96HALX, and BS97HALX)

Note: The tons of groundfish field includes both target and bycatch species, since NMFS does not break that information out in these data sets.

Table 6.15: BS/AI PSC Bycatch by the AFA Catcher Processors from 1995-97 in each PSC Target Grouping

		Non-Pollock Targets AFA CPs		Pollock Targets AFA CPs		All Target Fisheries AFA CPs	
PSC Target	Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Pacific Cod	Halibut Mortality	1.73%	4.53%	0.00%	0.00%	1.73%	4.53%
	C. *bairdi* (Zone 1)	0.49%	4.10%	0.00%	0.00%	0.49%	4.10%
	C. *bairdi* (Zone 2)	1.09%	2.56%	0.00%	0.00%	1.09%	2.56%
	Red King Crab (Zone 1)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Herring	2.91%	22.98%	0.00%	0.00%	2.91%	22.98%
	C. *opilio*	0.04%	0.16%	0.00%	0.00%	0.04%	0.16%
	Chinook	1.14%	2.58%	0.00%	0.00%	1.14%	2.58%
	O. Salmon	0.02%	0.07%	0.00%	0.00%	0.02%	0.07%
Rockfish	Halibut Mortality	0.33%	0.33%	0.00%	0.00%	0.33%	0.33%
	C. *bairdi* (Zone 1)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	C. *bairdi* (Zone 2)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Red King Crab (Zone 1)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Herring	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	C. *opilio*	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Chinook	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	O. Salmon	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pollock/	Halibut Mortality	0.22%	1.24%	18.82%	28.96%	19.04%	30.20%
Atka Mackerel/	C. *bairdi* (Zone 1)	0.04%	0.04%	14.25%	31.93%	14.29%	31.97%
Other Groundfish	C. *bairdi* (Zone 2)	0.00%	0.00%	0.52%	1.80%	0.52%	1.80%
	Red King Crab (Zone 1)	0.00%	0.00%	4.94%	12.21%	4.94%	12.21%
	Herring	0.00%	0.00%	23.80%	26.85%	23.80%	26.85%
	C. *opilio*	0.00%	0.00%	0.98%	2.13%	0.98%	2.13%
	Chinook	0.23%	0.25%	17.09%	21.23%	17.32%	21.48%
	O. Salmon	0.03%	0.03%	31.05%	36.11%	31.08%	36.14%
Rock sole/	Halibut Mortality	1.73%	2.90%	0.00%	0.00%	1.73%	2.90%
Other Flatfish	C. *bairdi* (Zone 1)	4.39%	4.76%	0.00%	0.00%	4.39%	4.76%
	C. *bairdi* (Zone 2)	0.02%	0.43%	0.00%	0.00%	0.02%	0.43%
	Red King Crab (Zone 1)	0.51%	0.51%	0.00%	0.00%	0.51%	0.51%
	Herring	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	C. *opilio*	0.04%	0.10%	0.00%	0.00%	0.04%	0.10%
	Chinook	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	O. Salmon	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 6.15 continued							
Greenland Turbot/	Halibut Mortality	4.03%	27.01%	0.00%	0.00%	4.03%	27.01%
Arrowtooth Flounder/	C. *bairdi* (Zone 1)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sablefish	C. *bairdi* (Zone 2)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Red King Crab (Zone 1)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Herring	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	C. *opilio*	0.01%	0.01%	0.00%	0.00%	0.01%	0.01%
	Chinook	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	O. Salmon	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Yellowfin Sole	Halibut Mortality	20.15%	24.73%	0.00%	0.00%	20.15%	24.73%
	C. *bairdi* (Zone 1)	39.00%	40.43%	0.00%	0.00%	39.00%	40.43%
	C. *bairdi* (Zone 2)	8.05%	9.27%	0.00%	0.00%	8.05%	9.27%
	Red King Crab (Zone 1)	1.45%	1.57%	0.00%	0.00%	1.45%	1.57%
	Herring	3.18%	5.32%	0.00%	0.00%	3.18%	5.32%
	C. *opilio*	11.31%	13.29%	0.00%	0.00%	11.31%	13.29%
	Chinook	0.01%	0.01%	0.00%	0.00%	0.01%	0.01%
	O. Salmon	0.00%	0.03%	0.00%	0.00%	0.00%	0.03%

Sources: National Marine Fisheries Service AKR PSC Bycatch Data (File Names BS95HALX, BS96HALX, and BS97HALX) for the numerator, and trawl bycatch mortality tables (1995-97) from the NMFS AKR web page for the denominator.

Amendment 57 to the BSAI Fishery Management Plan placed a prohibition on the use of bottom trawl gear for harvesting pollock. The following discussion of fishing gear and target definitions is taken from that amendment.

Pollock fisheries have been defined in different ways, and understanding these definitions is important for evaluating a proposal to ban non-pelagic trawling in directed pollock fisheries. To reduce confusion, standard definitions are show in the adjacent box. Defining what exactly is non-pelagic trawling for pollock will depend on the distinction between *gear* and *targets*.

Regulation on Trawl Performance Standard (679.7.14).

It is unlawful for any person to ... use a vessel to participate in a directed fishery for pollock with trawl gear and have on board the vessel, at any particular time, 20 or more crab of any species that have a width of more than 1.5 inches (38 mm) at the widest dimension when directed fishing for pollock with nonpelagic trawl gear is closed.

Gear is defined in regulations; the definition of a pelagic trawl is relatively complex, whereas non-pelagic trawls are all other trawls not meeting the pelagic trawl definition. Regulations that define pelagic trawl gear are listed in the accompanying table. Note that a performance based standard for pelagic trawls kicks in when non-pelagic trawling is prohibited due to PSC attainment. When the pollock fishery nears its allocation of halibut PSC, NMFS closes that fishery to non-pelagic gear. This occurred in the Bering Sea on September 11, 1996 and on September 7 in 1997. It is the gear definition, together with the performance standard, that was most important for the purposes of evaluating Amendment 57.

Definition of pelagic and non-pelagic trawl gear.
(§ 672.2 Parts 5 and 7)

(5) Non-pelagic trawl means a trawl other than a pelagic trawl;
(6) ....
(7) Pelagic trawl means a trawl that:
(I) Has no discs, bobbins, or rollers;
(ii) Has no chafe protection gear attached to the foot rope or fishing line;
(iii) Except for the small mesh allowed under paragraph (7)(ix) of this definition:
(A) Has no mesh tied to the fishing line, head rope, and breast lines with less than 20 inches (50.8 cm) between knots, and has no stretched mesh size of less than 60 inches (152.4 cm) aft from all points on the fishing line, head rope, and breast lines and extending past the fishing circle for a distance equal to or greater than one half the vessel's length overall; or
(B) Has no parallel lines spaced closer than 64 inches (162.6 cm), from all points on the fishing line, head rope, and breast lines and extending aft to a section of mesh with no stretched mesh size of less than 60 inches (152.4 cm), extending aft for a distance equal to or greater than one half the vessel's LOA;
(iv) Has no stretched mesh size less than 15 inches (38.1 cm) aft of the mesh described in paragraph (7)(iii) of this definition for a distance equal to or greater than one half the vessel's length overall;
(v) Contains no configuration intended to reduce the stretched mesh sizes described in paragraphs (7)(iii) and (iv) of this definition;
(vi) Has no flotation other than floats capable of providing up to 200 pounds (90.7 kg) of buoyancy to accommodate the use of a net-sounder device;
(vii) Has no more than one fishing line and one foot rope for a total of no more than two weighted lines on the bottom of the trawl between the wing tip and the fishing circle;
(viii) Has no metallic component except for connectors (e.g., hammerlocks or swivels) or net-sounder device aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure;
(ix) May have small mesh within 32 feet (9.8 m) of the center of the head rope as needed for attaching instrumentation (e.g., net-sounder device); and
(x) May have weights on the wing tips;

Target fishery definitions for pollock are used to assign bycatch rates and PSC among the pelagic and non-pelagic trawl apportionments. It is the target definition that NMFS uses to report catch and bycatch in pollock fisheries. Unfortunately, the target definitions are less useful for regulating how fishermen fish their gear. For example, to achieve a midwater only fishery, vessels targeting pollock would have to catch > 95% pollock. A vessel that took a majority of pollock, but less than 95% would be in violation of any regulation that mandated mid-water trawling based on target definitions. This would be impossible to regulate.

Because of these difficulties, the management action of Amendment 16a and Amendment 57 is to prohibit the use of non-pelagic gear when engaged in a pollock target fishery. While this still uses target fishery definitions to define direct pollock fishery (dominant species), it doesn't require fishermen to catch 95% pollock. One needs to recognize though, that pelagic gear can still be fished on the bottom.

Staff was requested to estimate the amount of PSC that would have been needed to conduct the 1995-97 pollock fisheries using only pelagic gear. To make these estimates, sampled hauls from the NORPAC Observer data base were queried for the years 1995-97. Those hauls were then used to calculate a ratio of PSC bycatch to target catch. Two separate ratios were calculated for comparison. The first was based on sampled hauls when pelagic gear was used. The second method selected only observations where less than 20 crabs were taken in the haul. These methods yielded very different results, as reported in Tables 6.16 and 6.17, especially for crab PSC.

To conduct this analysis, targets had to be assigned to each observed haul. The same basic formula was used to determine targets as NMFS uses in the Blend data, however, the catch was not aggregated by week. Results using the two methods could be very different, although no comparison of the two was conducted. The method used here would apply bycatch to different targets if a vessel was using a "topping off" strategy during a week.

The ratio of PSC to target catch was then multiplied by the catcher/processor's total pollock harvest to estimate PSC requirements. These estimates should only serve as a rough estimate of future PSC requirements. There are several factors that may be important when determining future PSC needs that were not accounted for in this calculation. For example, the fishery will take place in different areas and at different times of the year

under the new AFA and Steller sea lion measures. These factors have been shown to impact PSC bycatch rates of halibut, crab, and salmon in past analyses[8].

Table 6.16: Estimates of Catcher/Processor PSC bycatch had they harvested all BSAI pollock using pelagic gear over the three year time period

	Estimates of required PSC bycatch in pollock targets if only pelagic gear was permitted to be used in 1995-97.				Change in Pollock Fishery PSC bycatch if estimates of required bycatch are used instead of historic reported levels, 1995-97.			
	Based on when pelagic gear[a] was used		Based on when < 20 crabs were harvested in a haul[b]		Based on when pelagic gear was used		Based on when < 20 crabs were harvested in a haul	
	AFA CPs		AFA CPs		AFA CPs		AFA CPs	
PSC Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Halibut Mortality	111	159	184	291	-140	-228	-67	-96
C. bairdi	4,776[d]	12,965[d]	620[c/d]	1,120[c/d]	-32,553	-82,464	-36,709	-94,309
Red King Crab	113	485	27[c]	43[c]	-3,222	-8,197	-3,308	-8,197
Herring	954	1,075	949	1,082	-41	-47	-46	-40
C. opilio	14,678	36,700	607[c]	772[c]	-123,150	-263,324	-137,221	-299,302
Chinook	21,205	26,540	21,487	27,379	-2,114	-2,434	-1,832	-1,595
O. Salmon	45,582	51,415	46,447	52,751	-6,344	-8,976	-5,479	-7,640

a) Extrapolated NORPAC observed haul data. Only observed hauls where greater that 50 percent of the haul was pollock, and pelagic gear was used are included. For those hauls, the ratio of the PSC species divided by the amount of observed pollock was multiplied by these vessel total target pollock harvest to derive the estimate.

b) Extrapolated NORPAC observed haul data. Only hauls where less than 20 crab were observed are included. The ratio of the PSC species to total pollock catch in directed pollock fisheries was multiplied by the total amount of pollock harvested to determine PSC estimates.

c) For the crab species, this method tends to underestimate the amount of crab that will likely be necessary to harvest the catcher/processor's allocation of pollock.

d) This estimate is for both zone 1 and zone 2 combined.

[8] NPFMC BSAI FMP Amendments 58, 41, 40, 35, and 21b are examples of analyses where PSC bycatch rates were examined at different times within a year.

Table 6.17: Estimates of the percentage of trawl PSC bycatch that Catcher/Processors would be capped at based on their needs in the pollock target fishery.

	Estimates of required % of trawl PSC bycatch in pollock targets if only pelagic gear was permitted to be used in 1995-97.				Change in the % of Future Years Trawl PSC Allocation (Est. % of PSC Allotment-Reported % of PSC Allotment)			
	Based on when pelagic gear[a] was used		Based on when < 20 crabs were harvested in a haul[b]		When pelagic gear was used vs. total reported bycatch		When < 20 crabs were harvested in a haul vs. total reported bycatch	
	AFA CPs		AFA CPs		AFA CPs		AFA CPs	
PSC Species	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs	20 CPs	29 CPs
Halibut Mortality	0.98%	1.40%	1.62%	2.57%	-1.24%	-2.01%	-0.59%	-0.85%
C. bairdi	0.04%	0.12%	0.01%	0.01%	-0.88%	-1.95%	-0.99%	-2.23%
Red King Crab	0.02%	0.10%	0.01%	0.01%	-0.68%	-1.64%	-0.69%	-1.73%
Herring	0.20%	0.23%	0.20%	0.23%	-0.80%	-0.92%	-0.90%	-0.78%
C. opilio	0.11%	0.28%	0.00%	0.01%	-0.88%	-1.87%	-0.98%	-2.12%
Chinook	15.55%	19.46%	15.75%	20.07%	-1.55%	-1.78%	-1.34%	-1.17%
O. Salmon	21.63%	24.40%	22.04%	25.03%	-3.01%	-4.26%	-2.60%	-3.63%

a) Extrapolated NORPAC observed haul data. Only observed hauls where greater that 50 percent of the haul was pollock, and pelagic gear was used are included. For those hauls, the ratio of the PSC species divided by the amount of observed pollock was multiplied by these vessel total target pollock harvest to derive the estimate.

b) Extrapolated NORPAC observed haul data. Only hauls where less than 20 crab were observed are included. The ratio of the PSC species to total pollock catch in directed pollock fisheries was multiplied by the total amount of pollock harvested to determine PSC estimates.

c) For the crab species, this method tends to underestimate the amount of crab that will likely be necessary to harvest the catcher/processor's allocation of pollock.

d) This estimate is for both zone 1 and zone 2 combined.

The Council also requested that PSC bycatch rates by individual AFA catcher/processors and an average for non-AFA catcher/processors be provided. Tables 6.18 through 6.20 show those data for the years 1995-97. Separate tables are provided for the pollock, Pacific cod, and yellowfin sole target fisheries. It is important to note that targets were defined on a haul-by-haul basis. The same catch percentages were used to define a target, but instead of using weekly catch by gear and area, only the catch from individual hauls were used. These data were derived from the NORPAC observer files, and only non-CDQ hauls from the BSAI, where a species composition breakdown was provided by the observer were included.

The tables contain information on the PSC bycatch rates and the amount of target species that was harvested and observed. Rates that were above the average for the entire catcher/processor fleet are bolded in each of these tables.

Vessels in the list were numbered in random order, but they are consistent throughout these tables. So vessel "9-1" will be the same vessel in the pollock, Pacific cod, and yellowfin sole tables. Vessels that start with 9 (for example, 9-1) are the nine pollock ineligible AFA catcher/processor, and the vessels that start with 20 are the 20 eligible catcher/processors.

Comparing the reported rates of various catcher/processors in the fleet will provide a better understanding of amount of groundfish these vessels harvested relative to their PSC bycatch amounts. The actual amount of observed PSC catch could be calculated by multiplying the rate by the amount of target catch. However it is important to realize that such a calculation would underestimate that vessel's total amount of PSC taken, by the amount of PSC catch in unobserved hauls.

Table 6.18: PSC bycatch rates (PSC bycatch/target species catch) in the pollock fishery from 1995-97, by catcher/processor vessels

Vessel	Halibut	Herring	*C. opilio*	*C. bairdi*	Red King	Chinook	Other Salmon	Pollock
9-1	0.00012	0.00064	0.00102	0.00809	0.00004	0.01624	0.01355	22,819
9-2	**0.00050**	0.00025	0.01775	0.00071	-	0.00891	0.02922	11,243
9-3	0.00003	**0.00077**	0.00032	-	-	0.00872	0.02948	24,093
9-4	0.00016	0.00042	0.19831	0.02303	0.00526	0.00815	0.01374	44,849
9-5	0.00007	0.00030	0.26908	0.00043	-	**0.03640**	0.04541	13,941
9-6	0.00022	0.00036	0.06818	0.09533	-	**0.04483**	0.01780	15,806
9-7	0.00019	0.00031	0.00142	0.08657	0.00066	0.01883	0.01742	21,061
9-8	0.00027	0.00025	0.03037	0.03920	-	**0.02398**	0.02671	24,384
9-9	0.00002	0.00028	0.00939	0.00068	-	**0.02087**	0.01249	15,128
20-1	0.00037	0.00025	-	0.01657	-	0.00577	0.04669	33,403
20-2	0.00004	0.00001	0.00041	0.00539	-	0.00737	0.00098	7,833
20-3	0.00002	0.00030	0.00009	0.00052	-	0.00810	0.01598	43,825
20-4	0.00005	0.00012	0.11400	-	-	0.01793	0.04174	10,838
20-5	0.00010	0.00033	0.00429	0.00324	-	**0.01963**	0.05250	67,871
20-6	0.00001	0.00043	-	0.00013	-	0.01345	0.00126	29,956
20-7	0.00009	**0.00086**	0.00301	0.00788	-	**0.02004**	**0.05771**	45,492
20-8	0.00005	0.00040	0.00253	0.12075	**0.00594**	**0.02816**	0.00576	12,639
20-9	0.00004	**0.00081**	-	-	-	0.00048	0.00689	8,317
20-10	0.00004	0.00043	0.00032	0.00136	-	**0.04346**	0.02500	38,805
20-11	0.00002	**0.00108**	0.00033	-	-	0.01080	**0.07672**	63,736
20-12	0.00005	**0.00466**	0.02286	0.00169	-	0.01696	**0.07934**	31,387
20-13	0.00012	0.00065	0.05901	0.00593	-	**0.02101**	0.03315	38,112
20-14	0.00014	0.00017	0.14497	-	-	**0.03849**	0.02682	33,669
20-15	0.00006	**0.00119**	0.00144	0.00065	-	**0.02875**	**0.06824**	59,345
20-16	0.00012	0.00045	0.00105	0.00116	-	0.01489	0.01923	33,617
20-17	0.00027	0.00035	0.00260	0.00025	0.00002	**0.02644**	0.01690	44,820
20-18	0.00005	0.00020	0.00010	0.00045	-	0.00901	0.01354	57,741
20-19	0.00009	**0.00158**	0.00099	0.00058	-	0.01363	0.04940	48,710
20-20	0.00015	**0.00152**	0.00022	0.00028	-	0.01615	0.04086	54,248
AFA	0.00027	**0.00073**	0.16879	0.05790	0.00344	0.01868	**0.03592**	957,688
Non-AFA	**0.00255**	0.00034	**2.80699**	**1.94940**	**0.03555**	**0.02569**	0.01199	79,359
All CPs	0.00044	0.00070	0.36196	0.19640	0.00579	0.01920	0.03416	1,037,047
AFA CVs	**0.00023**	**0.00123**	0.01507	**0.01026**	**0.00099**	**0.04617**	0.05637	1,033,638
Non-AFA CVs	0.00016	0.00027	**0.05854**	0.00000	0.00000	0.02242	**0.09699**	848
All CVs	0.00023	0.00123	0.01511	0.01025	0.00099	0.04615	0.05640	1,034,485

Source: Observed hauls in the NORPAC Observer Data Base for the years 1995-97

Notes:

1) A bolded number means that vessel was above the catcher/processor fleet's average.

2) Herring and halibut rates are PSC (mt)./Target catch (mt). Crab and salmon are PSC (animals)/Target catch (mt).

Table 6.19: PSC bycatch rates (PSC bycatch/target species catch) in the Pacific cod fishery from 1995-97, by catcher/processor vessels

Vessel	Halibut	Herring	Opilio	Tanner	Red King	Chinook	Other Salmon	Pacific Cod
9-1	**0.02751**	**0.00144**	1.58726	**6.51348**	0.00000	**0.13119**	0.00239	2,306
9-2	0.00146	0.00000	0.00000	0.01199	0.00038	0.00688	0.00054	3,806
9-3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	62
9-5	0.00004	0.00006	0.17224	0.00915	0.00000	0.01281	0.00000	546
9-6	0.01266	0.00000	0.00000	0.93846	**0.13980**	0.03092	0.00000	3,064
9-7	0.01320	**0.00347**	1.97248	**8.34954**	0.00221	**0.27484**	**0.10515**	1,355
9-8	0.01458	**0.00043**	3.44880	**10.04388**	0.00000	**0.18355**	0.00000	2,229
9-9	0.00000	0.00016	**11.26791**	3.38064	0.00000	0.00000	0.00000	33
20-1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	198
20-2	**0.08576**	0.00002	**31.71026**	0.75155	0.00000	0.00000	0.00000	135
20-3	**0.86337**	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0
20-4	**0.11262**	0.00000	0.00000	**7.10894**	0.00000	**0.24482**	0.00000	269
20-6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0
20-7	**0.15539**	**0.00116**	3.55441	0.00000	0.00000	0.00000	0.00000	30
20-8	0.00285	0.00000	0.00818	0.03710	0.01120	**0.11565**	0.00098	3,057
20-10	0.00000	**0.00093**	0.00000	0.00000	0.00000	0.00000	0.00000	113
20-11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	15
20-12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	561
20-13	**0.03269**	0.00000	0.31974	0.61217	0.00000	0.07771	0.00222	450
20-14	0.00932	0.00000	0.00000	0.00509	0.00000	**0.14529**	0.00255	2,512
20-15	**0.06349**	0.00000	0.00000	**29.12436**	0.00000	0.00000	0.00000	21
20-16	0.01176	**0.00057**	0.21778	1.12165	0.00046	**0.32874**	0.00517	2,168
20-17	**0.12232**	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	18
20-18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	496
20-19	0.00080	0.00000	**10.91216**	0.00000	0.00000	**0.26416**	0.00000	21
20-20	**0.03073**	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8
AFA CPs	0.01197	**0.00044**	0.84046	2.43699	0.01994	**0.11713**	0.00713	23,473
Non-AFA CPs	**0.04144**	0.00008	**11.44726**	**9.32298**	**0.12270**	0.10537	**0.02346**	16,753
All CPs	0.02424	0.00029	5.25799	5.30488	0.06274	0.11223	0.01403	40,226
AFA CVs	**0.02765**	**0.00002**	1.04475	**1.07042**	**0.00498**	0.06583	**0.00668**	65,655
Non-AFA CVs	0.01705	0.00000	1.39923	0.60452	0.00059	**0.07382**	0.00059	1,699
All CVs	0.02739	0.00002	1.05369	1.05867	0.00487	0.06604	0.00653	67,354

Source: Observed hauls in the NORPAC Observer Data Base for the years1995-97

Notes:

1) A bolded number means that vessel was above the catcher/processor fleet's average.

2) Herring and halibut rates are PSC (mt)./Target catch (mt). Crab and salmon are PSC (animals)/Target catch (mt).

Table 6.20: PSC bycatch rates (PSC bycatch/target species catch) in the yellowfin sole fishery from 1995-97, by catcher/processor vessels

Vessel	Halibut	Herring	Opilio	Tanner	Red King	Chinook	Other Salmon	Yellowfin
9-1	**0.02249**	0.00022	**30.21579**	8.41740	**0.09530**	0.00000	0.00000	543
9-2	0.00069	0.00002	**60.05706**	8.30551	0.00000	0.00000	0.00000	1,018
9-3	**0.03302**	0.00000	**38.35211**	4.68335	**0.13498**	0.00000	0.00000	499
9-5	0.00000	0.00005	**91.88153**	0.34229	0.00000	0.00000	0.00000	237
9-6	**0.00607**	0.00005	0.83059	3.01231	0.00000	0.00000	0.00000	267
9-7	**0.02389**	0.00031	12.78647	0.00000	0.03335	0.00000	**0.00765**	**131**
9-8	**0.02015**	0.00000	**45.20464**	**22.11648**	0.00000	0.00000	0.00000	116
9-9	0.00346	**0.00140**	1.26613	1.36635	0.01562	0.00000	**0.00287**	**7,990**
20-2	**0.00825**	0.00007	5.43106	3.16128	0.01998	0.00000	0.00000	11,556
20-4	0.00115	0.00003	**36.29686**	7.29047	0.00000	0.00000	0.00000	2,883
20-7	0.00304	0.00045	**55.83229**	**18.95755**	0.00000	0.00000	0.00000	7,024
20-8	**0.00855**	0.00000	3.90634	2.43461	**0.29519**	0.00000	0.00000	572
20-10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	26
20-12	0.00121	0.00017	12.76300	2.66505	0.01048	0.00000	0.00000	5,833
20-14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	53
20-15	0.00252	0.00001	2.51559	1.88193	0.03941	0.00000	0.00000	6,851
20-18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	67
20-19	0.00287	0.00002	5.21463	5.44358	**0.05789**	0.00000	0.00000	6,589
20-20	0.00279	0.00002	8.32658	4.51906	0.00000	0.00000	0.00000	8,442
AFA	0.00421	0.00028	14.72575	5.34276	0.02241	0.00000	0.00039	60,693
Non-AFA	**0.00516**	**0.00135**	**24.89908**	**10.26026**	**0.04874**	**0.00022**	**0.00270**	**127,237**
All CPs	0.00485	0.00100	21.61354	8.67212	0.04024	0.00015	0.00196	187,929

Source: Observed hauls in the NORPAC Observer Data Base for the years 1995-97

Notes:

1) A bolded number means that vessel was above the catcher/processor fleet's average.

2) Herring and halibut rates are PSC (mt)./Target catch (mt). Crab and salmon are PSC (animals)/Target catch (mt).

6.6 Reaching caps will close which fisheries

Once the groundfish and PSC caps are established, then a decision must be made regarding the closures that occur when the caps are reached. This decision may be impacted by the method used to determine the caps. For example, if only the catch in the non-pollock target fisheries is included in the cap, the Council may feel it is appropriate to only close the non-pollock target fisheries upon attainment of the cap. After the closure in this scenario, only the pelagic pollock fishery would remain open. The pelagic pollock fishery would then close once the AFA catcher/processors harvested their pollock quota.

Caps established for the 1999 fisheries were based on the 1995-97 catch history of all 29 listed AFA catcher/processors in the non-pollock target fisheries. Once a species cap is reached by these vessels in 1999, NMFS will close all but the pelagic pollock fishery for the 20 eligible AFA catcher/processors.

Based on the 1999 groundfish caps, only the BSAI yellowfin sole, Pacific cod, and Atka mackerel fisheries will likely be opened to directed fishing by the AFA catcher/processor fleet. The caps established for other groundfish species were determined to be insufficient to open a fishery for those species. So if similar caps are set for 2000 and beyond, it is likely that the only EEZ fisheries off Alaska that the AFA catcher/processors will be allowed to fish are those three and pollock.

6.6.1 Only non-pollock fisheries close

When a sideboard cap is reached under this alternative only the non-pollock target fisheries will be closed to directed fishing by the AFA catcher/processors. This option provides the fleet a greater opportunity to harvest their entire cap of non-pollock groundfish. The risk associated with reaching a cap is much less if the pollock fishery remains open when a sideboard cap is reached.

If the sideboard caps are based on the bycatch from non-pollock target fisheries, the AFA vessels will only be able to harvest at their traditional levels in those fisheries. Any bycatch reductions in the pollock targets, resulting from cleaner fishing under the co-op, would be forgone by the AFA catcher/processors. This may diminish their incentives to reduce bycatch of a valuable species like Pacific cod in the pollock target fishery, if they are well above the 95 percent pollock threshold for the pelagic fishery definition.

Allowing these vessels to count bycatch in all target fisheries towards their caps, but reaching the caps would only close the non-pollock target fisheries, likely would not be much of an advantage in most fisheries. Pacific cod may be one of the exceptions. About 50 percent of the Pacific cod harvested by these vessels was taken in the pollock target fisheries. Access to that increase in their cap may allow them to harvest more cod in the directed fishery. If they did not reduce the cod bycatch in the pollock target fishery they may actually increase the percentage of the cod TAC that they harvest. Given that bottom trawling for pollock is no longer legal, this may not be as much of a problem in the future as it would have been in the past.

6.6.2 All fishing closes for the AFA catcher/processor fleet

Reaching a sideboard cap under this scenario would close both the pollock and non-pollock fisheries for the AFA catcher/processors. Budgeting their caps under this scenario would be critical, since excessive bycatch of any species could close the directed pollock fishery before their allocation is taken. This option may force AFA members to forgo harvesting opportunities in the non-pollock target fisheries at the start of the season to ensure they do not reach a cap before their pollock is harvested.

The management of bycatch under this scenario would be more difficult if the cap was based only on participation in the non-pollock target fisheries. Given the historic catches reported in Table 6.2 it appears that this would especially be true for the red rockfish, squid, POP, and other species groups. More bycatch of these species was taken in the pollock fisheries than in the non-pollock targets. Therefore, unless the fleet was able to reduce their bycatch of squid, they may be forced to forgo targeting non-pollock targets and still be unable to harvest their entire pollock allocation. It is of course true that the Council may recommend that specific species be exempted from the cap. Squid for example could be exempted, and therefore the catcher processor fleet would be in less danger of being closed down because of an inadequate cap for that particular species.

6.6.3 Description of Current Catch and Bycatch Management in the BSAI

Included as AFA sideboard options are measures that would close pollock fishing to pollock cooperatives whenever a sideboard species limit is reached. This approach would be a departure from current catch and bycatch management practices in the North Pacific fisheries (CDQ fisheries are a unique case as discussed below). Two other options were considered by the Council to address this issue. At the April 1999 meeting the Council did include the option of exempting certain, potentially constraining fisheries from sideboard limits to partially mitigate this problem for the pollock co-op participants, similar to what was done with squid for the CDQ fisheries. Alternatively, the co-op sideboards could be managed as the open access fisheries described below (as is the case for the 1999 fisheries), which would more likely allow for full harvest of the pollock allocations.

An additional discussion, specific to how the various pollock fisheries are managed, is included in Chapter 9.

For comparison purposes, current management of the open access, IFQ and CDQ fisheries is included here.

Open Access Fishery

Under the open access management regime, portions of the annual TAC for each groundfish species are set aside at the beginning of the year to fund a bycatch reserve. The bycatch reserve is not divided-up by directed fishery or gear type. If the directed fishery portion of a species TAC is consumed, the directed fishery for that species is shut down. When the directed fishery of a species is closed, that species may only be retained as bycatch at or below the Maximum Retainable Bycatch (MRB) level established for each directed fishery. When the bycatch reserve of that species is taken, retention of that species is prohibited and further catch of that species must be discarded until the Over Fishing Level (OFL) is reached. The only time an open access fishery is shut down because of bycatch is if the OFL of the bycatch species is reached or the total PSC is taken. Figure 1 below provides a basic illustration of this structure using BSAI Pacific cod quotas as an example.

Because the pollock fishery presently operates as a mid-water fishery, there are no PSC species that completely close the pollock fishery. A crab performance standard is used to determine whether pollock fishing is pelagic or non-pelagic. By regulation vessels can be fined if they exceed this standard. Certain herring and chinook savings areas close when PSC caps for those species exceed established numbers, however, the fishery remains open elsewhere.

IFQ Fishery

Bycatch management of the halibut and sablefish IFQ fisheries is somewhat similar to the open access regime. The IFQ holder must retain halibut and sablefish as directed catch or bycatch until the IFQ holder's quota is reached. After reaching the individual quota amounts, all halibut and sablefish caught by the IFQ holder must be discarded . The amount of discards are limited only by the OFL.

Halibut and sablefish quota holders are not restricted in the amount of cod or other groundfish species that can be taken as bycatch in the IFQ fisheries. Those bycatch amounts are taken from the open access bycatch reserve. An IFQ holder is free to participate in other fisheries, like cod, and is treated like all other open access participants. There is no cap on the amount of cod that can be taken as either bycatch or directed catch other than the open access cod TAC and the bycatch reserve. When the TAC and bycatch reserve of cod is reached, cod retention is prohibited and further catch of cod must be discarded. The only cod or other groundfish

closure that could occur would be if the OFL were reached, or the halibut PSC cap were reached in the open access fishery.

CDQ Fishery

In the MSCDQ program 10 % of the pollock TAC and 7.5% of all other species is allocated to the six CDQ groups. Additionally, PSC amounts and specific area apportionments of halibut and sablefish are allocated to the program. The CDQ groups can allocate their quotas of non-pollock species as either directed fishing quotas or as bycatch in other CDQ fisheries. However, any pollock taken as bycatch in non-pollock CDQ fisheries is funded from the pollock bycatch reserve shared with the open access fisheries.

The CDQ groups can also elect to apportion their PSC and bycatch allocations to be used at specific times of the year. For instance, many CDQ groups delay or forego high-bycatch, low-value flatfish fisheries until after the pollock fishery concludes so that the pollock fishery will not be closed down because of insufficient bycatch or PSC allocations. In this case, other fisheries would close down as a result of reaching a particular groundfish allocation, hence the 'squid box' issue alluded to in this discussion. CDQ fisheries are able to time their fisheries to mitigate the squid box issue because they have a specific allocation, as opposed to a limit for a particular species.

This flexibility would not be available to pollock cooperatives if, as proposed, their sideboard participation in non-pollock fisheries would be a limiting "cap" rather than a specified "quota." And, unlike the MSCDQ quota fisheries, the non-pollock fisheries remain olympic fisheries for pollock cooperative participants. Even with this bycatch flexibility, the MSCDQ program has experienced problems with PSC and bycatch allocations, such as the "squid box," which constrain the harvest of some MSCDQ fisheries.

Figure 6.1

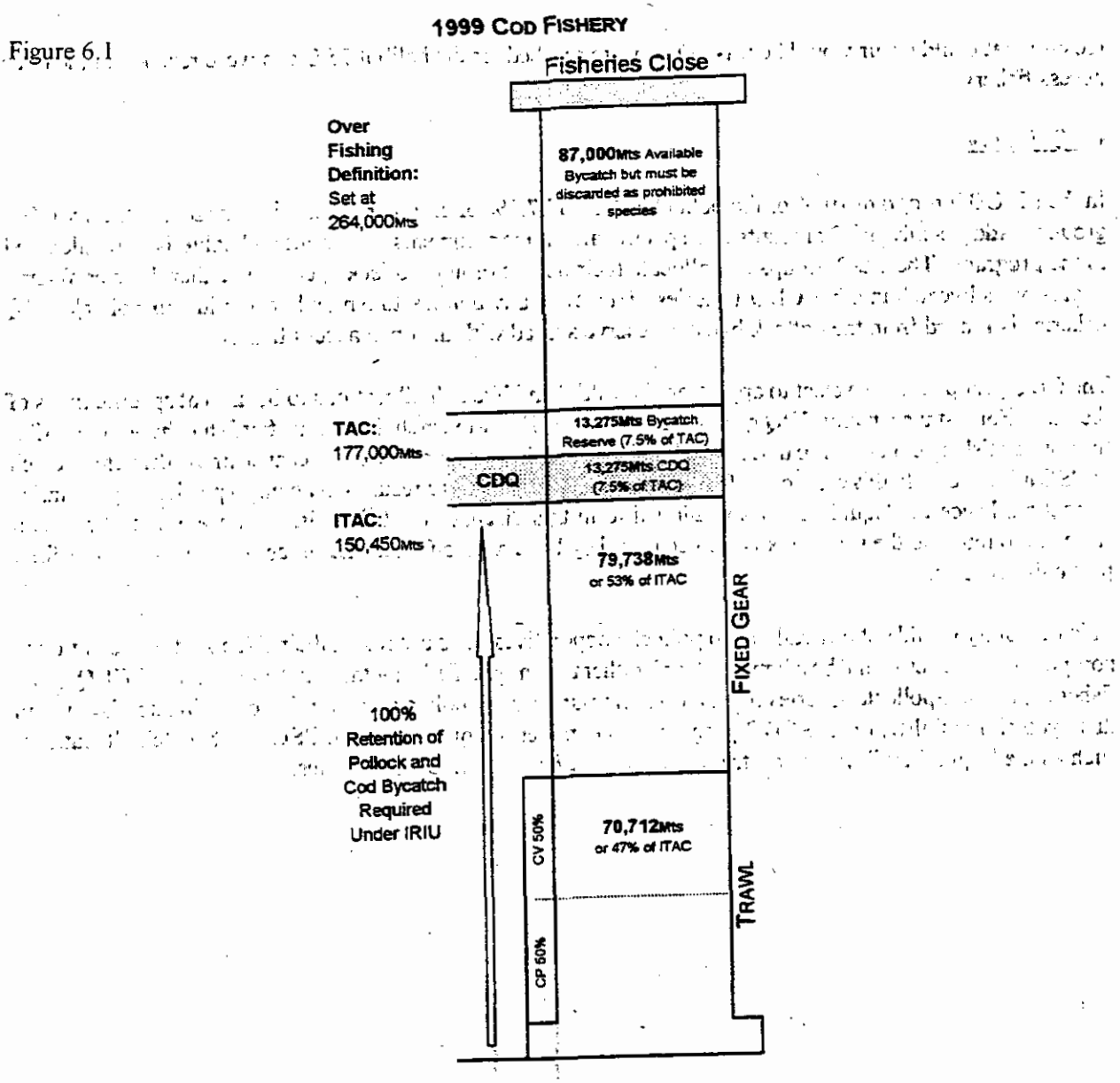


Figure 6.1. Under the open access groundfish fisheries, NMFS sets aside a "reserve" of each species' TAC at the beginning of the year to fund bycatch needs in the groundfish fisheries for other species. For example, 7.5% of the cod TAC is set aside for bycatch in other groundfish fisheries. Cod fishermen then fish on the 92.5% of the cod TAC that is available for directed fishing. Once that 92.5% is consumed, the directed fishery for cod shuts down. Other fisheries that have cod as bycatch continue, but are subject to the Maximum Retainable Bycatch (MRB) standard established for cod. Cod bycatch in excess of the MRB standard must be discarded. Once the bycatch reserve is exhausted, cod becomes a prohibited species and must be discarded, however, the directed fisheries for other species are allowed to continue, even if they have a cod bycatch component. Only when the total amount of cod taken reaches the overfishing level (OFL) are the directed fisheries for other groundfish that have cod bycatch subject to closure. Under the proposed option, a pollock co-op fishery would close once its sideboard cap of cod is reached, even if there is still an open access cod fishery, the cod bycatch reserve is still available, and the OFL has not been exceeded. In short, non-pollock groundfish fisheries are unrestricted by bycatch limits on other groundfish species, unless OFLs are reached.

7.0 AFA CATCHER VESSEL SIDEBOARDS

To mitigate the impact of AFA on the non-pollock fisheries, section 211(c) mandates that *"by not later than July 1, 1999 the North Pacific Council shall recommend for approval by the Secretary conservation and management measures to - (A) prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery"*. This chapter describes the options selected by the Council for constructing sideboards, which are harvest limits placed on AFA vessels for non-pollock species. Sideboard caps are expected to keep AFA catcher vessels from exceeding their traditional harvest levels in the non-pollock groundfish, crab, and scallop fisheries, as well as pollock in the Gulf of Alaska.

7.1 Alternatives for Analysis

To develop sideboard restrictions, several options were identified at the December 1998 Council meeting. Those alternatives were then revised by the Council in February 1999. Options for analysis were divided by whether they applied to the non-groundfish or groundfish fisheries. Non-groundfish restrictions focused on limiting AFA catcher vessel participation in the BSAI crab and scallop fisheries. Groundfish restrictions apply to AFA catcher vessel activity in both the GOA and BSAI. The complete set of the alternatives from the February meeting is presented below:

CRAB SIDEBOARDS

Participation in a co-op is defined as ANY use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

Initiate analysis of the following options to mitigate impacts of possible spillover effects of AFA on other fisheries:

Options For Section 208 Vessels:

1. No crossover allowed into any crab fisheries.
2. No crossover allowed in the Tanner crab fishery only (opilio and bairdi).
3. No crossover allowed into opilio unless vessel fished opilio in 1996 or 1997.
4. No crossovers at the endorsement level.
5. Allow crossovers only into red king crab fisheries (excludes brown and blue king crab).

Sub-options:

a. Vessels which qualified based on bycatch of bairdi in red king crab would be restricted to bycatch of bairdi in the red king crab fishery (applied to #2 & #4 above).
b. Only Section 208 catcher vessels that join a co-op (applies to #1-5 above and #6 below).
c. Allow crossovers for vessels with crab landings in each of the three years (1995, 96, and 97) (applies to #1 and #2 above).
d. Prohibit any vessel participating in an AFA co-op from lease, transfer, or sale of any license limitation program (LLP) permit.

Duration of sub-options:

a. Permanent based on participation in co-op
b. Only for year vessel is involved in co-op.
c. Duration of AFA

6. Measures which would restrict pollock co-op vessels to their:

Option a. Aggregate traditional harvest including a restriction to the percentage of crab harvest in **each** species in 1995, 96, and 97.

Option b. Average catch history 1995, 96, and 97 on an **each** species by **each** species and vessel-by-vessel basis.

Option c. No sale, lease, or stacking of vessel catch history in any crab fishery.

SCALLOP SIDEBOARDS

1. Participation in a co-op is defined as any use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

2. Measures which would restrict pollock co-op vessels to their aggregate traditional harvest in the scallop fishery in the years:

Option a. 1996 and 97.
Option b. 1997 only

Sub-options:

a. Based on percentage of statewide catch
b. Based on percentage of PSC cap

GROUNDFISH SIDEBOARDS

BSAI

Participation in a co-op is defined as ANY use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

To Whom do Restrictions Apply

Restrictions should apply to all non-pollock FMP fisheries.

Sideboards apply to all Section 208 eligible vessels.

Sub-options:

a. Applies to Section 208 vessels only if they join a co-op.
b. Create sub-sideboard cap for catcher vessels with average pollock landings in 1995-97, which were less than:
   1. 1,000 mt
   2. 3,000 mt
   3. 5,000 mt

When the CV Restrictions Should Apply

1. Harvest levels should be restricted only during the same time periods as the normal open access pollock fishery.

   Sub-options:
   a. Use 1998 open access season dates by sector as a base reference
   b. Use 1999 sea lion modified season dates.

2. Exempt those CVs that fish for motherships from BSAI groundfish sideboards prior to February 1 each year.

3. Exempt each CV sector from BSAI groundfish sideboards for the number of days in excess of 5 that each CV sector's pollock season is closed by regulation during the month of February.

4. Limit fishing to the season (or quarter - or half year) in which the catch history was earned.

5. At all times during the fishing year.

6. AFA qualified pollock catcher vessels, that during pollock A season historically had a majority of their catch in pollock, would be limited prior to March 1 of each year to the collective share of the cod fishery that these same vessels collectively harvested historically (1995, 96, 97) prior to March 1.
   1. Apply and monitor by vessel class and sector
   2. Apply and monitor by individual co-op.

   (This would effectively subdivide the P. cod cap between AFA vessels that harvested mostly pollock during the A season and those that did not).

Nature of CV Restrictions

Absolute harvest amounts expressed in percentage of TAC in metric tons.

Determination of "Traditional Harvest Level"

1. The definition of "traditional" in non-pollock fisheries will be determined by catch history:
   1. On basis of percentage of groundfish harvest in non-pollock fisheries by species by fishery.
   2. On basis of percentage of total groundfish harvest by species by fishery.
   3. On basis of percent of TAC in non-pollock fishery by species by fishery.

   Option A: Apply one time frame equally to all groundfish targets
   Sub-option 1: Use average catch history in the years 1995, 96, and 97.
   Sub-option 2: Use catch history based on years 1992-97.

Pollock: Initiate qualitative discussion on ability for Secretary to use the best 2 out of 3 years to determine overall denominator for total pollock pool and numerator for each co-op.

Determination of "Aggregate"

Option A: Apply and monitor by the vessel class and sector.
Option B: Apply and monitor by individual co-op.

Compensation

Further address in a discussion paper, options for compensation to inshore catcher vessels with catch history delivering to catcher processors that is no longer available to them under AFA. Additionally, examine inserting a clause replacing language in §210(b)(1) to add an option for determining catch history for catcher vessels on the basis of the best two of three years in 1995, 1996, 1997.

As provided by Section 213(c)(3) of AFA, the AP recommends the following change to Section 210(b)(1)(B) to allow a catcher vessel with catch history, based on deliveries to catcher processors, that is otherwise lost under AFA, to bring that catch history to the inshore sector cooperative while sharing the burden among all members of the inshore sector.

> *". . . the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) to harvest the aggregate percentage of the directed fishing allowance under Section 206(b)(1) in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of pollock harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) in the directed pollock fishery for processing by the inshore component, together with the amount harvested by such vessels for processing by catcher/processors in the offshore component during 1995, 1996 and 1997, relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component together with the aggregate total amount harvested by all catcher vessels (excluding those eligible under 208(b)) for processing by catcher/processors in the offshore component during such years and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) from harvesting in the aggregate in excess of such percentage of such directed fishing allowance."*

The analysis should breakout the 42 vessels by:

a. deliveries of 250 tons
b. deliveries of 500 tons
c. deliveries of over 1,000 tons
d. deliveries of over 2,000 mt
e. deliveries of over 3,000 mt
f. deliveries of over 5,000 mt

(Vessels that do not meet these harvest requirements may not be eligible for compensation in the inshore sector.)

Management of Non-Pollock fisheries

Vessels limited to target fishing for non-pollock species during those times when the open access target fishery for the non-pollock species is open.

Assigning PSC Caps for Co-op Catcher Vessels in Non-Pollock Fisheries

Determine PSC caps based on catch history ratios (1995, 1996, and 1997) rather than VIP rates.

a. A review of vessel specific PSC rates for eligible vessels, compared to non-eligible vessels.
b. Average bycatch rates of eligible vessels, compared to non-eligible vessels.
c. A retrospective analysis of PSC needs for eligible vessels using a performance-based pelagic pollock definition.

1. PSC and non-pollock groundfish caps would apply to all fisheries as true caps (i.e., when reached these vessels would stop fishing for all groundfish species).
2. The caps would only close the non-pollock target fisheries.

Include discussion paper establishing chinook PSC sideboard for co-op pools and/or sectors in pollock, on a pro-rata basis, based on final Council action on chinook bycatch caps.

GOA

1. Apply the following sideboards to AFA Section 208 eligible catcher vessels.
   Sub-option: Applies only to vessels participating in a co-op.

g. Any non-pollock catch limitations for AFA Section 208 vessels are aggregate caps not quotas or allocations.

h. Vessel catch history consists of the years 1995, 96 and 97.
   Sub-option: Fishery is released seasonally by quarter proportionally to when caught during qualifying years.

4. Gulf of Alaska flatfish sideboards to be halibut bycatch driven. Historic target catch should be multiplied by the average halibut bycatch rate and current mortality rate to determine the halibut mortality available to AFA vessels. These amounts should be separated between deepwater and shallow water complexes.

5. Gulf of Alaska groundfish target fishery: Target catch of each groundfish species available to AFA Section 208 vessels should be limited to the average catch, by target species, based on the average catch history.

7.2 Participation in a Cooperative

The Council clearly defined what participation in a cooperative means. Throughout this analysis participation in a cooperative will be any use of a vessel's catch history in a pollock cooperative, whether by direct harvest, lease, sale, or stacking of quota. The use of a vessel's catch history applies to both the direct allocation of pollock and the sideboard caps set for the non-pollock fisheries.

7.3 Crab Sideboards

The AFA requires the Council to develop sideboards for catcher vessels that are licensed to participate in the BSAI crab fisheries under LLP. Recommendations for restricting the fleet are required to be submitted to the Secretary of Commerce, for all three catcher vessel categories, by July 1, 1999. Currently only the catcher vessels that deliver to catcher/processors are operating under crab sideboard restrictions. Those were mandated by the AFA because that group of catcher vessels was allowed to form a cooperative in 1999. The crab restrictions placed on catcher vessels delivering BSAI pollock to catcher/processors are listed in section 211(c)(2)(C). That section of the AFA states that "*catcher vessels eligible under section 208(b) are hereby prohibited from participating in a directed fishery for any species of crab in the Bering Sea and Aleutian Islands Management Area unless the catcher vessel harvested crab in the directed fishery for that species of crab in such Area during 1997 and is eligible to harvest such species of crab under the license limitation program*". Staff interpreted the word "species" in that section of the AFA to mean either king or Tanner crab. Based on that assumption, three of the seven catcher vessels that deliver to catcher/processors were required to give up their rights to fish Tanner crab (*C. opilio and C. bairdi*) in 1999. When developing sideboards for all catcher vessels, the Council may choose to either retain or modify section 211(c)(2)(C) of the AFA. Therefore, all catcher vessel sectors have been included in this section of the analysis.

7.3.1 Options to Mitigate AFA Spillover Impacts on the Crab Fisheries

Several options to mitigate impacts of the AFA on BSAI crab fisheries were identified by the Council. A complete list of those alternatives was presented in the previous section of this analysis. Options ranged from excluding AFA catcher vessels from harvesting any BSAI crab, to limiting the vessels as a group to their traditional harvest levels in all BSAI crab fisheries. In between these two options are alternatives that would limit the AFA catcher vessels, either at or below their historic participation levels, in specific BSAI crab fisheries.

Two of the options would not allow AFA vessels to use specific LLP endorsements on their crab license. The first of these options would limit BSAI Tanner crab endorsements held by AFA vessels. The second covers all species/area endorsements, and would allow the Council to restrict the use of any or all species endorsements held by AFA catcher vessels.

Both of the alternatives that would restrict the use of specific endorsements include a suboption that would keep vessels that qualified for a Tanner crab endorsement, based on bycatch of *C. bairdi* in red king crab fisheries, from harvesting more than bycatch amounts of *C. bairdi* in future red king crab fisheries. The option restricting vessels to their historic catch levels would have a similar impact if applied to *C. bairdi* and *C. opilio* separately. Vessels that only harvested bycatch amounts of *C. bairdi* in the past, would be capped at their historic catch level (i.e., their bycatch of *C. bairdi*) in the future.

As drafted, the options listed in sections 7.3.1.1 through 7.3.1.5 would not allow AFA catcher vessels to participate in specific crab fisheries, meaning that recent participation in those fisheries would not ensure their right to future participation. The alternatives in section 7.3.1.6 would allow AFA catcher vessels that hold LLP rights to participate in BSAI crab fisheries up to their historic levels of participation.

Two options were considered to determine historic participation. The first would set a harvest cap for the entire fleet equal to the percentage of crab harvested in all species between 1995-97. The second option would use the same years to determine catch history levels, but the caps would be placed at the LLP endorsement level for each vessel. In other words, the caps would be monitored at the vessel level for each crab fishery.

Recall that in section 208(b) of the AFA, catcher vessels that deliver to catcher/processors were allowed to retain their rights to fish Tanner crab if they made landings of that species during 1997. None of the seven vessels met that requirement, so they were not allowed to fish Tanner crab in 1999. However, they will be issued a Tanner crab endorsement according to the current LLP rules. That endorsement cannot be fished on board an AFA vessel, but it could be fished if transferred to a non-AFA vessel. This same issue will also come into play for each of the other catcher vessel sectors. Transferring and applying the LLP license to a non-AFA vessel would activate the license so it could fish any crab species for which it held endorsements, without being limited by sideboard caps. For this reason, the Council also considered a sub-option that would restrict any vessel participating in a cooperative from leasing, transferring, or selling any LLP license. That restriction would keep the license from being fished more aggressively, but would also limit the license holder's business options. This is especially true if the caps apply regardless of whether a vessel joins a cooperative. The Council could also decide to issue inactive licenses/endorsements to AFA vessels, or simply not issue the licenses. Not issuing the licenses/endorsements would keep them from being transferred from a AFA vessel and becoming active, and thereby would limit effort in the crab fishery. But not issuing the license would certainly reduce the value of the license package that the AFA vessels qualified for under the LLP.

7.3.1.1 Allow No Crossovers into any BSAI Crab Species

This option would restrict AFA catcher vessels from participating in any BSAI crab fishery. Given the current list of AFA and crab LLP qualified vessels, the 102 endorsements presented in Table 7.1 could not be fished. The number of vessels participating in the BSAI Tanner crab fishery would be reduced by 42, if the endorsements were not issued or they could not be transferred. If the licenses were issued and could be transferred to a non-AFA vessel, the reduction in licenses would be between zero and 42. The actual number would depend on how many of these licenses were transferred away from AFA eligible catcher vessels. The same is true for each of the other crab species/area combinations listed in the table. A maximum of nine endorsements from the Saint Matthew and Pribilof fisheries would be impacted, as would one endorsement for Adak red king crab, and 41 endorsements for Bristol Bay red king crab.

Table 7.1. Crab endorsements held by all AFA vessels

Species/Area Endorsement	AFA Catcher Vessels by Delivery Mode				
	CV to Inshore	CV to Inshore/MS	CV to MS	CV to CP	Total
BSAI Tanner	32	6	1	3	42
Dutch Harbor Brown	0	0	0	0	0
St. Matthew Blue	3	4	0	2	9
Pribilof Blue/Red	8	1	0	0	9
Adak Brown	0	0	0	0	0
Adak Red	0	0	0	1	1
Bristol Bay Red	31	6	1	3	41
Total Number of Endorsements	74	17	2	9	102
Number of Vessels	33	6	1	3	43

Source: Council LLP data set derived from ADF&G Fishtickets.

7.3.1.2 Allow No Crossovers into the *C. bairdi* or *C. opilio* Fisheries

AFA catcher vessels would not be allowed to fish a BSAI Tanner crab endorsement under this alternative. From Table 7.1 we see that 42 endorsements for Tanner crab would either not be issued or their use would be restricted. However, any of the AFA vessels which held LLP endorsements for a king crab fishery would be allowed to continue fishing for those species. Depending on the option selected, they may be limited to their historical catch levels.

Alternatives discussed in sections 7.3.1.1 and 7.3.1.2 also contain a suboption that requires a vessel to have fished in each year 1995, 1996, and 1997 to retain its crossover rights. Applying this requirement would reduce the number of endorsements the AFA vessels would retain. The estimated numbers of endorsements that would be retained are listed in Table 7.2. The bottom line of Table 7.2 shows that only 10 of the 43 vessels made BSAI crab landings in all three years. Nine of the 10 vessels were in the inshore sector, and the tenth vessel is in the catcher vessel delivering to the catcher/processor sector. Note that this suboption is less restrictive than the previous; i.e., 33 vessels would lose their license as opposed to 43.

Table 7.2. Crab endorsements held by all AFA vessels that made crab landings each year 1995, 1996, and 1997

Species/Area Endorsement	AFA Catcher Vessel's by Delivery Mode				
	CV to Inshore	CV to Inshore/MS	CV to MS	CV to CP	Total
BSAI Tanner	9	0	0	1	10
D.Harbor. Brown	0	0	0	0	0
St. Matt. Blue	1	0	0	1	2
Prib. Blue/Red	2	0	0	0	2
Adak Brown	0	0	0	0	0
Adak Red	0	0	0	0	0
Bristol Bay Red	8	0	0	1	9
Total Number of Endorsements	20	0	0	3	23
Number of Vessels	9	0	0	1	10

Source: Council LLP data set derived from ADF&G Fishtickets.

7.3.1.3 Allow No Crossovers into the *C. opilio* Fishery Unless the Vessel Fished for *C. opilio* in 1996 or 1997

Implementation of this option would require amending the crab LLP, or issuing an AFA permit which would override a vessel's right to fish *C. opilio* under a LLP Tanner crab endorsement. Recall that a single endorsement is issued under the LLP which allows a vessel to participate in both the *C. opilio* and *C. bairdi* fisheries. This option is at a finer resolution than the LLP endorsement level.

ADF&G Fishticket data indicates that only seven of the AFA vessels, with a Tanner crab endorsement, would qualify to fish both *C. opilio* and *C. bairdi* under this option, the remaining 35 vessels would lose their *C. opilio* harvest privileges. Six of the vessels fished *C. opilio* in 1996 and three of the vessels fished *C. opilio* in 1997, so only two of the vessels fished *C. opilio* in both 1996 and 1997. The 35 AFA catcher vessels that lose their *C. opilio* harvest rights would be limited to fishing for *C. bairdi* with their Tanner crab endorsement in future years.

7.3.1.4 Allow No Crossovers at the Endorsement Level

As written this option could have the same result as any of the other options which limit crossovers, depending on how it is implemented. The Council could apply this option to any species/area endorsement in the crab LLP. For example, it could be applied only to the Tanner crab endorsement. That would have the same result as the no crossover into the *C. bairdi* or *C. opilio* fisheries option. Applying this option to all crab fisheries except red king crab, would have the same result as only allowing crossovers into the red king crab fisheries. This option provides the Council the flexibility to restrict crossovers for any crab LLP species/area endorsement combination. Recall that Table 7.1 shows the number of species/area endorsements held by AFA catcher vessels that could be lost under this option.

7.3.1.5 Allow Crossovers into the Red King Crab Fisheries Only

AFA vessels would only be allowed to fish the BSAI red king crab fisheries. In total, AFA catcher vessels would be issued one endorsement for the Adak red king crab and the 41 endorsements for Bristol Bay red king crab. Tanner crab, blue king crab, and brown king crab endorsements for these vessels would either not be issued or their use would be restricted when attached to an AFA vessel.

7.3.1.6 Restrict Cooperative to their Aggregate Traditional Harvest Based on their Percentage of the Harvest in 1995, 1996, and 1997

The final option would allow AFA vessels to fish their endorsements, but they would be capped at their average 1995-97 harvest levels. Caps would be calculated by dividing AFA vessel's total catch by the total catch of all vessels, at the LLP endorsement level.

Information in this section would also allow the Council to select this option in conjunction with any of the no crossover provisions discussed above. For example, a preferred alternative could be developed that would only allow AFA vessels to crossover into red king crab fisheries, and they would be limited to their historic participation in those fisheries.

ADF&G has expressed concerns over their ability to manage these fleet wide caps. Therefore, the viability of this option may require assurance from ADF&G that in-season management and enforcement of the caps are possible.

Estimates of the GHL percentages that AFA vessels would be allocated in future years are shown in Table 7.3. AFA vessels have historically harvested relatively more of the Bristol Bay red king crab fishery than any other fishery reported in Table 7.3. However, substantial amounts of Tanner crab were also harvested by AFA vessels.

Table 7.3 Percent of catch accounted for by AFA vessels (1995-97), and estimates of future catch caps

Species	Number of Vessels	AFA Vessel's Catch (Lbs.) 1995-97	AFA Vessel's Percentage of Total Catch	AFA Vessel's Future Harvest Based on 1998 GHLs	Estimated Avg. Future Catch per Vessel
C. bairdi	42	363,390	3.8%	n/a	n/a
C. opilio	42	4,389,214	1.8%	3,500,000	83,000
St. Matt. Blue King	9	68,518	0.6%	23,000	2,500
Prib. Red/Blue King	9	45,843	1.1%	14,000	1,500
Bristol B. Red King	41	1,777,416	10.2%	1,700,000	41,000
All Species	43	6,644,381	2.1%	5,237,000	122,000

Source: ADF&G crab fishticket data for 1995-97.
Note: The percentages for *C. opilio* and the Tanner crab totals are both listed as 1.8%. This is simply due to rounding, the actual Tanner crab percentage would be slightly larger had more decimal places been included.

A second option would apply caps to individual vessels. The results of those calculations cannot be presented here, because the information is considered confidential by the State of Alaska. However, from the tables above it is possible to determine both the number of vessels involved and the aggregate cap for the entire sector. For example, from Table 7.1 we know that 41 vessels could harvest Bristol Bay red king crab, and Table 7.3 indicates they would be allowed to harvest 10.2 percent of the GHL. If the GHL were 16.4 million pounds, as it was in 1998, then that would equate to an AFA vessel cap of approximately 1.7 million pounds. With that type of information, it may not be necessary to have individual catch records to make an informed decision. However before this alternative could be enforced, the individual caps would likely need to be made public.

It is also noted that the *C. opilio* and *C. bairdi* caps will be managed separately under a sideboard cap. There is no option to allow those caps to be combined into a single Tanner crab sideboard. This would have allowed vessels to carry over any unused cap from the *C. opilio* into the *C. bairdi* fishery, and that is not the intent of the Council.

7.3.2 To Whom the Restrictions Would Apply

Two options are being considered regarding to whom sideboard caps apply. The first option would apply the caps to all catcher vessels that are eligible to join a cooperative under section 208 of the AFA. Catcher vessel owners that decided not to participate in a cooperative, would still be subject to the sideboard caps (for their AFA vessels). All six crab sideboard options listed above also contain a suboption that would apply these caps to eligible AFA catcher vessels only if they joined a cooperative. Participation in a cooperative means any use of a vessel's catch history in a pollock cooperative, whether by direct harvest, lease, sale, or stacking of quota. If vessel owners choose not to join a cooperative, under this suboption, they would not be bound by the sideboard regulations.

Several members of industry have expressed concern that some vessels qualify for the cooperative with relatively small amounts of pollock history. If the owners of these vessels choose not to enter the cooperative, and are still bound by the sideboards applied to the AFA group of vessels, they could be placed in a difficult situation. They would not receive much benefit from the cooperative because of their limited pollock catch

history and their participation in the crab fisheries would be limited. They would also be required to compete against other AFA catcher vessels with substantial pollock catch histories for sideboard caps. Being bound by the sideboards may force these vessels to join the cooperative in order to have some bargaining power for the non-pollock caps they are competing to catch.

An option is also being considered that would allow vessels to decide whether to join a cooperative each year, for the duration of the AFA, or permanently. If vessel owners are not bound by the sideboard caps when they are not in a cooperative, and they can choose to join a cooperative each year, they will likely decide whether to join the cooperative based on the relative catch limits in the pollock and non-pollock fisheries and the prices for those species.

7.3.3 Duration of the Crab Sideboards

Crab sideboards could be implemented for one of three periods. First they could be permanent and extend beyond the December 31, 2004 of AFA. Inactive licenses (or endorsements), issued to AFA vessels could never be fished on an AFA vessel, but could be sold to a non-AFA vessel, so long as the AFA vessel was able to obtain an appropriate replacement license for participation in the groundfish fisheries.

Second, sideboards could last as long as the AFA, which will sunset on December 31, 2004, unless extended by the Council

Third sideboards could apply only during the years a vessel participates in a cooperative. Vessels could decide annually to join a cooperative, or be free of sideboard restrictions. A vessel is considered to have participated in a cooperative if its quota is used by a cooperative. Giving vessels an annual choice would likely increase the difficulty of managing the fisheries, because the sideboard caps may be revisited each year. It would, however, increase flexibility to respond to fluctuations in relative TAC's or prices.

7.4 Scallop Sideboards

Sideboards must be established for scallops also. The F/V FORUM STAR is the only listed offshore pollock catcher boat that fished for scallops in recent history and it will need to be restricted to its traditional harvest levels. That restriction could to be written into the permit issued to this vessel under the license limitation program adopted by the Council in February 1999.

In February 1999, the Council adopted final alternatives for defining "traditional harvest level" for fisheries under the American Fisheries Act. For scallop, that was to restrict pollock co-op vessels to their traditional harvest in the scallop fishery in the years 1996 and 1997, or 1997 only. Sub-options being considered would limit the F/V Forum Star's catch based on a percentage of the statewide catch, or based on a percentage of the crab bycatch limits. Specifically, the Council's motion included analysis of the following:

1. Participation in a co-op is defined as any use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.

2. Measures which would restrict pollock co-op vessels to their aggregate traditional harvest in the scallop fishery in the years:

   Option a. 1996 and 97.
   Option b. 1997 only

Sub-options:

a. Based on percentage of statewide catch

b. Based on percentage of PSC cap.

Suboption A is a straightforward way to determine traditional harvest levels. The F/V Forum Star did not fish for scallops in 1996, but landed approximately 60,000 pounds of scallops in 1997 (Jim Chase, owner, personal communication 2/8/99). [note that an attempt was made to get actual data released from CFEC, but we were unable to contact both permit holders (the vessel captains) to sign release waivers. So estimated landings from the vessel owner were used instead] Total statewide catches of scallops in Alaska were 732,424 pounds in 1996, and 786,043 pounds in 1997. Using these data, the average harvest for this vessel under Suboption A would be as follows:

Option a = 30,000 pounds, equating to 3.95% of the 1996 and 1997 harvest

Option b = 60,000 pounds, equating to 7.63% of the 1997 harvest

Implementing suboption A would be more straightforward if harvests from this vessel were limited to poundage. Due to crab bycatch limits, inseason adjustments, and other factors, harvests for the coming season are difficult to project. However, catches in the last few years have increased from about 730,000 pounds to 810,000 pounds. Given proposed changes to crab bycatch limits in the Bering Sea, annual harvests for coming years have been projected to be about 860,000 pounds (see breakeven analysis for Amendment 4 to the scallop FMP, February 1999). So, using the percentage harvests under option a and b, the F/V/ Forum Star could be limited to the scallop catch listed below:

Option a = 34,000 pounds, based on projected future statewide catch of 860,000 pounds

Option b = 65,600 pounds, based on projected future statewide catch of 860,000 pounds

Suboption B was proposed to limit harvests of scallops based on crab bycatch limits, but this is problematical for the scallop fishery. For each registration area, the state establishes a guideline harvest level (GHL), and in some areas, crab bycatch limits for king crab, Tanner crab, and snow crab (in the Bering Sea). It is unknown at the beginning of the fishing season whether or not the GHL for the registration area will be taken, or whether the fishery will be cut short due to reaching the crab bycatch limits. Table 7.4 provides the PSC bycatch limits from the 1998 scallop fishery. Vessel specific bycatch information is confidential and unavailable. Nevertheless, this Suboption could potentially allow a wide range of possibilities for this vessel. For example, if the vessel fished in Area D and E in 1997, it would have nearly no "bycatch history"; alternatively, if the vessel fished in the Bering Sea, it could potentially have developed a disproportionately large "bycatch history". Note that about 67% of the crab bycatch limits are apportioned to the Bering Sea registration area. Suboption B appears to reward the vessel if it fished in the Bering Sea (or had high bycatch levels in other areas), and would penalize the vessel if it did not fish in the Bering Sea (or had low bycatch elsewhere).

Table 7.4: Weathervane scallop registration areas, seasons, GHL's (pounds, shucked), and crab bycatch limits established for the 1998 scallop fishery, by area

			Crab Bycatch Limits		
Area	GHL (pounds)	Fishing Season	king crab	Tanner crab	Snow crab
D - District 16	0 - 35,000	July 1 - Feb 15	n/a	n/a	n/a
D - Yakutat	0 - 250,000	July 1 - Feb 15	n/a	n/a	n/a
E - Eastern PWS	0 - 20,000	July 1 - Feb 15	n/a	500	n/a
Western PWS	exploratory	July 1 - Feb 15	n/a	130	n/a
H - Cook Inlet (Kamishak)	0 - 20,000	Aug 15 - Oct 31	60	24,992	n/a
Cook Inlet (Outer area)	combined	Jan 1 - Dec 31	98	2,170	n/a
K - Kodiak (Shelikof)	0 - 300,000	July 1 - Feb 15	196	33,500	n/a
Kodiak (Northeast)	combined	July 1 - Feb 15	21	46,500	n/a
M - AK Peninsula	0 - 200,000	July 1 - Feb 15	900	48,500	n/a
O - Dutch Harbor	0 - 110,000	July 1 - Feb 15	10	10,700	n/a
Q - Bering Sea	0 - 400,000	July 1 - Feb 15	500	215,000	130,000
R - Adak	0 - 75,000	July 1 - Feb 15	50	10,000	n/a

7.5 Groundfish Sideboards

Three classes of AFA catcher vessels are defined by whether they deliver to catcher processors, motherships, or the inshore sector. For this analysis, a fourth class has been created, consisting of catcher vessels that can deliver to both the inshore and mothership sectors. Because it is uncertain whether they would be required to deliver their non-pollock sideboard caps to the same sector which they deliver their pollock allocation, they have been treated separately in the tables.

This section contains summary tables for many of the alternatives being considered. Additional tables in **Appendix II** contain detailed, reference information from which the summary tables were created.

Catcher vessels that deliver to catcher processors formed a cooperative in 1999, and their cooperative agreement restricted them, as a group, from exceeding their historic catch levels in fisheries other than pollock. Formal recommendations that would implement effort limits for all AFA catcher vessels must be submitted to the SOC by July 1, 1999, so the regulations can be in place for the 2000 fishing season. Language in the AFA mandating these limits (Section 211(c)(1)(A)) states that the Council shall recommend measures for approval by the SOC that "*prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock target fishery*". This portion of the document will estimate the non-pollock groundfish harvest caps that AFA catcher vessels will be allowed to harvest in future years.

7.5.1 Determination of Traditional Non-pollock Groundfish Harvest Levels in the BS/AI

Determining the level of catch at which these vessels will be capped in future years requires answering some general questions. The questions include what years should be included in the base period, should the denominator be based on catch or TAC, should catch from all target fisheries or just non-pollock targets be included, to whom do the restrictions apply, when do the sideboard caps apply, and at what level of aggregation should they apply for management/enforcement purposes? Answering each of these questions will determine the historical levels of non-pollock groundfish catch for the AFA catcher vessels.

BS/AI Catch Data

Historical catch data for the catcher vessel classes will be presented in the following sections. ADF&G fishtickets were used to determine a vessel's catch history when deliveries were made to shorebased processors and floating processors that operate in State waters. Fishtickets are required for all catch delivered to processors operating in State waters. Discards that occur at-sea are often not reported on fishtickets, nor are they required. Because the time frame for determining sideboard caps runs through 1997, and the Improved Retention/Improved Utilization (IR/IU) program did not go into place until 1998, the portion of BSAI Pacific cod and pollock that was discarded at-sea is likely underestimated for some vessels delivering catch inshore. Data for catcher vessels that delivered to catcher processors and motherships operating in Federal waters were derived from the NORPAC observer data base. Deliveries that were made in a CDQ fishery were not included from either source.

The NORPAC data base provides haul-by-haul catch records for the catcher vessels that deliver at-sea. When the haul is sampled by the observer, a detailed catch composition is included in the database. However, when the observer is unable to sample a haul, the total weight of that catch is recorded with no species information provided. NORPAC records from catcher vessel deliveries to catcher processors and mothership from 1995-97, indicate that about 55 percent of the total catch was sampled. The remaining 45 percent of the catch data had no information on the species that were harvested, but did report an estimate of the total weight of fish caught.

To provide estimates of a vessel's catch history at the species level, an assumption regarding the unobserved catch had to be made. Otherwise catcher vessels, on average, would not be credited for about 45 percent of their at-sea deliveries which came from NORPAC. For this analysis, the following methodology was used to estimate the species composition for unobserved hauls.

1) A flag was added to the data showing if the pollock fishery was open. Differences in season dates between the BS and AI were accounted for when the flag was added.
2) Observed catches by species were then summed for each catcher vessel based on whether the pollock fishery was open or closed.
3) The catch of each species (by catcher vessel and if pollock was open) was then divided by the vessel's total catch to determine the percentage of each species that catcher vessel harvested during the times of year when pollock was open or closed.
4) Those percentages were then multiplied by its catch from unobservered hauls (again separated based on whether pollock was open or closed). The results are estimates of catch for the unobserved hauls.
5) Some vessels were never observed. For those vessels, a percentage was calculated based on the harvests of all observed catcher vessels on that day. Those percentages for each species were then applied to the unobserved hauls that day.

This methodology for determining each vessel's catch by species will provide estimates that do not track exactly with the actual landings. However when the pollock fishery was open, almost 96 percent of all sampled catch was pollock, and over 93 percent of all catch from 1995-97 occurred when the pollock fishery was open. When the pollock fisheries were closed, only 50 percent of the catch was pollock. This percentage seems high, but that is because two vessels had observer reports of over 90 percent pollock when the pollock fishery was closed. Applying a vessel's own observed history helps correct for this problem. Overall when the pollock fishery was closed, the methodology employed estimated that about 25 percent of the unsampled catch was pollock. Pacific cod accounted for the largest portion of catch, when this method was used, at just over 55 percent.

For purposes of this analysis, the numbers resulting from extrapolating observed catch to unobserved hauls may provide reasonable estimates of each vessel's catch history for pollock. Estimates of the amounts of bycatch that occurred by species and the amounts of other target species harvested are likely less accurate than the estimates for pollock. Unfortunately, the sideboard caps rely on our estimates of non-pollock harvest.

Discard Rates

The Council also requested that information on catcher vessel discard rates be included in the analysis. It is not possible to determine discard rates for individual catcher vessels. Therefore, discard rates for all catcher vessels are reported here. The data were derived from the 1995-97 NMFS Blend data sets. Harvests made by catcher/processors were excluded. Separate tables have been included for the Bering Sea/Aleutian Islands (Table 7.5) and the Gulf of Alaska (Table 7.6).

Table 7.5: Discard Rates of Trawl Catcher Vessels in the BS/AI, 1995-97

	Target Fisheries	
Species - Area	All	Non-Pollock
Atka Mackerel - Central AI	63%	-
Atka Mackerel - Eastern AI	90%	100%
Arrowtooth Flounder - BSAI	93%	99%
Other Flatfish - BSAI	40%	42%
Flathead Sole - BSAI	87%	93%
Greenland Turbot - AI	90%	100%
Greenland Turbot - BS	31%	20%
Other Species - BSAI	91%	92%
Pacific Cod (All Trawl Gear - 95&96) - BS/AI	13%	8%
Pacific Cod (Trawl CV - 97) - BS/AI	6%	4%
Pollock (Inshore) - AI	1%	0%
Pollock (Offshore) - AI	0%	-
Pollock (Inshore) - BS	5%	92%
Pollock (Offshore) - BS	2%	92%
Pacific Ocean Perch - AI	4%	-
Pacific Ocean Perch - BS	42%	100%
Pacific Ocean Perch - Central AI	17%	-
Pacific Ocean Perch - Eastern AI	10%	100%
Other Rockfish - AI	100%	100%
Other Rockfish - BS	71%	55%
Rock Sole - BSAI	92%	92%
Sablefish (Trawl Gear) - AI	100%	-
Sablefish (Trawl Gear) - BS	17%	6%
Sharpchin/Northern Rockfish - AI	99%	100%
Squid - BSAI	53%	74%
Shortraker/Rougheye Rockfish - AI	39%	-
Other Red Rockfish - BS	84%	92%
Yellowfin Sole - BSAI	6%	6%
Grand Total	7%	36%

Table 7.6: Discard Rates of Trawl Catcher Vessels in the Gulf of Alaska, 1995-97

Species - Area	Target Fisheries	
	All	Non-Pollock
Atka Mackerel - Central Gulf (1995 through 1996)	99%	99%
Atka Mackerel - Eastern Gulf (1995 through 1996)	100%	100%
Atka Mackerel - Gulf of Alaska (1997)	99%	100%
Atka Mackerel - Western Gulf (1995 through 1996)	64%	100%
Arrowtooth Flounder - Central Gulf	70%	68%
Arrowtooth Flounder - Eastern Gulf	96%	96%
Arrowtooth Flounder - Western Gulf	95%	100%
Deep Water Flatfish - Central Gulf	11%	11%
Deep Water Flatfish - Eastern Gulf	13%	13%
Deep Water Flatfish - Western Gulf	100%	100%
Flathead Sole - Central Gulf	18%	18%
Flathead Sole - Eastern Gulf	10%	9%
Flathead Sole - Western Gulf	78%	95%
Northern Rockfish - Central Gulf	11%	11%
Northern Rockfish - Eastern Gulf	70%	70%
Northern Rockfish - Western Gulf	100%	100%
Other Species - Gulf of Alaska	67%	65%
Pacific Cod (Inshore) - Central Gulf	10%	10%
Pacific Cod (Offshore) - Central Gulf	1%	1%
Pacific Cod (Inshore) - Eastern Gulf	74%	94%
Pacific Cod (Inshore) - Western Gulf	2%	2%
Pacific Cod (Offshore) - Western Gulf	2%	2%
Pelagic Shelf Rockfish - Central Gulf	17%	17%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	21%	21%
Pelagic Shelf Rockfish - Eastern Gulf	17%	17%
Pelagic Shelf Rockfish - Western Gulf	96%	98%
Pollock - Chirikof District	9%	88%
Pollock - Eastern Gulf	2%	78%
Pollock - Kodiak	12%	64%
Pollock - Shumagin District	4%	97%
Pacific Ocean Perch - Central Gulf	12%	12%
Pacific Ocean Perch - Eastern Gulf	12%	11%
Pacific Ocean Perch - Western Gulf	56%	55%
Rex Sole - Central Gulf	19%	19%
Rex Sole - Eastern Gulf	12%	12%
Rex Sole - Western Gulf	96%	99%
Slope Rockfish - Central Gulf	88%	88%
Slope Rockfish - Eastern Gulf	7%	7%
Slope Rockfish - Western Gulf	100%	100%

Table 7.6 continued		
Sablefish (Trawl Gear) - Central Gulf	29%	29%
Sablefish (Trawl Gear) - Southeast	0%	0%
Sablefish (Trawl Gear) - Western Gulf	69%	69%
Sablefish (Trawl Gear) - Western Yakutat	66%	66%
Shallow Water Flatfish - Central Gulf	18%	18%
Shallow Water Flatfish - Eastern Gulf	26%	25%
Shallow Water Flatfish - Western Gulf	94%	99%
Shortraker / Rougheye - Central Gulf	46%	46%
Shortraker / Rougheye - Eastern Gulf	38%	31%
Shortraker / Rougheye - Western Gulf	2%	1%
Thornyhead - Gulf of Alaska	40%	40%
All Fisheries	13%	20%

Additional information on discard rates can be obtained from the 1995-97 discard report prepared for ADF&G[9] by Pacific Associates, Inc. and Fisheries Information Services. This document provides detailed bycatch rates by target fishery and delivery mode.

Base Years for Determining Numerator

Calculating the percentage of the TAC that catch vessels would be capped at in future years requires estimating a numerator and a denominator. This section will focus on the numerator. The next section will discuss the denominator. Many of the issues associated with determining each of these numbers have already been discussed in the catcher/processor sideboard chapter (Chapter 6). The issues that will need to be addressed for catcher vessels include changes in the TAC groupings over time, whether bycatch from the pollock target fishery should be included, and the period on which catch history is based.

Two periods are being considered for determining catcher vessel sideboard caps. The options selected by the Council are either the average catch from 1992-97 or 1995-97. The AFA is silent on this issue. Recall that catcher/processor sideboards are based on the years 1995-97. After choosing the period, the next question is what catch within those years will be included? There are again two options. The first would include catch from all target fisheries, and the second option would include only catch taken in non-pollock target fisheries.

Tables 7.7 and 7.8 report the catch of BSAI groundfish in the non-pollock target fisheries and in all target fisheries by the AFA eligible catcher vessels for the years 1995-97. Tables 7.9 and 7.10 report the same information, except for 1992-97.

[9]Alaska Department of Fish & Game, "Discards in the Groundfish Fisheries of the Bering Sea/Aleutian Islands & the Gulf of Alaska, 1995-97", September, 1998. This document may be downloaded from the ADF&G Commercial Fisheries Web Page.

Table 7.7: AFA catcher vessel harvests in non-pollock target fisheries, 1995-97 (mt)

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	Total 118 Vessels
Atka Mackerel - Central AI	-	1	-	-	1
Atka Mackerel - Eastern AI	16	7	1	10	34
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	1,741	137	73	240	2,191
Other Flatfish - BS and AI	6,171	517	257	563	7,508
Flathead Sole - BS and AI	4,851	251	197	444	5,743
Greenland Turbot - AI	2	-	-	9	11
Greenland Turbot - BS	538	10	4	39	601
Other Species - BS and AI	3,050	216	138	338	3,742
P. Cod (Fixed Gear) - BS and AI	50	13	-	195	258
P. Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CVs) - BSAI (1997 only)	40,884	3,118	2,057	4,957	51,016
Pacific Ocean Perch - BS	8	3	-	3	14
* POP - C. AI (1996 - 1997 only)	-	-	-	-	-
* POP - E. AI (1996 - 1997 only)	1	-	-	3	4
* POP - W. AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - AI	-	1	-	3	4
Other Rockfish - BS	24	1	-	4	29
Rock Sole - BS and AI	11,963	610	382	584	13,539
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	54	1	-	3	58
Sablefish (Trawl Gear) - BS	1	-	-	-	1
Sharpchin/Northern Rockfish - AI	1	11	-	5	17
Squid - BS and AI	7	-	-	-	7
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	49	10	2	7	68
Yellowfin Sole - BS and AI	33,070	4,196	894	997	39,157

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data.

* Denotes TAC groups that do not extend throughout entire time period.

Table 7.8: AFA catcher vessel harvests in all target fisheries, 1995-97 (mt)

Species by TAC Grouping	All Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	Total 118 Vessels
Atka Mackerel - Central AI	15	2	-	-	17
Atka Mackerel - Eastern AI	452	10	2	11	475
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	2,766	369	245	352	3,732
Other Flatfish - BS and AI	7,792	646	356	607	9,401
Flathead Sole - BS and AI	6,293	613	483	668	8,057
Greenland Turbot - AI	4	-	-	10	14
Greenland Turbot - BS	653	24	12	44	733
Other Species - BS and AI	3,500	3339	229	416	4,484
P. Cod (Fixed Gear) - BS and AI	50	13	-	195	258
P. Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CVs) - BSAI (1997 only)	45,449	3,831	2,620	5,754	57,654
Pacific Ocean Perch - BS	717	25	16	9	767
* POP - C. AI (1996 - 1997 only)	7	-	-	-	7
* POP - E. AI (1996 - 1997 only)	27	-	-	3	30
* POP - W. AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - AI	1	1	-	4	6
Other Rockfish - BS	51	2	1	6	60
Rock Sole - BS and AI	13,250	1,119	652	861	15,882
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	68	1	-	4	73
Sablefish (Trawl Gear) - BS	1	-	-	-	1
Sharpchin/Northern Rockfish - AI	1	12	-	6	19
Squid - BS and AI	1,427	53	20	14	1,514
Shortraker/Rougheye Rockfish - AI	3	-	-	-	3
Other Red Rockfish - BS	58	13	4	11	86
Yellowfin Sole - BS and AI	33,249	4,402	1,043	1,036	39,730

Source: ADF&Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 7.9: AFA catcher vessel harvests (mt) in non-pollock target fisheries, 1992-97[1]

Species by TAC Grouping	All Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	Total 118 Vessels
* Atka Mackerel - C. AI (1993 - 1997 only)	-	1	1		2
* Atka Mackerel - E. AI (1993 - 1997 only)	31	15	2	17	65
* Atka Mackerel - W. AI (1993 - 1997 only)	-	-	-	-	-
Arrowtooth Flounder - BS and AI	2,458	279	139	319	3,195
Other Flatfish - BS and AI	10,195	1,285	472	1,000	12,952
* Flathead Sole - BS and AI (1995 - 1997 only)	4,851	251	197	444	5,743
* Greenland Turbot - AI (1994 - 1997)	2	-	-	9	11
* Greenland Turbot - BS (1994 - 1997)	771	10	5	40	826
Other Species - BS and AI	4,548	360	306	597	5,811
* Pacific Cod (Fixed Gear) - BS and AI	201	13		195	409
* Pacific Cod (Jig Gear) - BS and AI	-	-	-		-
* P. Cod (Trawl; CVs) - BSAI (1997 only)	40,884	3,118	2,057	4,957	51,016
Pacific Ocean Perch - BS	15	3	1	4	23
* POP - C. AI (1996 - 1997 only)	-	-	-	-	-
* POP - E. AI (1996 - 1997 only)	1	-		3	4
* POP - W. AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - AI	-	1	-	4	5
Other Rockfish - BS	61	1	1	4	67
Rock Sole - BS and AI	16,876	1,112	764	1,145	19,897
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	74	1	-	3	78
Sablefish (Trawl Gear) - BS	1	-	-	-	1
Sharpchin/Northern Rockfish - AI	2	11		19	32
Squid - BS and AI	10	-	-	-	10
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	50	12	4	12	78
Yellowfin Sole - BS and AI	46,211	4,696	1,277	2,705	54,889

Source: ADF&Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

1) Target fisheries that include the years 1992 or 1993 may be slightly underestimated.

Table 7.10: AFA catcher vessel harvests (mt) in all target fisheries, 1992-97[1]

Species by TAC Grouping	All Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	Total 118 Vessels
* Atka Mackerel - C. AI (1993 - 1997 only)	15	2	-	1	18
* Atka Mackerel - E. AI (1993 - 1997 only)	564	19	2	18	603
* Atka Mackerel - W. AI (1993 - 1997 only)	-	-	-	-	-
Arrowtooth Flounder - BS and AI	3,998	647	430	491	5,566
Other Flatfish - BS and AI	13,575	1,857	914	1,238	17,584
* Flathead Sole - BS and AI (1995 - 1997 only)	6,293	613	483	668	8,057
* Greenland Turbot - AI (1994 - 1997)	4	-	-	10	14
* Greenland Turbot - BS (1994 - 1997)	903	26	15	45	989
Other Species - BS and AI	5,569	643	525	750	7,487
* Pacific Cod (Fixed Gear) - BS and AI	201	13	-	195	409
* Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CVs) - BSAI (1997 only)	45,449	3,831	2,620	5,754	57,654
Pacific Ocean Perch - BS	840	89	82	29	1,040
* POP - C. AI (1996 - 1997 only)	7	-	-	-	7
* POP - E. AI (1996 - 1997 only)	27	-	-	3	30
* POP - W. AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - AI	1	1	-	4	6
Other Rockfish - BS	99	3	2	8	112
Rock Sole - BS and AI	19,358	2,107	1,373	1,672	24,510
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	93	3	3	5	104
Sablefish (Trawl Gear) - BS	1	-	-	-	1
Sharpchin/Northern Rockfish - AI	4	12	-	21	37
Squid - BS and AI	2,001	82	33	17	2,133
Shortraker/Rougheye Rockfish - AI	3	-	-	-	3
Other Red Rockfish - BS	65	20	9	20	114
Yellowfin Sole - BS and AI	46,807	5,582	2,273	3,404	58,066

Source: ADF&Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

1) Target fisheries that include the years 1992 or 1993 may be slightly underestimated.

Choosing the Base for the Denominator

Denominators for the AFA sideboard calculations could be based on either total catch or TAC. Using TAC will generally result in smaller sideboard caps for the catcher vessels. Only when the average TAC was exceeded during the base time period would this not be true. In many years trawl caught Pacific cod and flatfish fisheries were closed because the halibut PSC cap is reached prior to harvesting the entire TAC. For those species, using TAC will result in smaller catcher vessel sideboard caps. Smaller caps are simply the result of the denominator being larger (i.e., TAC is greater than catch).

TAC fishery groupings change over time. Reading across the rows of Table 7.11 shows the extent of these changes. Rows that have blank cells indicate that TAC has been restructured. For example, an important change was the splitting of the BSAI Pacific cod TAC between trawl catcher vessels and trawl catcher/processors. Prior to 1997 a single TAC was set for all trawl vessels. Splitting out the trawl allocation between catcher vessels and catcher processors makes it difficult to calculate a catcher vessel's catch history across the two time periods. Because of this problem, the catcher/processor's Pacific cod sideboard cap was based solely on 1997 catch history. The table below shows the TAC's for BSAI groundfish fisheries between 1992-97. The problem is more pronounced when the years 1992-97 are used to determine a vessel's sideboard caps.

Table 7.11: Final TACs (mt) in the Bering Sea and Aleutian Islands by Year

Species by TAC Grouping	YEAR						1995-97 Total	1992-97 Total
	1992	1993	1994	1995	1996	1997		
Atka Mackerel - AI	43,000						-	43,000
Atka Mackerel - Central AI		27,000	44,525	50,000	33,600	19,500	103,100	174,625
Atka Mackerel - Eastern AI		3,520	13,475	13,500	26,700	15,000	55,200	72,195
Atka Mackerel - Western AI		14,080	10,000	16,500	45,857	32,200	94,557	118,637
Arrowtooth - BS and AI	8,500	8,500	10,000	10,227	9,000	17,646	36,873	63,873
Other Flatfish - BS and AI	67,150	67,150	47,600	19,540	29,750	43,138	92,428	274,328
Flathead Sole - BS and AI				25,500	25,500	36,975	87,975	87,975
Greenland Turbot - AI			2,333	2,331	1,983	2,525	6,839	9,172
Greenland Turbot - BS			4,667	4,669	3,967	8,275	16,911	21,578
Greenland Turbot - BS and AI	5,950	7,000					-	12,950
Other Species - BS and AI	17,000	22,610	22,432	20,000	20,125	25,800	65,925	127,967
P. Cod (All Gear) - BS and AI	154,700	164,500					-	319,200
P. Cod (Fixed Gear) - BS and AI			92,040	121,800	138,200	152,700	412,700	504,740
P. Cod (Jig Gear) - BS and AI			3,820	1,000	1,000	400	2,400	6,220
P. Cod (Trawl Gear) - BS and AI			95,140	127,200	130,800		258,000	353,140
P. Cod (Trawl Gear, CVs) - BSAI						65,450	65,450	65,450
P. Cod (Trawl Gear, CPs) - BSAI						51,450	51,450	51,450
Pacific Ocean Perch - AI	3,009	13,900	10,900	10,500			10,500	38,309
Pacific Ocean Perch - BS	9,945	3,330	1,910	1,850	1,530	2,380	5,760	20,945
Pacific Ocean Perch - Central AI					3,025	3,170	6,195	6,195
Pacific Ocean Perch - Eastern AI					3,025	3,240	6,265	6,265
Pacific Ocean Perch - Western AI					6,050	6,390	12,440	12,440
Other Rockfish - AI	786	706	655	589	728	607	1,924	4,071
Other Rockfish - BS	340	306	310	329	380	317	1,026	1,982
Rock Sole - BS and AI	34,000	63,750	63,750	60,000	59,500	82,607	202,107	363,607
Sablefish (Fixed Gear) - AI	1,913	1,950	2,100	1,320	720	720	2,760	8,723
Sablefish (Fixed Gear) - BS	595	638	270	640	440	440	1,520	3,023
Sablefish (Trawl Gear) - AI	638	650	700	550	330	255	1,135	3,123
Sablefish (Trawl Gear) - BS	595	637	270	800	468	468	1,736	3,238
Sharpchin/Northern Rockfish - AI	4,820	5,100	5,670	5,103	4,445	3,706	13,254	28,844
Squid - BS and AI	1,700	1,700	2,444	850	850	1,970	3,670	9,714
Shortraker/Rougheye Rockfish - AI	1,037	1,100	1,037	933	956	938	2,827	6,001
Other Red Rockfish - BS	1,190	1,200	1,190	1,070	1,071	893	3,034	6,614
Yellowfin Sole - BS and AI	199,750	187,000	170,325	161,500	170,000	195,500	527,000	1,084,075

Source: National Marine Fisheries Service AKR Webpage (for example - http://www.fakr.noaa.gov.1993/gcatch93.txt)

The second option for the denominator is total catch. Tables 7.12 shows the total catch numbers that will be used in BSAI fisheries. It is important to note that this includes all catch taken in that particular TAC fishery grouping. Using Greenland turbot as the example, turbot harvested by any gear type would be included in the total catch table, since the TAC is not divided by gear.

Changes in the TAC grouping also cause problems when using total catch as the denominator. The problem is basically the same as discussed above. Grouping or splitting TAC fisheries does not allow consistent estimates to be made over the entire time period. Some of the TAC fisheries in Table 7.12 represent catch histories that are limited to a subset of the overall time period where consistent data exists. For example, rows representing POP in the Aleutian Islands areas only contain data from the years 1996-97. The resulting numbers in Table 7.12 are the same in both the 1992-97 and 1995-97 columns, because the years 1995-96 were used in both cases. The same set of years was used to determine the numerator in the section above.

Table 7.12: Total Catch (mt) of BSAI Groundfish Species by Year

Species Groupings	1995-97	1992-97
* Atka Mackerel - Central Aleutian Islands (1993 - 1997 only)	103,894	171,050
* Atka Mackerel - Eastern Aleutian Islands (1993 - 1997 only)	58,658	76,500
* Atka Mackerel - Western Aleutian Islands (1993 - 1997 only)	88,749	99,908
Arrowtooth Flounder - Bering Sea and Aleutian Islands	34,015	69,282
Other Flatfish - Bering Sea and Aleutian Islands	61,670	154,416
* Flathead Sole - Bering Sea and Aleutian Islands (1995 - 1997 only)	52,464	52,464
* Greenland Turbot - Aleutian Islands (1994 - 1997 only)	4,674	7,805
* Greenland Turbot - Bering Sea (1994 - 1997 only)	16,359	23,497
Other Species - Bering Sea and Aleutian Islands	68,562	151,335
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	396,400	490,157
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	1,039	1,769
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	62,877	62,877
Pacific Ocean Perch - Bering Sea	4,697	13,381
* Pacific Ocean Perch - Central Aleutian Islands (1996 - 1997 only)	5,693	5,693
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 - 1997 only)	6,175	6,175
* Pacific Ocean Perch - Western Aleutian Islands (1996 - 1997 only)	13,598	13,598
Other Rockfish - Aleutian Islands	771	2,167
Other Rockfish - Bering Sea	594	1,146
Rock Sole - Bering Sea and Aleutian Islands	169,356	345,361
Sablefish (Fixed Gear) - Aleutian Islands	2,415	7,583
Sablefish (Fixed Gear) - Bering Sea	1,538	3,088
Sablefish (Trawl Gear) - Aleutian Islands	145	757
Sablefish (Trawl Gear) - Bering Sea	495	495
Sharpchin/Northern Rockfish - Aleutian Islands	12,522	23,266
Squid - Bering Sea and Aleutian Islands	2,682	4,653
Shortraker/Rougheye Rockfish - Aleutian Islands	2,547	6,088
Other Red Rockfish - Bering Sea	763	2,585
Yellowfin Sole - Bering Sea and Aleutian Islands	437,138	828,345

* Categories that are stared list the maximum range of years used to determine historical catch.
Source: NMFS Blend data for the years 1992-97

Alternative Sideboard Cap Estimates

Information presented in Tables 7.7 through 7.10 above allows several of the sideboard cap alternatives to be calculated when used in conjunction with the tables included in the denominator section. Simply dividing the numbers reported in the numerator tables by the appropriate numbers in the denominator tables will result in the percentage of the TAC that AFA catcher vessels would be allowed to harvest up to in future years. Six specific alternatives will be presented in this section. They correspond to the three alternatives specified in the "Determination of Harvest Level" section, with a separate table for each of the two time periods being considered.

Comparing Tables 7.13 through 7.18 shows that, in general, catcher vessels would receive the largest sideboard cap when catch in all target fisheries was included in the numerator, the denominator is based on total catch, and the base years 1995-97 are used. Several reasons could account for a shorter time period resulting in a larger cap. The fleet's structure tends to be more consistent over a shorter time period. It is well documented that considerable entry and exit have occurred in the North Pacific groundfish fisheries over the years. Some vessels that have harvested pollock in the past are no longer fishing, which provides the current pollock fleet a larger share of the pollock fishery and more non-pollock catch in the sideboard pool. As the time period lengthens, vessels that harvested pollock in the past may not be AFA eligible, and therefore will not bring their non-pollock catch history into a sideboard cap. Another reason that a shorter time period results in a larger cap may have to do with pollock season lengths. Bycatch of other species is low in the pollock fishery, in earlier years when the pollock season was longer, vessels would spend more of their year fishing pollock. This likely means they would have less catch of non-pollock groundfish.

The most important BSAI non-pollock groundfish species for AFA catcher vessels will likely be Pacific cod. While there may be limited targeting of flatfish, rockfish, and sablefish, Pacific cod will be relied upon as an important source of revenue. This will be especially true if strong Pacific cod prices continue into the future. Table 7.19 summarizes the amount of Pacific cod that would be available to each AFA catcher vessel sector under the proposed cap structures. The difference between the smallest and largest cap is about 5,500 mt. Recall that for Pacific cod only 1997 data were used, because the TAC was split between catcher vessels and catcher/processors starting that year (Amendment 46 to the BSAI FMP). The current allocation of BSAI Pacific cod is 51 percent to fixed gear, 47 percent to trawl gear, and 2 percent to jig gear. The trawl portion of the TAC is then subdivided equally between catcher vessels and catcher/processors. Working through the math results in trawl catcher vessels being allocated 23.5 percent of the TAC. If 1999 TACs were to continue into the future, that percentage would translate into 41,595 mt. Those percentages are then multiplied by the portion of the 1999 Pacific cod TAC available to AFA trawl catcher vessels (41,595 mt), to provide an estimate of the amount of cod that they could harvest under a cap. Table 7.19 is a summary table which compares the resulting percentages under the three basic alternatives for Pacific cod only, using 1995-97 catch history.

Table 7.13: Estimates of catcher vessel sideboard caps (percent of future TACs) using only harvest from the non-pollock target fisheries as the numerator and total catch as the denominator, 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
Atka Mackerel - Central AI	-	-	-	-	-
Atka Mackerel - Eastern AI	0.03%	0.01%	-	0.02%	0.06%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	5.12%	0.40%	0.21%	0.71%	6.44%
Other Flatfish - BS and AI	10.01%	.84%	0.42%	0.91%	12.18%
Flathead Sole - BS and AI	9.25%	0.48%	0.38%	0.85%	10.96%
Greenland Turbot - AI	0.04%	-	-	0.19%	0.23%
Greenland Turbot - BS	3.29%	0.06%	0.02%	0.24%	3.61%
Other Species - BS and AI	4.45%	0.32%	0.20%	0.49%	5.46%
Pacific Cod (Fixed Gear) - BS and AI	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl CV) - BSAI (1997 only)	65.02%	4.96%	3.27%	7.88%	81.13%
Pacific Ocean Perch - BS	0.17%	0.06%	-	0.06%	0.29%
* POP - C. AI (1996 - 97 only)	-	-	-	-	-
* POP - E. AI (1996 - 97 only)	0.02%	-	-	0.05%	0.07%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	-	0.13%	-	0.39%	0.52%
Other Rockfish - BS	4.04%	0.17%	-	0.67%	4.88%
Rock Sole - BS and AI	7.06%	0.36%	0.23%	0.34%	7.99%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	37.33%	0.69%	-	2.07%	40.09%
Sablefish (Trawl Gear) - BS	0.20%	-	-	-	0.20%
Sharpchin/Northern Rockfish - AI	0.01%	0.09%	-	0.04%	0.14%
Squid - BS and AI	0.26%	-	-	-	0.26%
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	6.42%	1.31%	0.26%	0.92%	8.91%
Yellowfin Sole - BS and AI	7.57%	.96%	0.20%	0.23%	8.96%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1995-97.

Table 7.14: Estimates of catcher vessel sideboard caps (percent of future TACs) using only harvest from the non-pollock target fisheries as the numerator and total catch as the denominator, 1992-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
*Atka Mackerel - Cent. AI (1993-97 only)	-	-	-	-	-
*Atka Mackerel - East. AI (1993-97 only)	0.04%	0.02%	-	0.02%	0.08%
*Atka Mackerel - West. AI (1993-97 only)	-	-	-	-	-
Arrowtooth Flounder - BS and AI	3.55%	0.40%	0.20%	0.46%	4.61%
Other Flatfish - BS and AI	6.60%	0.83%	0.31%	0.65%	8.39%
*Flathead Sole - BS and AI (1995-97 only)	9.25%	0.48%	0.38%	0.85%	10.96%
*Greenland Turbot - AI (1994-97 only)	0.03%	-	-	0.12%	0.15%
*Greenland Turbot - BS (1994-97 only)	3.28%	0.04%	0.02%	0.17%	3.51%
Other Species - BS and AI	3.01%	0.24%	0.20%	0.39%	3.84%
Pacific Cod (Fixed Gear) - BS and AI	0.04%	-	-	0.04%	0.08%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CV) - BSAI (1997 only)	65.02%	4.96%	3.27%	7.88%	81.13%
Pacific Ocean Perch - BS	0.11%	0.02%	0.01%	0.03%	0.17%
* POP - C. AI (1996 - 97 only)	-	-	-	-	-
* POP - E. AI (1996 - 97 only)	0.02%	-	-	0.05%	0.07%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	-	0.05%	-	0.18%	0.23%
Other Rockfish - BS	5.32%	0.09%	0.09%	0.35%	5.85%
Rock Sole - BS and AI	4.89%	0.32%	0.22%	0.33%	5.76%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	9.77%	0.13%	-	0.40%	10.30%
Sablefish (Trawl Gear) - BS	0.20%	-	-	-	0.20%
Sharpchin/Northern Rockfish - AI	0.01%	0.05%	-	0.08%	0.14%
Squid - BS and AI	0.21%	-	-	-	0.21%
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	1.93%	0.46%	0.15%	0.46%	3.00%
Yellowfin Sole - BS and AI	5.58%	0.57%	0.15%	0.33%	6.63%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1992-97.

Table 7.15: Estimates of catcher vessel sideboard caps (percent of future TACs) using harvest from all target fisheries as the numerator and total catch as the denominator, 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
Atka Mackerel - Central AI	0.01%	-	-	-	0.01%
Atka Mackerel - Eastern AI	0.77%	0.02%	-	0.02%	0.81%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	8.13%	1.08%	0.72%	1.03%	10.96%
Other Flatfish - BS and AI	12.64%	1.05%	0.58%	0.98%	15.25%
Flathead Sole - BS and AI	12.00%	1.17%	0.92%	1.27%	15.36%
Greenland Turbot - AI	0.09%	-	-	0.21%	0.30%
Greenland Turbot - BS	3.99%	0.15%	0.07%	0.27%	4.48%
Other Species - BS and AI	5.10%	0.49%	0.33%	0.61%	6.53%
Pacific Cod (Fixed Gear) - BS and AI	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl CV) - BSAI (1997 only)	72.28%	6.09%	4.17%	9.15%	91.69%
Pacific Ocean Perch - BS	15.26%	0.53%	0.34%	0.19%	16.32%
* POP - C. AI (1996 - 97 only)	0.12%	-	-	-	0.12%
* POP - E. AI (1996 - 97 only)	0.44%	-	-	0.05%	0.49%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	0.13%	0.13%	-	0.52%	0.78%
Other Rockfish - BS	8.59%	0.34%	0.17%	1.01%	10.11%
Rock Sole - BS and AI	7.82%	0.66%	0.38%	0.51%	9.37%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	47.01%	0.69%	-	2.77%	50.47%
Sablefish (Trawl Gear) - BS	0.20%	-	-	-	0.20%
Sharpchin/Northern Rockfish - AI	0.01%	0.10%	-	0.05%	0.16%
Squid - BS and AI	53.20%	1.98%	0.75%	0.52%	56.45%
Shortraker/Rougheye Rockfish - AI	0.12%	-	-	-	0.12%
Other Red Rockfish - BS	7.60%	1.70%	0.52%	1.44%	11.26%
Yellowfin Sole - BS and AI	7.61%	1.01%	0.24%	0.24%	9.10%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1995-97.

Table 7.16: Estimates of catcher vessel sideboard caps (percent of future TACs) using harvest from all target fisheries as the numerator and total catch as the denominator, 1992-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
Atka Mackerel - Central AI	0.01%	-	-	-	0.01%
Atka Mackerel - Eastern AI	0.74%	0.02%	-	0.02%	0.78%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	5.77%	0.93%	0.62%	0.71%	8.03%
Other Flatfish - BS and AI	8.79%	1.20%	0.59%	0.80%	11.38%
Flathead Sole - BS and AI	12.00%	1.17%	0.92%	1.27%	15.36%
Greenland Turbot - AI	0.05%	-	-	0.13%	0.18%
Greenland Turbot - BS	3.84%	0.11%	0.06%	0.19%	4.20%
Other Species - BS and AI	3.68%	0.42%	0.35%	0.50%	4.95%
Pacific Cod (Fixed Gear) - BS and AI	0.04%	-	-	0.04%	0.08%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CV) - BSAI (1997 only)	72.28%	6.09%	4.17%	9.15%	91.69%
Pacific Ocean Perch - BS	6.28%	0.67%	0.61%	0.22%	7.78%
* POP - C. AI (1996 - 97 only)	0.12%	-	-	-	0.12%
* POP - E. AI (1996 - 97 only)	0.44%	-	-	0.05%	0.49%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	0.05%	0.05%	-	0.18%	0.28%
Other Rockfish - BS	8.64%	0.26%	0.17%	0.70%	9.77%
Rock Sole - BS and AI	5.61%	0.61%	0.40%	0.48%	7.10%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	12.28%	0.40%	0.40%	0.66%	13.74%
Sablefish (Trawl Gear) - BS	0.20%	-	-	-	0.20%
Sharpchin/Northern Rockfish - AI	0.02%	0.05%	-	0.09%	0.16%
Squid - BS and AI	43.01%	1.76%	0.71%	0.37%	45.85%
Shortraker/Rougheye Rockfish - AI	0.05%	-	-	-	0.05%
Other Red Rockfish - BS	2.51%	0.77%	0.35%	0.77%	4.40%
Yellowfin Sole - BS and AI	5.65%	0.67%	0.27%	0.41%	7.00%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1992-97.

Table 7.17: Estimates of catcher vessel sideboard caps (percent of future TACs) using harvest from non-pollock target fisheries as the numerator and TACs as the denominator, 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
Atka Mackerel - Central AI	-	-	-	-	-
Atka Mackerel - Eastern AI	0.03%	0.01%	-	0.02%	0.06%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	4.72%	0.37%	0.20%	0.65%	5.94%
Other Flatfish - BS and AI	6.68%	0.56%	0.28%	0.61%	8.13%
Flathead Sole - BS and AI	5.51%	0.29%	0.22%	0.50%	6.52%
Greenland Turbot - AI	0.03%	-	-	0.13%	0.16%
Greenland Turbot - BS	3.18%	0.06%	0.02%	0.23%	3.49%
Other Species - BS and AI	4.63%	0.33%	0.21%	0.51%	5.68%
Pacific Cod (Fixed Gear) - BS and AI	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CV) - BSAI (1997 only)	62.47%	4.76%	3.14%	7.57%	77.94%
Pacific Ocean Perch - BS	0.14%	0.05%	-	0.05%	0.24%
* POP - C. AI (1996 - 97 only)	-	-	-	-	-
* POP - E. AI (1996 - 97 only)	0.02%	-	-	0.05%	0.07%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	-	0.05%	-	0.16%	0.21%
Other Rockfish - BS	2.34%	0.10%	-	0.39%	2.83%
Rock Sole - BS and AI	5.92%	0.30%	0.19%	0.29%	6.70%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	4.76%	0.09%	-	0.26%	5.11%
Sablefish (Trawl Gear) - BS	0.06%	-	-	-	0.06%
Sharpchin/Northern Rockfish - AI	0.01%	0.08%	-	0.04%	0.13%
Squid - BS and AI	0.19%	-	-	-	0.19%
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	1.62%	0.33%	0.07%	0.23%	2.25%
Yellowfin Sole - BS and AI	6.28%	0.80%	0.17%	0.19%	7.44%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1995-97. TACs for the denominator were taken from reports on the NMFS web page.

Table 7.18: Estimates of catcher vessel sideboard caps (percent of future TACs) using harvest from non-pollock target fisheries as the numerator and TACs as the denominator, 1992-97

Species by TAC Grouping	Non-Pollock Target Fisheries				
	CV Inshore 92 Vessels	CV to IN/MS 14 Vessels	CV to MS 7 Vessels	CV to CP 7 Vessels	All AFA CVs 120 Vessels
Atka Mackerel - Central AI	-	-	-	-	-
Atka Mackerel - Eastern AI	0.04%	0.02%	-	0.02%	0.08%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BS and AI	3.85%	0.44%	0.22%	0.50%	5.01%
Other Flatfish - BS and AI	3.72%	0.47%	0.17%	0.36%	4.72%
Flathead Sole - BS and AI	5.51%	0.29%	0.22%	0.50%	6.52%
Greenland Turbot - AI	0.02%	-	-	0.10%	0.12%
Greenland Turbot - BS	3.57%	0.05%	0.02%	0.19%	3.83%
Other Species - BS and AI	3.55%	0.28%	0.24%	0.47%	4.54%
Pacific Cod (Fixed Gear) - BS and AI	0.04%	-	-	0.04%	0.08%
Pacific Cod (Jig Gear) - BS and AI	-	-	-	-	-
* P. Cod (Trawl, CV) - BSAI (1997 only)	62.47%	4.76%	3.14%	7.57%	77.94%
Pacific Ocean Perch - BS	0.07%	0.01%	-	0.02%	0.10%
* POP - C. AI (1996 - 97 only)	-	-	-	-	-
* POP - E. AI (1996 - 97 only)	0.02%	-	-	0.05%	0.07%
* POP - W. AI (1996 - 97 only)	-	-	-	-	-
Other Rockfish - AI	-	0.02%	-	0.10%	0.12%
Other Rockfish - BS	3.08%	0.05%	0.05%	0.20%	3.38%
Rock Sole - BS and AI	4.64%	0.31%	0.21%	0.31%	5.47%
Sablefish (Fixed Gear) - AI	-	-	-	-	-
Sablefish (Fixed Gear) - BS	-	-	-	-	-
Sablefish (Trawl Gear) - AI	2.37%	0.03%	-	0.10%	2.50%
Sablefish (Trawl Gear) - BS	0.03%	-	-	-	0.03%
Sharpchin/Northern Rockfish - AI	0.01%	0.04%	-	0.07%	0.12%
Squid - BS and AI	0.10%	-	-	-	0.10%
Shortraker/Rougheye Rockfish - AI	-	-	-	-	-
Other Red Rockfish - BS	0.76%	0.18%	0.06%	0.18%	1.18%
Yellowfin Sole - BS and AI	4.26%	0.43%	0.12%	0.25%	5.06%

Sources: ADF&G Fishtickets for deliveries within state waters and NORPAC Observer data for at-sea deliveries, from 1992-97. TACs for the denominator were taken from reports on the NMFS web page.

Table 7.19: Estimates of future BSAI catcher vessel Pacific cod caps under the various scenarios, based on the years 1995-97

Species by TAC Grouping	CV Inshore 90 Vessels	CV to IN/MS 11 Vessels	CV to MS 10 Vessels	CV to CP 7 Vessels	All AFA CVs 118 Vessels
All targets / Total catch					
Percent of TAC	72.28%	6.09%	4.17%	9.15%	91.69%
Estimates of available cap (mt)	30,065	2,533	1,735	3,806	38,138
Non-pollock targets / Total catch					
Percent of TAC	65.02%	4.96%	3.27%	7.88%	81.13%
Estimates of available cap (mt)	27,045	2,063	1,360	3,278	33,746
Non-pollock targets / TAC					
Percent of TAC	62.47%	4.76%	3.14%	7.57%	77.94%
Estimates of available cap (mt)	27,045	2,063	1,360	3,278	33,746

Note: The percentages refer to the portion of the overall trawl CV allocation.

7.5.1.1 To Whom do the Sideboards Apply

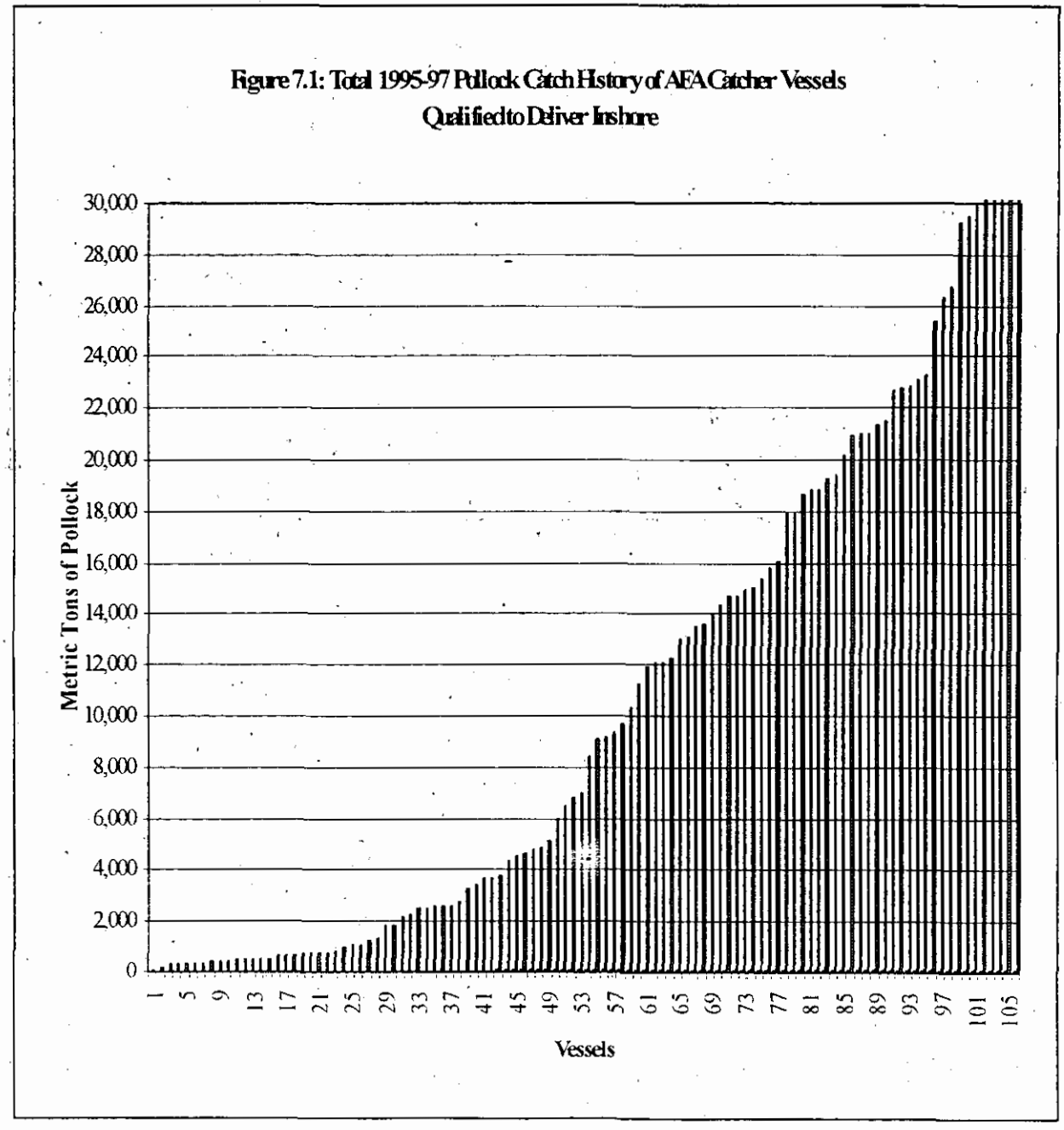
Determining to whom the restrictions apply requires answering the question, are AFA eligible catcher vessels that do not join a cooperative still required to abide by the sideboard restrictions? The language in the AFA is not clear regarding to whom the restrictions apply. The first part of the section 211(c)(1)(A) seems to indicate that it is meant to apply to all AFA eligible catcher vessels. However, the phrase at the end of the quote indicates that the impacts resulting from fishery cooperatives should be mitigated by this action. That phrase could be interpreted to indicate that this section should apply only to AFA eligible catcher vessels that actually join a cooperative. Because of the uncertainty in the language and the differing interpretations of this section of the AFA, a decision will need to be made regarding to whom the sideboard regulations apply.

It is likely that vessels with relatively small amounts of pollock harvest in the inshore and mothership sectors will be most impacted by this decision. The seven catcher vessels fishing for the catcher/processor fleet have already shown that they are willing to join a cooperative and abide by the sideboard restrictions included in the AFA for 1999. Determining which of the inshore and mothership catcher vessels would join a cooperative is impossible at this point. However, members of industry have indicated that at least one vessel asked to be removed from section 208 when the bill was being drafted. The language in section 208(c) line 20, defining which catcher vessels not specifically listed are eligible to join a mothership cooperative, would once again make that vessel eligible to join. This vessel would be required to abide by the catcher vessel sideboards if the option that all vessels eligible to join a cooperative is selected, even though they have already indicated that they would rather forego joining a cooperative than be bound by the sideboards.

Members of the AFA catcher vessel sector have asked, what negative impacts would be caused by AFA eligible vessels that do not join a cooperative? They argue that these vessels would be competing in the open access fisheries just like non-AFA vessels, and they would be getting no benefits from the cooperatives. This is likely true for the small independent catcher vessel owners. It is less clear that this would be true if a "person" owned more than one catcher vessel. In that case it might be possible to have one or more of their catcher vessels not join the cooperative, giving the vessel which did not join the cooperative the freedom to participate without a cap in the open access non-pollock fishery. They would also be allowed to compete for the open access portion of the pollock TAC against the other catcher vessels that decided not to join cooperatives in that sector. If they were the only vessel not joining a cooperative from a sector, they would be guaranteed their portion of the

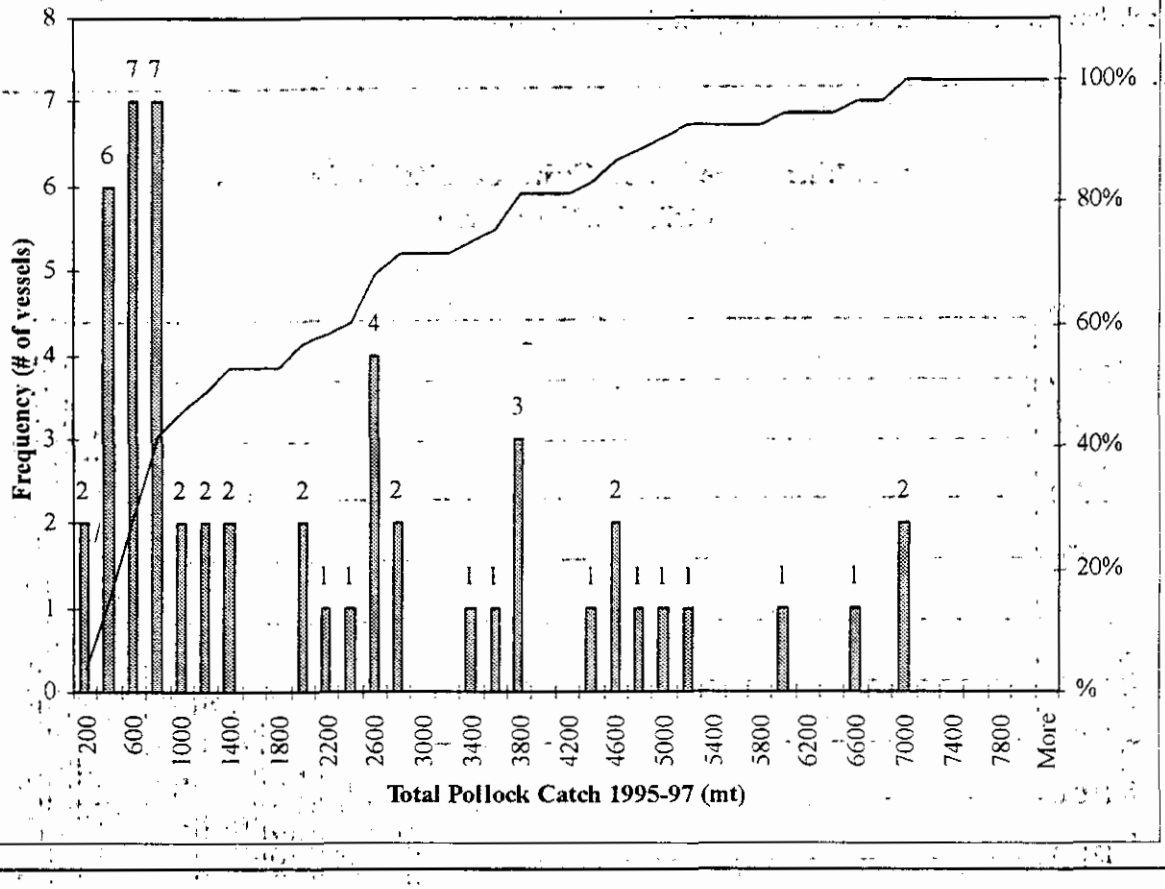
pollock quota, without being restricted by sideboard caps in the non-pollock fisheries. It may also be true that if a small number of catcher vessels were in the open access portion of the pollock fishery, that they could form an "unofficial" cooperative to rationalize their portion of the pollock allocation. This could occur since only AFA eligible catcher vessels will be allowed to participate in the directed pollock fishery.

Figure 7.1 below shows the BS/AI pollock catch history of the AFA eligible catcher vessels in the inshore sector, according to preliminary data. The vessels that had the four largest catch histories have been truncated at 30,000 mt., in order to preserve confidential information. Information in this figure shows that several vessels have relatively small amounts of pollock catch history.



Finer resolution of the catcher vessels with an inshore pollock catch history of less than 8,000 mt. is provided in Figure 7.2 below. The information is broken down by 200 mt. increments with the number of vessels and the cumulative catch totals reported. That figure shows that 24 vessels had less than 1,000 mt of pollock landings during 1995-97 qualification window.

Figure 7.2: Histogram of Bottom 50% of Inshore Sector Catcher Vessels



A second sub-option would create separate sideboard caps for catcher vessels that harvested over and under 1,000 mt, 3,000 mt , or 5,000 mt of BSAI pollock, on average from 1995-97. Separate caps are being considered because, it was presumed that catcher vessels with small amounts of pollock history had likely spent more time fishing for other species. If they must compete from the same cap as vessels with smaller histories in non-pollock fisheries, the portion of the sideboard cap they actually harvest may be less than they contributed to the cap. Competing against catcher vessels that are similarly situated may improve their bargaining position and chances of harvesting the historic levels of catch in these fisheries they enjoyed before the AFA. Table 7.20 shows the percentages of the overall sideboards that would be allocated to the catcher vessels under each pollock history threshold, and the number of vessels which could harvest from the sub-cap.

Table 7.20: Number of vessels and the percentage of the cap that the sub-group of catcher vessels would be eligible to harvest, based on their annual average catch history in the 1995-97 pollock fisheries

Species/Sector	< 1,000 mt of Pollock		< 3,000 mt of Pollock		< 5,000 mt of Pollock	
	# of Vessels	% of Total Cap	# of Vessels	% of Total Cap	# of Vessels	% of Total Cap
Pacific Cod						
Inshore	18	7.44	40	34.62%	55	61.35%
Inshore/MS	0	n/a	0	n/a	3	conf.
Mothership	0	n/a	2	conf.	6	conf.
Catcher Processor	0	n/a	1	conf.	5	conf.
Other Species						
Inshore	18	3.81%	40	11.49%	55	22.42%
Inshore/MS	0	n/a	0	n/a	3	conf.
Mothership	0	n/a	2	conf.	6	conf.
Catcher Processor	0	n/a	1	conf.	5	conf.

Source: ADF&G Fishtickets and NORPAC Observer data from 1995-97.

7.5.1.2 When do the Sideboards Apply

The question of when sideboard caps apply to the AFA catcher vessels also needs to be answered. The Council considered six alternatives. These alternatives can be grouped into three separate categories. The first category is the option that applies throughout the year, and does not contain sub-caps. The second category also applies all year, but those options contain sub-caps during parts of the year. Finally, the third category would apply the caps only during specific times of the year. At other times of the year catcher vessels would not be bound by a cap, and therefore, possibly not limited to historical catch levels.

The first option would apply the cap at all times during the fishing year. This is the only option in the first category and would prevent the AFA catcher vessels from participating in non-pollock fisheries above their historic levels on an annual basis. Once they reach a cap in the non-pollock fisheries, fishing by vessels operating under that cap would be halted until the following year. The results of this option were presented in Tables 7.12 - 7.17. A separate discussion is provided in the "Determination of Aggregate" section of this chapter which speaks to whether the caps will be enforced at a sector or cooperative level. The NMFS implementation and monitoring section of this document will also speak to this issue.

Two options are included under the second category. Sideboard caps in this category would limit catcher vessels to their historic catch levels, but the caps would be sub-divided by either quarter or by vessel class (Tables 7.21 -7.24). Applying the caps by quarter would restrict catcher vessels to harvesting their cap in the same quarter of the year as it was earned. The Council also has the information necessary to divide the caps semi-annually, from these tables. For example, if the inshore catcher vessels harvested 68 percent of the Pacific cod used to determine the cap during the first quarter of the year and 30 percent in the second quarter, they would be limited to harvesting 98 percent of the Pacific cod cap during the first half of the year in the future. This would prevent catcher vessels from taking more of the cap during the first quarter (half) of the year than they traditionally harvested. It would also prevent them from taking more of the halibut PSC cap, assuming that the PSC caps are also apportioned based on the percentage of groundfish harvested in a quarter.

Table 7.21: Quarterly catch distribution of catcher vessels qualified for the inshore sector only, 1995-97

Species by TAC Grouping	Inshore Catcher Vessels - All Target Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	100%	0%	0%	0%	100%
Atka Mackerel - Eastern Aleutian Islands	1%	7%	91%	2%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	41%	42%	11%	6%	100%
Other Flatfish - Bering Sea and Aleutian Islands	40%	42%	7%	11%	100%
Flathead Sole - Bering Sea and Aleutian Islands	61%	24%	7%	8%	100%
Greenland Turbot - Aleutian Islands	100%	0%	0%	0%	100%
Greenland Turbot - Bering Sea	5%	79%	11%	5%	100%
Other Species - Bering Sea and Aleutian Islands	51%	40%	4%	5%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	17%	30%	0%	53%	100%
* Pacific Cod (Trawl Gear, CV) - BSAI (1997 only)	68%	30%	1%	1%	100%
Pacific Ocean Perch - Bering Sea	1%	1%	70%	28%	100%
* Pacific Ocean Perch - Central AI (1996 - 1997 only)	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Eastern AI (1996 - 1997 only)	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Western AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	24%	39%	35%	2%	100%
Rock Sole - Bering Sea and Aleutian Islands	63%	35%	1%	1%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	1%	78%	14%	6%	100%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	5%	0%	77%	18%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Other Red Rockfish - Bering Sea	81%	7%	8%	3%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	36%	62%	2%	1%	100%

Source: ADF&G Fishtickets and NORPAC Observer data for the years 1995-97.

Table 7.22: Quarterly catch distribution of catcher vessels qualified for the inshore/mothership sectors, 1995-97

Species by TAC Grouping	Inshore/Mothership CVs - All Target Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	100%	0%	0%	0%	100%
Atka Mackerel - Eastern Aleutian Islands	64%	9%	27%	0%	100%
Atka Mackerel - Western Aleutian Islands					
Arrowtooth Flounder - Bering Sea and Aleutian Islands	41%	4%	37%	18%	100%
Other Flatfish - Bering Sea and Aleutian Islands	35%	46%	11%	9%	100%
Flathead Sole - Bering Sea and Aleutian Islands	53%	13%	25%	9%	100%
Greenland Turbot - Aleutian Islands					
Greenland Turbot - Bering Sea	19%	35%	42%	4%	100%
Other Species - Bering Sea and Aleutian Islands	50%	23%	21%	6%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0%	100%	0%	0%	100%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands					
* Pacific Cod (Trawl Gear, CVs) - BSAI (1997 only)	47%	46%	5%	1%	100%
Pacific Ocean Perch - Bering Sea	27%	0%	70%	3%	100%
* Pacific Ocean Perch - Central AI (1996 - 1997 only)					
* Pacific Ocean Perch - Eastern AI (1996 - 1997 only)					
* Pacific Ocean Perch - Western AI (1996 - 1997 only)					
Other Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	50%	0%	50%	0%	100%
Rock Sole - Bering Sea and Aleutian Islands	68%	21%	9%	2%	100%
Sablefish (Fixed Gear) - Aleutian Islands					
Sablefish (Fixed Gear) - Bering Sea					
Sablefish (Trawl Gear) - Aleutian Islands	50%	50%	0%	0%	100%
Sablefish (Trawl Gear) - Bering Sea					
Sharpchin/Northern Rockfish - Aleutian Islands	92%	8%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	22%	0%	73%	5%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands					
Other Red Rockfish - Bering Sea	69%	8%	23%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	40%	36%	23%	1%	100%

Source: ADF&G Fishtickets and NORPAC Observer data for the years 1995-97.

Table 7.23: Quarterly catch distribution of catcher vessels qualified for the mothership sector, 1995-97

Species by TAC Grouping	Mothership Catcher Vessels - All Target Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	100%	0%	0%	0%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	45%	4%	32%	19%	100%
Other Flatfish - Bering Sea and Aleutian Islands	35%	50%	10%	6%	100%
Flathead Sole - Bering Sea and Aleutian Islands	51%	24%	18%	7%	100%
Greenland Turbot - Aleutian Islands	-	-	-	-	-
Greenland Turbot - Bering Sea	22%	44%	33%	0%	100%
Other Species - Bering Sea and Aleutian Islands	38%	44%	14%	5%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-
* Pacific Cod (Trawl Gear, CVs) - BSAI (1997 only)	54%	40%	4%	2%	100%
Pacific Ocean Perch - Bering Sea	29%	0%	71%	0%	100%
* Pacific Ocean Perch - Central AI (1996 - 1997 only)	-	-	-	-	-
* Pacific Ocean Perch - Eastern AI (1996 - 1997 only)	-	-	-	-	-
* Pacific Ocean Perch - Western AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-
Other Rockfish - Bering Sea	-	-	-	-	-
Rock Sole - Bering Sea and Aleutian Islands	63%	31%	5%	1%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	-	-	-	-	-
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	22%	0%	78%	0%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-
Other Red Rockfish - Bering Sea	75%	0%	25%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	46%	8%	46%	1%	100%

Source: ADF&G Fishtickets and NORPAC Observer data for the years 1995-97.

Table 7.24: Quarterly catch distribution of catcher vessels qualified for the catcher/processor sector, 1995-97

Species by TAC Grouping	C/P sector CVs - All Target Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	91%	9%	0%	0%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	46%	22%	20%	11%	100%
Other Flatfish - Bering Sea and Aleutian Islands	28%	49%	6%	17%	100%
Flathead Sole - Bering Sea and Aleutian Islands	53%	20%	18%	8%	100%
Greenland Turbot - Aleutian Islands	90%	10%	0%	0%	100%
Greenland Turbot - Bering Sea	4%	80%	13%	2%	100%
Other Species - Bering Sea and Aleutian Islands	62%	18%	12%	7%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	82%	0%	0%	18%	100%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-
* Pacific Cod (Trawl Gear, CV) - BSAI (1997 only)	82%	13%	5%	1%	100%
Pacific Ocean Perch - Bering Sea	44%	0%	44%	11%	100%
* Pacific Ocean Perch - Central AI (1996 - 1997 only)	-	-	-	-	-
* Pacific Ocean Perch - Eastern AI (1996 - 1997 only)	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Western AI (1996 - 1997 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	50%	33%	17%	0%	100%
Rock Sole - Bering Sea and Aleutian Islands	66%	25%	6%	3%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	33%	67%	0%	0%	100%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	100%	0%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	14%	0%	86%	0%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-
Other Red Rockfish - Bering Sea	80%	10%	10%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	41%	36%	17%	5%	100%

Source: ADF&G Fishtickets and NORPAC Observer data for the years 1995-97.

A second option in this category would sub-divide the sideboard caps based on whether a vessel's catch was mostly pollock during the "A" season. If a vessel had harvested mostly pollock, its Pacific cod sideboard cap prior to March 1 would be accounted for separately from catcher vessels that harvested mostly non-pollock groundfish during that time of the year. The intent of this alternative is to prevent catcher vessels that historically harvested mostly pollock during the "A" season, from increasing their relative harvest of the Pacific cod cap at the expense of the catcher vessels that have traditionally harvested Pacific cod during the "A" season. Monitoring this division of the catcher vessel sideboard cap will require NMFS to account for catch at the catcher vessel level. Currently catch is accounted for at the processor level. However, the agency is currently developing an electronic reporting system that would likely solve this impediment, though it is uncertain whether this system could be in place by the start of the 2000 fishing season.

Calculations dividing the Pacific cod cap, in Table 7.25, use 1995-97 as the base years. Those years were specifically requested for calculating this option. Recall that the other tables used only 1997 to determine Pacific cod catch history, since the Pacific cod trawl gear TAC was subdivided between catcher vessels and

catcher processors that year. Using different qualifying years, will likely lead to different estimates of the amount of TAC that could be harvested prior to March 1. Had the catcher vessels harvested less of the trawl Pacific cod TAC during the years 1995-96, relative to the current catcher vessel - catcher/processor split, they will receive a smaller percentage of the TAC in this calculation. The opposite would of course be true. If AFA catcher vessels had harvested more of the Pacific cod, relative to the catcher/processors during 1995-96, they would have a larger sideboard cap during the January through February time period.

Table 7.25: Pacific cod catches by AFA catcher vessels prior to March 1, of the years 1995-97

Pacific Cod (Trawl Gear)		Non-Pollock Target Fisheries				
		CV Inshore	CV to IN/MS	CV to MS	CV to CP	Total Catch
Majority Pollock: 111 vessels	Catch (metric tons)	3,261	205	-	78	3,544
	% of TAC - based on TAC	1.01%	0.06%	-	0.02%	1.10%
	% of TAC-based on catch	1.10%	0.07%	-	0.03%	1.20%
Majority Non-pollock: 9 vessels	Catch (metric tons)	14,953	-	-	-	14,953
	% of TAC - based on	4.62%			-	4.62%
	% of TAC-based on catch	5.05%	-	-	-	5.05%
All Fisheries						
Majority Pollock: 111 vessels	Catch (metric tons)	11,404	1,756	1,019	1,190	15,369
	% of TAC - based on TAC	3.53%	0.54%	0.32%	0.37%	4.75%
	% of TAC-based on catch	3.85%	0.59%	0.34%	0.40%	5.19%
Majority Non-pollock: 9 vessels	Catch (metric tons)	15,156	-	-	-	15,156
	% of TAC - based on	4.69%			-	4.69%
	% of TAC-based on catch	5.12%	-	-	-	5.12%

Note: % of TAC - based on TAC means the percentage of the Pacific cod TAC that each group of catcher vessels would be allowed to harvest prior to March 1. This percentage is calculated using TAC as the denominator. The row titled % of TAC - based on catch used total Pacific cod catch as the denominator.
Source: ADF&G fishtickets, NORPAC observer data, and historic TACs from NMFS web page for the years 1995-97.

The third category would apply sideboard caps to AFA catcher vessels during specific times of the year and/or to certain sectors. The Council's intent is that only catch taken during a symmetrical period in which the caps apply would be included when setting the caps. Therefore, if caps do not apply during a specific time of the year, the catch made during that same time of the year from 1995-97 would not be included in the caps. Option one would limit the catcher vessels to historic catch levels only when the "normal" pollock season is open. Two methods of defining the normal pollock fishery were provided. The first is based on the 1998 open access fishery dates (Table 7.26), and the second is based on the 1999 open access dates as modified by Steller sea lion concerns. The dates based on the 1999 seasons are not included in tabular form. Currently the dates for the "B" and "C" seasons are still being developed for 1999. Under these options the AFA catcher vessels

would no longer be bound by the caps during predefined times of the year. Essentially, they would not have caps when pollock was closed. Persons proposing this alternative argued that since the sideboards were designed to protect the non-pollock fleet from the effects of cooperatives, when the pollock fishery is closed there are not cooperative impacts. Everyone would be fishing in the open access mode and no one would be able to employ fishing strategies afforded by cooperatives that would give them an advantage over the rest of the fleet.

Table 7.26: 1998 BSAI pollock season dates

Area	Opened	Closed	Days Open	Sector
Dates the 1998 Directed Pollock Fishery Was Open				
Aleutian Islands	01/26/98	02/23/98	28	Offshore
Aleutian Islands	01/26/98	03/13/98	46	Inshore
Bering Sea	01/26/98	02/20/98	25	Offshore
Bering Sea	01/26/98	02/26/98	31	Inshore
Bering Sea	09/01/98	10/19/98	48	Offshore
Bering Sea	09/01/98	10/29/98	58	Inshore
1998 Pollock Seasonal Allowance Dates				
BS/AI	01/01/98	04/15/98	104	Both
BS/AI	09/01/98	11/01/98	61	Both

Source: NMFS Alaska Region Web Site

If the 1999 fishing seasons were used as the standard for when the sideboard caps apply, it may create opportunities for vessels to increase their harvests of a species like Pacific cod. Given that there is currently a period between the A1 and A2 pollock seasons when pollock fishing is closed for the inshore and catcher/processor sectors, AFA catcher vessels could harvest Pacific cod during those times and not have the harvests count towards their sideboard cap. This may give these vessels an advantage over the open access fleet during those seasons. Pollock vessels could move into Pacific cod between pollock seasons, but Pacific cod boats could not move into pollock if cod closes earlier than expected because of the pollock fleet's effort. Members of the non-pollock fleets may still perceive an AFA fleet without restrictions during specific times of the year as a threat.

A second option would allow catcher vessels that deliver to the mothership sector to operate outside of the BSAI groundfish caps prior to February 1. Under the current Steller sea lion protection measures the mothership sector of the pollock fishery does not open until February 1. This exemption would allow the catcher vessels delivering to motherships to be unconstrained by sideboards between the January 20th opening date for fishing with trawl gear in the BSAI and the February 1 start of the pollock season. It is unknown if they would exceed their traditional harvest in other fisheries under this exemption. However, the opportunity to do so would be available. After February 1 they would be constrained by their sideboard caps. The cap would be calculated based on their historic catch after February 1. Excluding the catch of sideboard species that occurred prior to February 1; will reduce the amount of the species that could be harvested when the caps apply. However, it is likely that the catcher vessels could harvest more of these species during the period prior

to February 1, than they had during the 1995-97 time period. Because during the years 1995-97 the vessels were likely targeting pollock prior to February 1.

The third option in this category would exempt AFA catcher vessels from the BSAI groundfish caps for the number days that the pollock fishery is closed by regulation, in excess of the five days mandated under the current Steller sea lion protection measures, for the catcher/processor and inshore sectors. The result of this action is to transfer some of the burden from the pollock fleet to the non-pollock fleet if the mandatory closed time between the A1 and A2 seasons increases, or the catcher vessels reach their A2 cap and the pollock fishery is closed by regulation prior to the end of February.

At this time, it is not possible to predict the behavior of vessels that will be fishing under a cooperative. It may be true that allowing AFA catcher vessels to operate outside of the sideboard caps, when the pollock fishery is closed, may not give them any advantage. On the other hand, they may be able to harvest their sideboard caps when the pollock fishery is open, and then continue targeting non-pollock groundfish species in the BSAI once the pollock fishery is closed. This type of behavior would allow them to increase their historic participation in non-pollock fisheries.

Providing an analysis showing the impacts of choosing one alternative over another, is not possible. To conduct such an analysis, it would be necessary to know which vessels will join cooperatives. Since that information is not available, another alternative would be to assume that vessels with less than a given level of pollock catch history would opt not to join the cooperatives, reasoning that, they would be better off outside the bounds of the sideboards. Determining the point at which vessel owners would decided to join a cooperative would also be difficult, and the results would likely be inaccurate. The data indicates that vessels with relatively small pollock histories would contribute relatively more of their overall catch history as sideboard caps for the sector (See Appendix II). Vessels with a smaller pollock history may have been operating in other fisheries, like Pacific cod or crab, during a part of the year when pollock was open. Therefore, they would take catch from their directed fisheries, which they accumulated while pollock was open, into a cooperative. Counting only harvests made in the non-pollock target fisheries would result in these vessels contributing an even larger portion of the catch history to the overall sideboard caps, relative to the other AFA catcher vessels.

7.5.1.3 Level at Which Sideboards are Monitored and Enforced

The Council considered two options for determining the level at which groundfish sideboards would be monitored and applied. One option would aggregate the sideboards by vessel class and sector. Vessel class is assumed to mean catcher vessels delivering to inshore processors, motherships, or catcher processors, and the sector is the more generic defined as AFA catcher vessels. The second option is to monitor and enforce these caps at the cooperative level. This option would require NMFS to monitor many more caps if several inshore cooperatives are formed. It may also raise confidentially issues if caps are set at the individual plant level. Additional clarification on the confidentiality issues would likely be required if this option was selected.

It is likely that members of the pollock industry would prefer that the sideboard caps are monitored at the cooperative level. The inshore sector provides the best example. Preliminary information suggests that seven companies are eligible to process BSAI pollock under the AFA. Each of these companies would be allowed to form a cooperative. Assuming that each company did form its own cooperative, each cooperative would have its own pollock allocation and sideboard cap. Sideboard caps would be determined based on the catch history of the catcher vessels joining a cooperative. Rationally using a cap is likely to be easier if the number of vessels that can harvest from the cap is reduced, and they are closely linked by a cooperative. It is the same logic that has lead members of industry to push for a Vessel Bycatch Accounting (VBA) program. Controlling

the actions of a small group is easier than controlling the actions of a large group. In a large group (i.e., the sector level), it is likely that vessels would rush to harvest the cap, to insure they harvest their share. Whereas, members of a smaller group might be more likely to reach an agreement regarding how the cap should be distributed, while operating under an open access race for the sideboard caps.

A third option, that was not included in the Council's list of alternatives, would be to monitor the cap across all sectors. One sideboard cap would be set for the entire fleet of AFA catcher vessels, and once the cap is reached they would all be required to stop fishing. This option would be easiest for NMFS to monitor, but is perhaps the least acceptable to the AFA fleet. Chapter 9 contains additional discussion on the issues of monitoring limits at the cooperative level.

7.5.1.4 Nature of Catcher Vessel Restrictions

Catcher vessel sideboard caps will be expressed as a percentage of the TAC for each GOA and BSAI groundfish species or species group. Once the TACs are set in given year, each catcher vessel's percentage of the total will be multiplied by the TAC to determine the metric tons of each species that vessel will be allowed to take with them into a cooperative. Aggregating each vessel's cap by cooperative or sector will determine the maximum amount of non-pollock groundfish those vessels will be allowed to harvest, as a group, under the sideboard caps.

7.5.2 Management Actions Resulting from Reaching the Groundfish Harvest Caps

The issue of what fisheries close when a cap is reached was discussed under the catcher/processor sideboard section. That same issue also needs to be decided for catcher vessels. Recall that there are two options. The first option would close the non-pollock groundfish fisheries when the cap is reached. The second option would close all groundfish fisheries (including pollock) for AFA catcher vessels. A detailed discussion of current fishery management practices was included at the end of Chapter 6.

Deciding which fisheries close when a cap is reached may very well depend on which fisheries were included in the numerator when calculating the cap. If only the catch of species taken during non-pollock fisheries are used to calculate the cap, the burden on industry would be much greater if attainment of a cap closed all fisheries. There are specific cases where this is especially true. Squid and certain rockfish species are good examples. If vessels only received sideboards cap history from non-pollock target fisheries, and all fisheries were closed when a cap was reached, they would not have enough squid to harvest their pollock allocation. However, the Council could take this into account and exempt certain species from the cap; much like was done for the CDQ groups with squid. If the cap only closed the non-pollock targets, these vessels would be allowed to harvest about their historic average of sideboard species (assuming bycatch levels in the pollock fishery remained constant), and be more likely to harvest their pollock allocations.

Catcher vessels are allowed to harvest groundfish in both the BSAI and GOA under AFA. Because they can fish both areas the problem is slightly more complex than it was for the catcher/processors. However, if we assume that reaching a cap in the BSAI would not close both the BSAI and GOA fisheries, or vise versa, then the problem is basically the same as discussed for catcher/processors. When a cap is reached in the BSAI, fisheries in which that species is harvested will be closed. The same would be true in the GOA. Reaching a GOA sideboard cap would close fisheries in the Gulf.

7.5.2.1 PSC Limits

The VBA Committee was requested by the Council, during their December 1998 meeting, to develop PSC sideboard caps for the AFA catcher vessel fleets that will be allowed to participate in non-pollock groundfish fisheries. Two alternatives for determining the caps were listed by the Council. The first option applied the VIP rates to target fishery catch to determine PSC caps. The second method would have applied an appropriate, yet unspecified, fraction of the VIP rates to determine the caps. A task for the Committee would have been to determine the appropriate fraction to apply.

After reviewing this task, the VBA Committee discussed the issue and included the following recommendation in their minutes from the January 7-8th meeting.

"In December, the Council tasked the VBA Committee with developing options for PSC caps for co-op vessels in non-pollock fisheries. The Committee reviewed this issue, and felt that it would be better to let the affected industry groups discuss this and report directly to the Council. However, the Committee suggests that, rather than use VIP rates to determine PSC caps, a better option would be based on catch history ratios (like suggested for the VBA pool limits)."

Based on the Committee recommendation, the historic catch ratios would be multiplied by the available PSC caps to determine the amount of each PSC species the vessels would be allowed to take into a co-op. The VBA Committee also indicated in their minutes that 5% of the caps could be set aside to reduce bycatch under the pilot program. It may also be possible to include that type of reduction in the sideboard caps if AFA members are included in the pilot program. However, it is important to note that under a VBA program the PSC limits would be vessel or "pool" specific allocations and not caps.

Upon receiving the Committee's advice, the Council revised their alternative for developing PSC caps. The new alternative would base the PSC caps on groundfish catch history ratios instead of VIP rates or historical PSC catch levels. Basing the PSC amounts on the percentage of groundfish harvested would not reward vessels for high amounts of PSC bycatch in the past, unless fishing practices were employed that increased target catch by using relatively larger amounts of PSC. Nonetheless, it is the intent of the Council not to reward "dirty" fishing when setting PSC bycatch caps.

PSC in the BSAI trawl fisheries was allocated between several target fishery groups during the years 1995-97. The most important of these groupings for catcher vessels were the Atka mackerel/pollock/other groundfish, Pacific cod, yellowfin sole, and rock sole/other flatfish targets. Catch ratios for those fishery groupings are reported in Table 7.27, along with estimated halibut PSC amounts based on these ratios. AFA catcher vessels had very limited or no PSC bycatch in the target fisheries that were excluded from this list (rockfish and Greenland turbot/arrowtooth/sablefish).

To determine the amount of PSC that AFA catcher vessels will be allocated under a sideboard cap, their percentage of a groundfish target cap, presented in Table 7.27, will be multiplied by the available PSC in that target fishery. It has yet to be determined if that cap will be managed as an overall cap or at the individual target fishery level. If the caps are managed at the target fishery level, then reaching the PSC cap in the Pacific cod fishery will shut down the AFA catcher vessel from targeting Pacific cod. However, if the caps are managed in total, then AFA catcher vessels could use halibut from their general reserve, that may have originally been earned in the yellowfin sole fishery, and continue fishing for Pacific cod. This would not change the likelihood that a portion of the trawl Pacific cod allocation would be rolled over into the fixed gear allocation in future years, because the overall halibut cap for Pacific cod would remain in place. Allowing

AFA vessels to shift PSC between target fisheries could reduce the amount of halibut PSC that could be used by non-AFA vessels in the Pacific cod fishery.

It is also important to note that using target fishery catch history to determine PSC allocations results in the same percentage of each PSC species being included in the cap. For example, based on the information presented in Table 7.27, the AFA catcher vessels would be capped at 49 percent of the halibut and crab PSC species allotted to the Pacific cod target fishery.

Table 7.27: Percent of future PSC caps based on catch history ratios of AFA catcher vessels to all vessels, for the years 1995-97, by PSC target fishery definition

PSC Target Categories	AFA Catcher Vessels - All Target Fisheries				
	CV Inshore 92 Vessels	CV to IN/MS 14 Vessels	CV to MS 7 Vessels	CV to CP 7 Vessels	All AFA CVs 120 Vessels
Percent of Future Year's PSC Allocation					
Atka mackerel/Pollock/Other Groundfish[2]	32%	7%	2%	3%	44%
Yellowfin Sole	10%	1%	0%	1%	12%
Pacific Cod[1]	38%	4%	1%	5%	49%
Rock sole/Other flatfish	13%	2%	1%	1%	17%
Future Year's Halibut Allocation (mt) based on 1999 PSCs and the Percentages Above					
Atka mackerel/Pollock/Other Groundfish[2]	80.0	17.5	5.0	7.5	110.0
Yellowfin Sole	100.5	10.5	0.0	10.5	121.5
Pacific Cod[1]	589.0	62.0	15.5	77.5	744.0
Rock sole/Other flatfish	103.5	16.0	8.0	8.0	135.5

Source: NMFS Blend data for the years 1995-97 for denominator, and Fishtickets and NORPAC Observer data 1995-97 for the numerator.

Notes:

1) Only 1997 data were used for the Pacific cod fishery.

2) Estimates for the Atka mackerel/Pollock/Other Groundfish category do not reflect the changes that have occurred in the pollock fishery for 1999.

Reaching a PSC cap will either close a target fishery, or a specific fishing area. For example, reaching a red king crab cap will not close a target fishery, but will close either Zone 1 or Zone 2 to trawl gear. Management of the AFA catcher vessel's PSC is expected to be treated in the same way. Once the AFA catcher vessels reach their Zone 1 red king crab cap, they will be required to stop trawling inside Zone 1, but they will not be required to stop fishing in other areas.

The Council also requested that staff review the historic PSC bycatch rates of the catcher vessel fleet. This information is presented in Tables 7.28 and 7.29, and focus on the pollock and Pacific cod fisheries, respectively. Each of the AFA and Non-AFA catcher vessels that had observed hauls in the BSAI from 1995-97 were included in this calculation. Observed catch in metric tons for each vessel, by target fishery, are reported in the far right hand column. That catch does not represent a vessel's total catch for the year, it is simply the amount of observed catch taken in the target fishery (pollock or Pacific cod). To mask the identity of the vessels with the largest harvests, their actual amounts have been replaced with a "floor" amount (e.g., vessels that caught more than >30,000 mt). The rates in the tables were calculated by dividing the PSC catch amounts by the target catch. Separate tables for the pollock and Pacific cod fisheries have been included. The bottom three rows of each table summarize the overall difference between all AFA catcher vessels and all non-AFA catcher vessels.

Table 7.28: PSC bycatch ratios in the pollock target fisheries, 1995-97

Vessel	Halibut	Herring	C. opilio	C. Bairdi	Red King	Chinook	Other Salmon	Target
AFA - 1	0.00004	0.00024	0.01027	0.00022	0.00000	0.04394	0.04038	22,282
AFA - 10	**0.02761**	0.00000	0.00000	0.00000	0.00000	**0.07829**	0.00000	13
AFA - 100	0.00020	0.00055	0.00040	0.00000	0.00000	0.03411	0.01307	2,526
AFA - 101	0.00023	0.00060	0.00000	0.00000	0.00000	0.02732	**0.09028**	11,719
AFA - 102	**0.00088**	0.00100	0.00000	**0.04019**	0.00000	**0.10157**	**0.08426**	2,218
AFA - 103	0.00015	**0.00566**	0.00000	0.00000	0.00000	**0.33509**	**0.21888**	224
AFA - 104	**0.00030**	0.00101	**0.05829**	**0.12470**	0.00000	0.01794	0.05303	6,411
AFA - 105	**0.00028**	0.00071	0.00000	0.00000	0.00000	0.04483	**0.12159**	1,174
AFA - 106	0.00021	**0.00203**	0.00099	0.00000	0.00000	**0.09050**	**0.07952**	2,013
AFA - 107	0.00003	**0.00207**	0.00000	0.00000	0.00000	0.01647	0.01764	>30,000
AFA - 108	**0.00043**	**0.00239**	0.00010	**0.02766**	0.00000	**0.07621**	**0.12794**	10,319
AFA - 109	0.00009	0.00062	0.00000	0.00000	0.00000	**0.08133**	0.01094	831
AFA - 11	**0.00034**	0.00007	**0.02223**	**0.02712**	0.00000	0.03810	0.03184	5,177
AFA - 110	0.00012	0.00024	0.00917	**0.01372**	**0.00394**	**0.06665**	0.02139	28,992
AFA - 111	**0.00036**	0.00086	**0.03278**	**0.06057**	0.00000	**0.05102**	**0.12684**	8,126
AFA - 112	**0.00075**	0.00061	0.00042	0.00067	0.00092	**0.06505**	**0.06352**	18,418
AFA - 113	**0.00181**	0.00000	**6.03897**	**6.03897**	0.00000	0.00000	0.00000	11
AFA - 114	0.00020	0.00066	0.00029	-0.00077	0.00000	**0.06009**	**0.14735**	10,345
AFA - 115	**0.00119**	**0.00142**	**0.12634**	**0.03744**	0.00011	0.02903	0.01513	18,438
AFA - 116	**0.00040**	0.00071	0.00011	**0.03579**	0.00000	0.03319	0.04905	9,023
AFA - 117	0.00018	0.00066	**0.02569**	**0.01858**	0.00000	0.04050	**0.17780**	7,992
AFA - 118	0.00009	0.00016	0.00000	0.00059	0.00000	**0.05758**	0.01543	1,685
AFA - 12	**0.00036**	0.00051	0.00032	0.00000	0.00000	**0.05949**	**0.31093**	6,243
AFA - 13	0.00022	0.00029	0.00000	0.00152	0.00000	0.03594	0.04934	5,578
AFA - 14	**0.00073**	**0.00319**	0.00459	**0.01778**	0.00000	0.01888	0.02017	20,917
AFA - 15	0.00011	**0.00240**	0.00387	0.00000	0.00000	**0.08114**	**0.07316**	20,799
AFA - 16	**0.00340**	0.00000	0.00000	0.00000	0.00000	**0.12177**	0.00000	128
AFA - 17	0.00016	**0.00248**	0.00820	0.00000	0.00000	0.03356	0.04661	>30,000
AFA - 18	0.00007	0.00006	0.00000	0.00000	0.00000	**0.04720**	0.01067	5,636
AFA - 19	**0.00030**	0.00014	0.00046	0.00137	0.00000	**0.06714**	**0.12871**	2,189
AFA - 2	0.00023	**0.00229**	0.00064	0.00021	0.00000	**0.05951**	**0.05736**	4,699
AFA - 20	0.00005	**0.00288**	0.00000	0.00000	0.00000	**0.49315**	**0.23014**	2,160
AFA - 21	0.00013	**0.00752**	0.00000	0.00000	0.00000	**0.12591**	**0.21056**	874
AFA - 22	**0.00036**	0.00008	0.00000	0.00000	0.00000	0.04142	0.01797	2,115
AFA - 23	0.00018	0.00057	0.00019	0.00000	0.00000	0.03319	**0.06545**	15,121
AFA - 24	**0.00099**	0.00006	0.00126	**0.05587**	0.00000	**0.05044**	**0.15259**	793
AFA - 25	**0.00039**	**0.00662**	0.00651	0.00650	0.00000	**0.04636**	**0.06223**	3,948
AFA - 26	0.00000	0.00000	0.00000	0.01007	0.00000	0.00000	**0.08058**	99
AFA - 27	**0.00028**	0.00008	**0.01681**	0.00000	0.00000	0.03363	0.00912	24,972
AFA - 28	**0.00025**	**0.00206**	0.00029	0.00000	0.00000	**0.06996**	0.05102	3,430
AFA - 29	**0.00068**	**0.00640**	**0.04273**	**0.03617**	0.00006	0.04001	0.01964	17,366
AFA - 3	**0.00119**	**0.00578**	**0.09422**	**0.02578**	0.00000	**0.06958**	0.04799	6,314
AFA - 30	**0.00050**	0.00024	0.01096	**0.01280**	0.00000	0.03536	0.01024	16,534
AFA - 31	0.00019	0.00056	0.00010	0.00000	0.00000	**0.05313**	**0.12539**	10,208
AFA - 32	0.00008	0.00081	0.00000	0.00129	0.00000	**0.07700**	0.02681	29,789
AFA - 33	0.00004	0.00010	0.00000	0.00000	0.00000	0.04231	0.03135	21,081
AFA - 34	0.00009	0.00045	**0.03854**	0.00635	0.00079	0.01379	**0.12985**	6,329
AFA - 35	0.00011	**0.00293**	0.00491	0.00213	0.00000	**0.05343**	0.01594	7,528

Table 7.28 continued

AFA - 36	**0.00033**	0.00104	**0.06448**	0.00189	**0.02757**	**0.05086**	**0.11338**	8,448
AFA - 37	0.00009	0.00013	0.00000	**0.04483**	0.00000	0.03364	0.03568	4,522
AFA - 38	0.00005	0.00062	0.00016	0.00019	0.00000	**0.07809**	**0.07232**	6,205
AFA - 39	0.00020	0.00023	**0.02702**	**0.06249**	0.00000	**0.05240**	0.04746	1,011
AFA - 4	0.00022	0.00068	**0.01785**	**0.08594**	0.00000	0.04322	**0.14239**	7,051
AFA - 40	0.00019	0.00038	**0.15389**	0.00124	0.00000	0.00932	0.00786	5,585
AFA - 41	0.00008	0.00092	**0.02759**	0.00000	0.00000	0.03031	0.01277	>30,000
AFA - 42	**0.00024**	0.00122	0.00037	0.00000	0.00000	0.03593	**1.05120**	2,672
AFA - 43	**0.00024**	0.00010	**0.01664**	**0.02418**	0.00000	**0.05581**	0.04242	6,128
AFA - 44	0.00002	0.00013	0.00000	0.00109	**0.00109**	**0.06848**	**0.19864**	921
AFA - 45	**0.00037**	0.00060	**0.03009**	0.00379	0.00000	0.02542	0.05084	5,547
AFA - 46	0.00018	0.00018	0.00000	0.00328	0.00000	**0.06961**	0.03074	8,231
AFA - 47	**0.00137**	**0.00187**	**0.13471**	0.00000	0.00000	**0.13293**	**0.18786**	1,802
AFA - 48	0.00023	0.00096	0.00927	0.00008	0.00000	0.01936	0.02934	25,218
AFA - 49	0.00023	0.00071	0.00000	0.00000	0.00000	0.04400	**0.11944**	14,110
AFA - 5	0.00005	0.00021	0.00000	0.00000	0.00000	**0.06938**	0.01596	5,324
AFA - 50	0.00002	**0.00274**	0.00004	0.00000	0.00000	**0.10915**	0.01992	25,769
AFA - 51	0.00005	0.00033	0.00000	0.00000	0.00000	**0.09165**	**0.13920**	4,407
AFA - 52	0.00016	0.00106	0.00041	0.00000	0.00000	0.01422	**0.13374**	7,232
AFA - 53	0.00012	**0.00314**	0.00015	0.00044	0.00000	**0.05473**	0.04218	6,757
AFA - 54	**0.00776**	0.00002	0.00000	0.00000	0.00000	0.01276	**0.15316**	78
AFA - 55	0.00006	**0.00317**	0.00000	**0.04462**	0.00000	0.01559	0.02058	7,637
AFA - 56	**0.00029**	**0.00299**	0.00000	0.00017	0.00000	**0.07874**	0.05595	5,987
AFA - 57	0.00010	0.00044	0.00250	0.00023	0.00000	0.03761	**0.09916**	4,395
AFA - 58	0.00012	0.00021	0.00068	0.00078	0.00036	**0.07917**	0.02378	19,228
AFA - 59	**0.00025**	0.00041	0.00000	0.00000	0.00000	**0.04973**	**0.27866**	466
AFA - 6	0.00011	0.00071	0.00067	0.00000	0.00000	0.02147	0.02181	6,007
AFA - 60	0.00015	0.00098	0.00000	0.00000	0.00000	**0.23079**	**0.23883**	622
AFA - 61	**0.00025**	0.00084	**0.01755**	**0.12634**	0.00000	0.01332	**0.10502**	11,692
AFA - 62	0.00008	0.00085	0.00110	0.00055	0.00000	0.03496	**0.09908**	1,813
AFA - 63	**0.00050**	0.00099	**0.16460**	**0.16045**	**0.08527**	0.01589	**0.06405**	6,345
AFA - 64	0.00022	0.00084	0.00000	**0.01754**	0.00000	0.04528	0.05505	5,377
AFA - 65	**0.00029**	0.00000	0.00000	0.00000	0.00000	**0.11051**	**0.19893**	181
AFA - 66	0.00010	**0.00143**	0.00008	0.00000	0.00000	0.04014	0.02497	>30,000
AFA - 67	0.00003	0.00024	0.00000	0.00000	0.00000	**0.06081**	0.02635	4,449
AFA - 68	0.00003	0.00034	0.00000	0.00000	0.00000	**0.13927**	**0.13927**	108
AFA - 69	**0.00088**	0.00009	0.00000	0.00000	0.00000	**0.05666**	**0.08998**	300
AFA - 7	0.00023	0.00057	**0.05395**	0.00546	0.00000	0.02329	**0.09941**	22,483
AFA - 70	**0.00297**	0.00000	0.01064	0.00000	0.00000	0.03192	**0.10641**	94
AFA - 71	**0.00040**	0.00073	**0.03432**	0.00000	0.00000	**0.46908**	**0.24026**	87
AFA - 72	0.00004	0.00101	0.00000	0.00000	0.00000	**0.08214**	**0.06194**	19,432
AFA - 73	0.00013	0.00005	0.00000	0.00000	0.00000	**0.04800**	**0.11294**	354
AFA - 74	0.00003	0.00038	0.00000	0.00000	0.00000	0.04444	0.02540	17,475
AFA - 75	0.00009	0.00074	0.00000	0.00000	0.00000	0.04355	**0.11230**	436
AFA - 76	0.00001	0.00000	0.00000	0.00000	0.00000	0.01510	0.00000	331
AFA - 77	0.00021	0.00056	0.00014	**0.01648**	0.00000	**0.06614**	0.03623	6,900
AFA - 78	0.00007	0.00102	0.00187	0.00000	0.00000	0.04172	0.05591	1,663
AFA - 79	0.00008	0.00079	0.00011	0.00015	0.00000	**0.04942**	0.02834	26,475
AFA - 8	**0.00029**	0.00062	0.00000	**0.24356**	**0.01456**	**0.05256**	0.00049	2,041

Table 7.28 continued

AFA - 80	0.00006	0.00017	0.00893	0.00744	0.00074	0.02331	0.03808	1,344
AFA - 81	0.00002	0.00044	0.00000	0.00000	0.00000	0.04102	0.04063	19,068
AFA - 82	**0.00058**	0.00083	**0.26502**	0.00000	0.00000	0.00892	**0.14108**	7,179
AFA - 83	**0.00044**	0.00087	0.00036	0.00000	**0.00864**	**0.05017**	**0.13285**	8,249
AFA - 84	0.00018	**0.00276**	0.00013	0.00007	0.00000	0.03228	**0.06331**	15,118
AFA - 85	0.00016	0.00014	0.00000	**0.03460**	0.00000	0.04011	0.00811	2,487
AFA - 86	**0.00049**	0.00105	**0.12315**	0.00000	0.00000	0.03374	**0.15087**	8,655
AFA - 87	0.00003	**0.00143**	0.00000	0.00000	0.00000	0.02609	0.02077	3,994
AFA - 88	0.00023	0.00052	0.00000	0.00000	0.00000	0.02039	**0.06750**	10,075
AFA - 89	0.00007	0.00042	0.00024	0.00012	0.00000	**0.06200**	**0.06649**	8,480
AFA - 9	0.00005	0.00020	0.00000	0.00071	0.00000	**0.09608**	**0.23298**	1,415
AFA - 90	0.00008	**0.00258**	0.00116	0.00116	0.00000	**0.31394**	**0.30818**	859
AFA - 91	**0.00050**	0.00074	0.00503	**0.04112**	0.00000	0.04518	**0.12266**	10,815
AFA - 92	0.00016	0.00106	0.00000	0.00000	0.00000	0.04508	0.02413	4,537
AFA - 93	0.00011	0.00072	0.00000	0.00013	0.00000	0.04444	0.05203	7,768
AFA - 94	0.00007	0.00000	0.00000	0.00000	0.00000	0.04611	0.00000	369
AFA - 95	**0.00103**	**0.00194**	0.00000	**0.07884**	0.00030	0.01228	**0.07552**	3,297
AFA - 96	**0.00048**	0.00026	0.00029	0.00000	0.00000	**0.05070**	**0.12798**	3,399
AFA - 97	0.00004	0.00002	0.00000	-0.00398	0.00000	0.01621	0.01390	1,298
AFA - 98	**0.00049**	0.00061	0.00007	0.00022	0.00000	0.04257	**0.06018**	13,459
AFA - 99	0.00015	0.00011	0.00000	0.00000	0.00000	0.04440	0.02537	788
Non - AFA -3	0.00006	0.00082	0.00000	0.00000	0.00000	0.01987	**0.13512**	252
Non- AFA - 8	**0.00048**	0.00001	0.00000	0.00000	0.00000	**0.05592**	**0.31688**	54
Non-AFA - 1	0.00000	0.00010	0.00000	0.00000	0.00000	0.04419	**0.07364**	68
Non-AFA - 2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	14
Non-AFA - 4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	13
Non-AFA - 7	**0.00040**	0.00002	0.00000	0.00000	0.00000	0.00000	0.02687	119
Non-AFA -5	**0.00250**	0.00000	**3.23154**	0.00000	0.00000	0.00000	0.00000	15
Non-AFA -6	0.00000	0.00000	0.00000	0.00000	0.00000	0.01577	0.00000	127
Non-AFA -9	0.00005	0.00005	0.00000	0.00000	0.00000	0.03210	**0.12304**	187
AFA CV Avg.	**0.00023**	**0.00123**	0.01507	**0.01026**	**0.00099**	**0.04617**	0.05637	1,033,638
Non-AFA CV Avg.	0.00016	0.00027	**0.05854**	0.00000	0.00000	0.02242	**0.09699**	848
All CVs Avg.	0.00023	0.00123	0.01511	0.01025	0.00099	0.04615	0.05640	1,034,485
AFA CP Avg	0.00027	**0.00073**	0.16879	0.05790	0.00344	0.01868	**0.03592**	957,688
Non-AFA CP Avg	**0.00255**	0.00034	**2.80699**	**1.94940**	**0.0355**	**0.02569**	0.01199	79,359
All CPs	0.00044	0.00070	0.36196	0.19640	0.00579	0.01920	0.03416	1,037,047

Source: Observed hauls in the Norpac Observer data base, 1995-97

Notes:

1) A bolded number means that vessel was above the fleet average.

2) Herring and halibut rates are PSC (mt) / Target (mt). Crab and salmon are PSC (animals)/Target (mt)

Table 7.29: PSC bycatch ratios in the Pacific cod target fisheries, 1995-97

Vessel	Halibut	Herring	C. opilio	C. Bairdi	Red King	Chinook	Other Salmon	Target
AFA - 1	0.01800	0.00000	0.78297	**1.25782**	0.00000	**0.64669**	0.00000	315
AFA - 10	**0.03212**	0.00000	0.00000	0.00000	0.00000	0.03678	0.00525	190
AFA - 100	**0.03348**	0.00000	0.05655	0.36001	0.00000	**0.12629**	0.00000	513
AFA - 101	0.02149	0.00000	0.47235	**4.05024**	0.00000	0.02011	**0.05384**	149
AFA - 102	0.00981	0.00000	0.02740	0.06561	0.00000	**0.09479**	0.00056	1,778
AFA - 104	0.02452	0.00000	0.25891	**4.23448**	0.00000	**0.08823**	0.00000	400
AFA - 105	0.01465	0.00000	0.31747	0.07851	0.00000	0.01996	0.00000	1,655
AFA - 106	**0.08034**	**0.00003**	14.10415	**13.73087**	0.00000	0.00000	0.00000	212
AFA - 107	0.01931	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	47
AFA - 108	0.02032	0.00000	0.64164	1.05426	0.00000	**0.08495**	0.00000	800
AFA - 109	**0.03338**	0.00000	0.00000	0.11939	0.00000	0.00000	0.00000	340
AFA - 11	**0.03501**	0.00000	2.30247	0.59580	**0.01616**	0.00404	0.00135	742
AFA - 110	0.02648	0.00000	1.76514	**1.17104**	0.00000	0.00670	**0.12824**	597
AFA - 111	0.01963	**0.00044**	0.93512	1.04160	0.00000	0.05396	0.00000	836
AFA - 112	**0.04972**	0.00000	0.69945	0.84677	**0.05077**	0.06443	0.00058	1,726
AFA - 113	0.01392	0.00000	0.70889	0.58803	0.00000	0.00471	0.00000	637
AFA - 114	**0.06811**	0.00000	3.68078	0.00000	0.00000	0.00000	0.00000	29
AFA - 115	**0.04089**	0.00002	3.73462	**2.17919**	0.00285	**0.24415**	0.00095	>2,000
AFA - 116	**0.04231**	**0.00007**	0.75734	**2.51259**	0.00000	**0.17275**	0.00000	820
AFA - 117	0.02581	0.00000	0.04455	0.13365	0.00000	0.05092	0.00000	157
AFA - 118	0.02005	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	57
AFA - 13	**0.03271**	0.00000	0.52566	**1.30164**	**0.06250**	0.00387	0.00000	775
AFA - 14	0.02295	0.00000	0.14676	**1.30487**	0.00000	0.05055	0.00000	>2,000
AFA - 15	0.01957	0.00000	3.75804	1.04495	0.00000	0.00000	0.00000	1,436
AFA - 16	**0.04906**	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	169
AFA - 17	0.00027	0.00000	0.12693	0.12693	0.00000	0.03505	0.00000	200
AFA - 18	0.02412	0.00000	0.01518	0.11216	0.00137	0.01647	0.00000	729
AFA - 19	0.02440	0.00000	0.83678	0.37337	0.00000	0.00173	0.00000	578
AFA - 2	**0.02806**	0.00000	0.95651	0.06116	0.00000	0.03200	0.00101	989
AFA - 20	0.00011	**0.00421**	0.00000	0.00000	0.00000	**1.30525**	**0.32631**	6
AFA - 21	0.01471	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	80
AFA - 22	0.02106	0.00000	0.00000	0.54985	0.00000	0.00000	0.00000	375
AFA - 23	0.01569	0.00000	0.00827	0.31770	0.00000	0.00267	0.00267	375
AFA - 24	**0.04157**	0.00000	0.35985	**1.84053**	0.00000	0.00000	0.00000	191
AFA - 25	0.01578	0.00000	0.28541	0.08748	0.00000	0.01242	0.00000	1,050
AFA - 27	0.01678	0.00000	2.31278	0.35902	0.00000	0.00000	0.00000	486
AFA - 28	0.01880	0.00000	1.02669	0.19289	0.00000	**0.13529**	0.00000	474
AFA - 29	**0.02934**	0.00000	2.01369	**2.86021**	0.00052	**0.09157**	0.00000	1,917
AFA - 3	**0.02912**	0.00002	1.72415	0.34193	0.00000	0.00952	**0.03983**	1,155
AFA - 30	**0.08759**	0.00000	11.93368	**1.67153**	0.00000	**0.15884**	0.00000	434
AFA - 31	0.01422	0.00000	0.54516	0.76346	0.00000	**0.28710**	0.00000	78
AFA - 32	**0.06447**	0.00000	0.53415	**11.64255**	0.00000	**0.12125**	0.00000	279
AFA - 33	**0.02840**	0.00000	0.13659	0.00000	0.00000	0.03916	0.00000	299
AFA - 34	**0.03828**	0.00000	5.45194	**12.95646**	0.00000	**0.19886**	0.00000	357

Table 7.29 continued

AFA - 35	**0.06143**	**0.00003**	0.22886	0.03081	0.00000	0.02641	0.00000	227
AFA - 36	0.01667	0.00000	2.10134	**1.17788**	0.00000	**0.15494**	0.00099	1,009
AFA - 37	**0.05286**	**0.00003**	0.00000	0.06467	0.00000	**0.12892**	0.00000	233
AFA - 38	**0.02798**	0.00000	2.07291	**2.11725**	0.00000	0.00000	0.00000	738
AFA - 39	**0.02774**	0.00000	0.89655	0.53641	0.00000	0.02170	0.00000	1,307
AFA - 4	**0.06068**	0.00000	1.54228	**1.86447**	0.00000	0.00000	0.00000	398
AFA - 40	0.00485	0.00000	0.00000	0.12933	0.00000	0.02677	0.00000	1,225
AFA - 41	**0.04047**	0.00000	0.00000	**4.58215**	0.00000	0.00000	0.00000	7
AFA - 43	0.02421	0.00000	0.27751	0.71346	0.00000	0.01908	0.00000	891
AFA - 44	0.02395	0.00000	0.00000	**2.37172**	0.00000	0.00000	0.00000	85
AFA - 45	0.02528	0.00000	2.91803	**1.57814**	0.00000	**0.15334**	0.00000	327
AFA - 46	**0.06319**	0.00000	0.20360	**3.20219**	0.00000	**0.13121**	0.00000	249
AFA - 47	0.02536	0.00000	0.60546	0.23854	0.00000	0.00101	0.00051	1,978
AFA - 48	**0.10328**	0.00000	0.82115	**1.37942**	0.00000	**0.13945**	0.00102	982
AFA - 49	0.01986	0.00000	0.39322	0.14422	0.00000	0.00739	**0.01222**	327
AFA - 5	0.01471	0.00000	0.06948	**2.55531**	0.00000	**0.36625**	0.00000	198
AFA - 50	**0.02774**	0.00000	0.30356	**8.96878**	0.00000	0.05897	0.00000	373
AFA - 52	0.02458	0.00000	0.98974	0.50787	0.00000	0.00000	0.00000	764
AFA - 53	0.02278	0.00000	0.35713	0.13574	0.00000	0.01584	0.00000	442
AFA - 54	**0.03861**	0.00000	0.08129	0.94114	0.00000	0.00581	0.00000	172
AFA - 55	0.02257	0.00000	0.00000	**2.62561**	0.00000	**0.25727**	0.00000	396
AFA - 56	**0.04479**	0.00000	0.11734	0.96071	**0.12275**	**0.17837**	0.00000	399
AFA - 57	**0.04334**	0.00000	1.18174	**1.71718**	0.00000	**0.66879**	0.00000	558
AFA - 58	0.02238	0.00000	0.26903	0.43682	**0.01077**	0.05612	0.00067	1,485
AFA - 59	0.02089	0.00000	1.15877	0.21511	0.00000	0.05293	0.00000	741
AFA - 6	**0.02839**	**0.00029**	0.08755	0.05942	0.00000	0.01082	**0.05547**	739
AFA - 60	0.00952	**0.00003**	0.84910	0.01416	0.00000	0.02023	0.00506	989
AFA - 61	**0.03511**	0.00000	0.00000	0.17047	**0.03008**	**0.10028**	0.00000	100
AFA - 62	0.01802	0.00000	0.00447	0.13996	0.00000	0.00894	0.00000	447
AFA - 63	0.00514	0.00000	0.00000	0.19829	**0.05263**	0.00000	0.00000	1,538
AFA - 64	**0.02911**	**0.00010**	0.32994	0.22833	0.00000	0.00000	0.00000	635
AFA - 66	0.02041	0.00000	7.22967	**2.09241**	0.00000	**1.27084**	0.00000	22
AFA - 67	0.01529	0.00000	0.42704	0.07415	0.00000	0.00182	0.00000	550
AFA - 69	**0.02913**	0.00000	0.00000	0.28025	0.00000	0.00000	0.00000	121
AFA - 7	0.01764	**0.00039**	1.78677	0.21503	0.00000	0.04306	0.00000	828
AFA - 72	**0.04379**	0.00001	0.20379	0.00000	0.00000	0.00000	0.00000	290
AFA - 73	**0.04065**	0.00000	0.92212	**1.60295**	0.00000	0.01713	0.00000	234
AFA - 76	0.01084	0.00000	0.00000	0.71824	0.00000	**0.63234**	0.00000	85
AFA - 77	**0.07102**	0.00000	2.37053	0.79046	0.00000	0.01543	0.00000	259
AFA - 78	**0.04645**	0.00000	0.00000	**3.03838**	0.00000	0.00000	0.00000	39
AFA - 79	**0.04020**	**0.00006**	0.18802	0.42714	0.00000	0.03196	0.00564	532
AFA - 8	0.01012	0.00000	0.01236	0.18596	0.00000	0.02162	0.00000	324
AFA - 80	**0.04203**	0.00000	0.56997	0.91308	**0.01656**	0.01656	0.00000	60
AFA - 81	**0.07361**	0.00000	0.33378	0.29002	0.00000	0.00282	0.00564	354
AFA - 82	**0.03863**	0.00000	3.68395	0.90967	0.00000	**0.13448**	0.00000	552

Table 7.29 continued

AFA - 83	**0.03237**	**0.00004**	0.25815	0.12011	0.00163	**0.06832**	0.00000	615
AFA - 84	0.01915	0.00000	0.80612	**1.07810**	0.00042	0.00042	0.00000	>2,000
AFA - 85	0.01950	0.00000	0.05135	0.44086	0.00000	**0.20880**	0.00000	439
AFA - 86	**0.03078**	0.00000	1.17787	**1.62270**	0.00000	**0.10675**	**0.11420**	1,033
AFA - 87	**0.04381**	0.00000	1.67037	**6.00052**	0.00000	0.00284	0.00000	352
AFA - 88	0.01375	**0.00017**	0.11266	**1.54780**	0.00000	0.01437	0.00000	489
AFA - 89	**0.03487**	0.00000	0.28545	0.15111	0.00000	**0.12557**	0.00000	546
AFA - 9	0.01851	0.00000	0.01996	1.00447	0.00000	0.01397	0.00000	501
AFA - 90	0.02364	0.00000	4.75925	**1.55468**	0.00000	**0.63316**	0.00000	154
AFA - 91	**0.03120**	0.00000	1.45560	**1.20568**	0.00000	**0.15911**	0.00000	505
AFA - 92	0.02493	0.00000	0.67740	**1.12075**	0.00000	0.00680	0.00000	588
AFA - 93	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8
AFA - 95	**0.03355**	0.00000	3.82972	**2.15125**	0.00000	**0.11605**	**0.08495**	760
AFA - 96	0.02409	0.00000	0.29432	0.27129	0.00000	0.00200	**0.02197**	501
AFA - 97	0.02051	0.00000	0.53552	0.73298	0.00000	**0.28618**	**0.23185**	188
AFA - 98	0.01970	0.00000	0.03963	0.04294	**0.00824**	0.00996	0.00088	>2,000
AFA - 99	**0.02799**	0.00000	0.00000	0.05758	0.00000	0.00288	0.00000	347
Non - AFA -3	0.01673	0.00000	0.16980	0.00000	0.00000	0.05267	0.00000	278
Non- AFA - 8	**0.03433**	0.00000	2.00975	**2.36743**	0.00000	0.00000	0.00000	105
Non-AFA - 2	**0.03117**	0.00000	1.91231	0.36856	0.00000	0.00000	0.00000	105
Non-AFA - 4	0.00915	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	45
Non-AFA -5	0.01251	0.00000	2.94668	0.58600	0.00217	0.03593	0.00217	462
Non-AFA -6	0.01600	0.00000	0.79276	0.66763	0.00000	**0.13374**	0.00000	704
AFA Avg.	**0.02765**	**0.00002**	1.04475	**1.07042**	**0.00498**	0.06583	**0.00668**	65,655
Non-AFA Avg.	0.01705	0.00000	1.39923	0.60452	0.00059	**0.07382**	0.00059	1,699
All Vessels Avg.	0.02739	0.00002	1.05369	1.05867	0.00487	0.06604	0.00653	67,354
AFA CP Avg.	0.01197	**0.00044**	0.84046	2.43699	0.01994	**0.11713**	0.00713	23,473
Non-AFA CP Avg	**0.04144**	0.00008	**11.44726**	**9.32298**	**0.12270**	0.10537	**0.02346**	16,753
All CPs Avg.	0.0242	0.00029	5.25799	5.30488	0.06274	0.11223	0.01403	40,226

Source: Observed hauls in the Norpac Observer data base, 1995-97

Notes:

1) A bolded number means that vessel was above the fleet average.

2) Herring and halibut rates are PSC (mt) / Target (mt). Crab and salmon are PSC (animals) / Target (mt)

Table 7.30 reports the AFA catcher vessels observed PSC catch for 1997 and provides an estimate of bycatch needs, had the pollock fishery been conducted entirely in a pelagic mode, based on 1999 TACs, as requested by the Council. These estimates should only be considered as rough approximations of future needs. The numbers of crab required are especially small. Excluding all harvests where no more than 20 crab were caught reduces the estimated crab needs to a level where a single tow could produce enough bycatch to exceed the cap. Imposing restrictions that severe could penalize the entire AFA for a single mistake made by a captain. Therefore, these numbers should reflect the absolute minimum amount of bycatch needed, if the fishery were conducted with few or no "bad" tows.

Table 7.30: PSC catch and estimated bycatch needs in the BSAI pollock fisheries

	1997 Observed Catch			Estimates of PSC Needs[1]	
AFA Vessels	All	20 Crabs[2]	Pelagic Gear[3]	20 Crabs[2]	Pelagic Gear[3]
Pollock (mt)	307,440	305,826	289,843	529,243	529,243
Chinook Salmon	21,730	21,433	21,005	24,315	24,694
Other Salmon	25,110	25,109	23,183	29,938	29,600
Herring (mt)	506	506	490	651	657
Halibut (mt)	109	90	48	106	60
Red King Crab	141	27	-	15	56
C. opilio	9,998	145	1,552	123	1,810
C. bairdi	3,505	61	344	122	2,212

Source: NMFS Observer Data from the Years 1995-97

1) Estimates of PSC needs in future years were calculated based on the portion of the 1999 TACs that would be harvested by catcher vessels in the pollock target fishery, multiplied by the average PSC bycatch rates in the pollock target fishery from 1995-97.

2) Only observations that had less than 20 crabs in a haul were included

3) Only observations were pelagic gear was used are included (for definition of pelagic gear see Chapter 6).

The estimates above are based on assigning each haul to a specific target fishery, and then selecting only hauls where pollock was the target fishery. NMFS assigns target fisheries by week, zone (NMFS three digit location code), gear type, and processor, not on a haul-by-haul basis. Generally small differences resulted from using these target definitions to determine PSC bycatch needs in the pelagic pollock fishery, because pollock is a relatively clean fishery with high catch rates. Fisheries that have more diversity in the species mix, would likely have larger differences when the two methods were used. Table 7.31 shows the differences in PSC catch in the pollock fishery that result from both target methods. A sample of over 20,000 haul records where species composition was sampled from 1995-97 was used to test the difference between both methods.

Table 7.31: Comparison of Catcher Vessel PSC bycatch in the BSAI pollock fisheries from 1995-97, when a per haul target calculation is used instead of a weekly aggregation

AFA Catcher Vessels	20 Crabs[1]		Pelagic Gear[2]	
	Target by Haul[3]	Target by Week[4]	Target by Haul	Target by Week
Chinook Salmon	40,046	40,152	39,898	39,994
Other Salmon	33,150	33,293	32,992	33,134
Herring (mt)	1,105	1,280	1,102	1,276
Halibut (mt)	150	144	66	67
Red King Crab	30	10	1	1
C. opilio	165	212	395	409
C. bairdi	181	141	97	163

Source: NMFS Observer Data from the Years 1995-97.
1) Only observations that had less than 20 crabs in a haul were included.
2) Only observations where pelagic gear was used are included (for definition of pelagic gear see Chapter 6).
3) Target fisheries were determined for each haul that was sampled for species composition in the Observer database.
4) Target fisheries were determined at the vessel level for weekly aggregations in each zone fished.
Note: A matched pairs t-test revealed no significant difference between each targeting method at a significance level of 10%, and a similar test yielded the same results when the two methods were compared for PSC bycatch of AFA catcher processors.

7.6. GOA Sideboards

Sideboard alternatives for the GOA are slightly different from those developed for the BS/AI. The Council was clear that the sideboards are caps and not allocations, and stated that target catch of non-flatfish species available to AFA catcher vessels should be limited to the average catch, by target species, based on average catch history during the years 1995-97. Staff has assumed that this calculation is equivalent to dividing the AFA catcher vessel's total harvest of those species by the total harvest of all vessels. The resulting percentage is the portion of the TAC that AFA catcher vessels could harvest up to under a sideboard cap. A suboption also exists to release the sideboard caps, by quarter, in proportion to when the catch used to determine the sideboards was harvested.

7.6.1 Deep and Shallow Water Flatfish Sideboard Caps

Harvests of GOA flatfish species have traditionally been limited by halibut bycatch. Setting appropriate halibut sideboard caps would constrain the amount of deep and shallow water flatfish that could be harvested by AFA catcher vessels to approximately their traditional levels. This assumes that the ratio of halibut bycatch to flatfish target catch remains fairly consistent in future years. It also assumes that the non-AFA catcher vessels are willing to allow some increases in AFA catcher vessel catch of flatfish species, if the ratio of halibut to target catch decreases. Discussions with members of industry indicated this was not a serious problem, because there is a portion of the flatfish TAC left on the table most years.

The alternative proposed for calculating halibut bycatch sideboard caps multiplies the historic target catch in those fisheries by the average halibut bycatch rate and the current mortality rates. This calculation will determine the amount of halibut available to AFA catcher vessels, and so long as PSC caps are managed at

the target fishery level, setting specific deep and shallow water flatfish caps may be unnecessary. If AFA vessel PSC caps are managed by NMFS in aggregate and not at the target fishery level, then limiting catch in the deep and shallow water flatfish complexes this way may raise some concern. AFA catcher vessels might have the opportunity to shift halibut from other GOA target fisheries, Pacific cod or pollock for example, for use in the flatfish targets, and thus expand their catch of flatfish, beyond what was anticipated.

Table 7.32 shows the amount of groundfish catch and halibut bycatch taken by catcher vessels in the deep and shallow water flatfish complexes for the years 1995-97. This information can be used along with the AFA catcher vessel's historic flatfish catch information from the GOA to determine halibut bycatch caps for AFA vessels in future years. That estimate is reported in the final row of Table 7.32, and the formula used for that calculation is noted at the bottom of the table. Note that the results of that calculation is in metric tons and not a percentage of the future allocation as was done for the BSAI. Converting the resulting shallow water flatfish numbers to a percentage could be accomplished by dividing our estimate by the shallow water PSC allocations. A similar calculation could be made for the deep water complex. These PSC complex groupings are different from the shallow and deep water flatfish target fisheries. The shallow water PSC complex includes pollock, Pacific cod, Atka mackerel, other species, and shallow water flatfish. The deep water PSC complex includes rockfish, flathead sole, sablefish, arrowtooth flounder, and deep water flatfish.

Table 7.32: Historic groundfish and halibut PSC catch information from catcher vessels in the 1995-97 GOA deep and shallow water flatfish fisheries

Row	Historic Catch Classes	Deep water flats	Shallow water flats
All Catcher Vessel's Historic Harvests			
1	Total Groundfish Catch in the Target Fishery (mt)	8,074	26,603
2	Total Target Catch in the Target Fishery (mt)	3,071	11,704
3	Percent of Target Species Caught	38%	44%
4	Total Amount of Reported Halibut Bycatch (mt)	553	1,888
5	Total Reported Halibut Mortality (mt)	313	1,245
6	1999 Halibut Discard Mortality Rates	66%	71%
AFA Catcher Vessel's Historic Harvests			
7	Target Catch in Target Fishery from 1995-97 (mt)	2,329	5,551
Estimated Annual Halibut Mortality Cap		92	212
Percent of each 1999 PSC Complex[2]		10%	20%

Sources: 1995-97 NMFS Blend data for target catch information, and 1995-97 NMFS PSC data sets (e.g. GO95HALX) for halibut bycatch amounts.

1) Estimates were calculated using the following formula: ((Row 4/Row 2)*Row 6*Row 7)/3

2) Assumes 59 percent of the fourth quarter allocation was to the shallow water PSC complex, which was the 1995-97 average for all catcher vessels. No allocation of halibut is made by complex in the fourth quarter.

A sub-option to allocate the caps by quarter has also been included in the list of alternatives. Halibut PSC for the two flatfish complexes would be apportioned according to when the target catch was harvested. Table 7.33 lists the proportion of deep and shallow water flatfish that was caught by quarter. Multiplying the estimated annual halibut mortality cap for the AFA catcher vessels (92 mt in the deep water flatfish fishery and 212 mt in the shallow water flatfish fishery), by these percentages of quarterly target catch will yield the amount of halibut available by quarter.

Table: 7.33 Percentage of deep and shallow water flatfish catch and estimated halibut PSC caps, by quarter

Species	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Percent of Catch (in Non-pollock Target Fisheries only) by Quarter					
Deep Water Flatfish	11%	67%	18%	4%	100%
Shallow Water Flatfish	28%	26%	23%	23%	100%
Estimated Halibut PSC Caps by Quarter (mt)					
Deep Water Flatfish	10	62	17	4	92
Shallow Water Flatfish	59	55	49	49	212

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97.

7.6.2 Groundfish Sideboard Caps

The Council has proposed that the target catch of each GOA groundfish species available to AFA catcher vessels should be limited to the average catch, by target species, based on their historic catch during the years 1995-97. The following tables have been prepared to provide information on these caps. Table 7.34 shows the catch history of AFA catcher vessels. Pollock is also included as a sideboard species for the GOA, because the AFA allocation of pollock only applies to the BSAI. Sideboard caps for these species could be limited through halibut PSC caps or the groundfish sideboards. Table 7.35 reports the catch history of all vessels in the GOA fisheries. Finally, Table 7.35 is the resulting percentage when the information in the first table is divided by the information in the second.

Table 7.34: Catch of groundfish species by all vessels in the GOA, 1995-97

TAC Species Groupings	Total Harvest of All GOA Vessels
Atka Mackerel - CG (1995 - 1996)	379
Atka Mackerel - GOA (1997)	329
Atka Mackerel - WG (1995 - 1996)	1,906
Arrowtooth Flounder - Central Gulf	48,384
Arrowtooth Flounder - Eastern Gulf	2,965
Arrowtooth Flounder - Western Gulf	5,890
Deep Water Flatfish - Central Gulf	6,503
Deep Water Flatfish - Eastern Gulf	1,450
Deep Water Flatfish - Western Gulf	123
Flathead Sole - Central Gulf	5,661
Flathead Sole - Eastern Gulf	191
Flathead Sole - Western Gulf	1,845
Northern Rockfish - CG	11,481
Northern Rockfish - EG	83
Northern Rockfish - WG	343
Other Species - GOA	13,300
Pacific Cod (Inshore) - CG	126,966
Pacific Cod (Offshore) - CG	9,730
Pacific Cod (Inshore) - EG	2,803
Pacific Cod (Offshore) - EG	16
Pacific Cod (Inshore) - WG	59,436
Pacific Cod (Offshore) - WG	6,724
Pelagic Shelf Rockfish - CG	1,765
Pelagic Shelf Rockfish (Nearshore) - CG	4,244
Pelagic Shelf Rockfish - EG	1,375
Pelagic Shelf Rockfish - WG	384
Pollock - Chirikof District	58,289
Pollock - EG	9,896
Pollock - Kodiak	64,191
Pollock - Shumagin District	80,839
Pacific Ocean Perch - CG	14,451
Pacific Ocean Perch - EG	4,947
Pacific Ocean Perch - WG	4,241

Table 7.34 continued	
Rex Sole - Central Gulf	11,267
Rex Sole - Eastern Gulf	542
Rex Sole - Western Gulf	1,452
Slope Rockfish - CG	2,440
Slope Rockfish - EG	993
Slope Rockfish - WG	117
Sablefish (Trawl Gear) - CG	4,788
Sablefish (Trawl Gear) - Southeast	190
Sablefish (Trawl Gear) - WG	125
Sablefish (Trawl Gear) - W Yakutat	685
Shallow Water Flatfish - Central Gulf	21,286
Shallow Water Flatfish - Eastern Gulf	85
Shallow Water Flatfish - Western Gulf	1,214
Shortraker / Rougheye - CG	3,089
Shortraker / Rougheye - EG	1,910
Shortraker / Rougheye - WG	414
Thornyhead - GOA	3,428

Source: NMFS AKR 1995-97 Blend data.

Table 7.35: Catch of groundfish species by AFA catcher vessels in the GOA, 1995-97

Species by TAC Grouping	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	Total Catch (102 Vessels)
Atka Mackerel - CG (1995 - 1996)	7	2	-	1	10
Atka Mackerel - GOA (1997)	-	-	-	-	-
Atka Mackerel - WG (1995 - 1996)	227	-	15	6	248
Arrowtooth Flounder - Central Gulf	7,028	55	166	435	7,684
Arrowtooth Flounder - Eastern Gulf	103	-	23	3	129
Arrowtooth Flounder - Western Gulf	107	1	3	-	111
Deep Water Flatfish - Central Gulf	3,023	-	143	26	3,192
Deep Water Flatfish - Eastern Gulf	88	-	6	14	108
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	1,139	1	17	125	1,282
Flathead Sole - Eastern Gulf	36	-	1	6	43
Flathead Sole - Western Gulf	90	-	12	1	103
Northern Rockfish - CG	1,432	-	28	4	1,464
Northern Rockfish - EG	5	-	-	-	5
Northern Rockfish - WG	2	-	-	-	2
Other Species - GOA	1,656	2	11	93	1,762
Pacific Cod (Inshore) - CG	27,148	-	2,586	168	29,902
Pacific Cod (Offshore) - CG	-	37	314	386	737
Pacific Cod (Inshore) - EG	275	-	-	5	280
Pacific Cod (Offshore) - EG	-	-	-	-	-
Pacific Cod (Inshore) - WG	9,714	-	2,105	340	12,19
Pacific Cod (Offshore) - WG	-	13	109	527	649
Pelagic Shelf Rockfish - CG	438	-	1	6	445
Pelagic Shelf Rockfish (Nearshore) - CG	1	-	-	-	1
Pelagic Shelf Rockfish - EG	-	-	1	19	20
Pelagic Shelf Rockfish - WG	2	-	-	-	2
Pollock - Chirikof District	29,875	10	41	151	30,077
Pollock - EG	4,088	-	1,037	166	5,291
Pollock - Kodiak	30,689	9	2,951	659	34,308
Pollock - Shumagin District	57,162	316	2,720	91	60,289
Pacific Ocean Perch - CG	3,560	7	199	107	3,873
Pacific Ocean Perch - EG	7	-	1	146	154
Pacific Ocean Perch - WG	66	-	-	-	66
Rex Sole - Central Gulf	710	20	18	47	795
Rex Sole - Eastern Gulf	112	-	8	9	129
Rex Sole - Western Gulf	14	-	-	-	14
Slope Rockfish - CG	17	-	3	-	20
Slope Rockfish - EG	-	-	-	-	-

Table 7.35 continued					
Slope Rockfish - WG	-	-	-	-	-
Sablefish (Trawl Gear) - CG	627	-	31	15	673
Sablefish (Trawl Gear) - Southeast	-	-	-	1	1
Sablefish (Trawl Gear) - WG	4	-	-	-	4
Sablefish (Trawl Gear) - W Yakutat	10	-	-	11	21
Shallow Water Flatfish - Central Gulf	7,079	1	101	240	7,421
Shallow Water Flatfish - Eastern Gulf	12	-	8	30	50
Shallow Water Flatfish - Western Gulf	338	-	18	32	388
Shortraker / Rougheye - CG	182	-	3	3	188
Shortraker / Rougheye - EG	7	-	2	11	20
Shortraker / Rougheye - WG	1	-	-	-	1
Thornyhead - GOA	183	-	6	14	203

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

Table 7.36: Percent of future years TAC included in the sideboard caps

Species by TAC Grouping	CV Inshore 80 Vessels	CV to IN/MS 9 Vessels	CV to MS 7 Vessels	CV to CP 6 Vessels	Total Catch 107 Vessels
Atka Mackerel - CG (1995 - 1996)	1.85%	0.53%	-	0.26%	2.64%
Atka Mackerel - GOA (1997)	-	-	-	-	-
Atka Mackerel - WG (1995 - 1996)	11.91%	-	0.79%	0.31%	13.01%
Arrowtooth Flounder - Central Gulf	14.53%	0.11%	0.34%	0.90%	15.88%
Arrowtooth Flounder - Eastern Gulf	3.47%	-	0.78%	0.10%	4.35%
Arrowtooth Flounder - Western Gulf	1.82%	0.02%	0.05%	-	1.89%
Deep Water Flatfish - Central Gulf	46.49%	-	2.20%	0.40%	49.09%
Deep Water Flatfish - Eastern Gulf	6.07%	-	0.41%	0.97%	7.45%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	20.12%	-	0.30%	2.21%	22.65%
Flathead Sole - Eastern Gulf	18.85%	-	0.52%	3.14%	22.51%
Flathead Sole - Western Gulf	4.88%	-	0.65%	0.05%	5.58%
Northern Rockfish - CG	12.47%	-	0.24%	0.03%	12.74%
Northern Rockfish - EG	6.03%	-	-	-	6.02%
Northern Rockfish - WG	0.57%	-	-	-	0.57%
Other Species - GOA	12.45%	0.02%	0.08%	0.70%	13.25%
Pacific Cod (Inshore) - CG	21.38%	-	2.04%	0.13%	23.55%
Pacific Cod (Offshore) - CG	-	0.38%	3.23%	3.97%	7.58%
Pacific Cod (Inshore) - EG	9.81%	-	-	0.18%	9.99%
Pacific Cod (Offshore) - EG	-	-	-	-	-
Pacific Cod (Inshore) - WG	16.34%	-	3.54%	0.57%	20.45%
Pacific Cod (Offshore) - WG	-	0.19%	1.62%	7.84%	9.65%
Pelagic Shelf Rockfish - CG	24.82%	-	0.06%	0.34%	25.22%
Pelagic Shelf Rockfish (Nearshore) - CG	0.02%	-	-	-	0.02%
Pelagic Shelf Rockfish - EG	-	-	0.07%	1.38%	1.45%
Pelagic Shelf Rockfish - WG	0.52%	-	-	-	0.52%
Pollock - Chirikof District	51.25%	0.02%	0.07%	0.26%	51.60%
Pollock - EG	41.31%	-	10.48%	1.68%	53.47%
Pollock - Kodiak	47.81%	0.01%	4.60%	1.03%	53.45%
Pollock - Shumagin District	70.71%	0.39%	3.36%	0.11%	74.57%
Pacific Ocean Perch - CG	24.63%	0.05%	1.38%	0.74%	26.80%
Pacific Ocean Perch - EG	0.14%	-	0.02%	2.95%	3.11%
Pacific Ocean Perch - WG	1.56%	-	-	-	1.56%
Rex Sole - Central Gulf	6.30%	0.18%	0.16%	0.42%	7.06%
Rex Sole - Eastern Gulf	20.66%	-	1.48%	1.66%	23.80%
Rex Sole - Western Gulf	0.96%	-	-	-	0.96%
Slope Rockfish - CG	0.70%	-	0.12%	-	0.82%

Table 7.36 continued					
Slope Rockfish - EG	-	-	-	-	-
Slope Rockfish - WG					
Sablefish (Trawl Gear) - CG	13.10%	-	0.65%	0.31%	14.06%
Sablefish (Trawl Gear) - SE	-	-	-	0.53%	0.53%
Sablefish (Trawl Gear) - WG	3.20%	-	-	-	3.20%
Sablefish (Trawl Gear) - W. Yakutat	1.46%	-	-	1.61%	3.07%
Shallow Water Flatfish - Central Gulf	33.26%	-	0.47%	1.13%	34.86%
Shallow Water Flatfish - Eastern Gulf	14.12%	-	9.41%	35.29%	58.82%
Shallow Water Flatfish - Western Gulf	27.84%	-	1.48%	2.64%	31.96%
Shortraker / Rougheye - CG	5.89%	-	0.10%	0.10%	6.09%
Shortraker / Rougheye - EG	0.37%	-	0.10%	0.58%	1.05%
Shortraker / Rougheye - WG	0.24%	-	-	-	0.24%
Thornyhead - GOA	5.34%	-	0.18%	0.41%	5.93%

Source:
1) Numerator - ADF&G Fishtickets and NORPAC Observer data, 1995-97
2) Denominator: NMFS AKR Blend data, 1995-97.

A sub-option under consideration by the Council would apportion the sideboard caps by the quarter of year in which the catch history used to calculate the caps was earned. The next five tables provide that breakout. Table 7.37 shows the apportionment if all AFA catcher vessels were treated as a single class. The remaining four tables break down the percentages by the AFA catcher vessel sectors used throughout this chapter.

Dividing the caps by quarter will restrict the harvest to the traditional times of year that they have occurred in the past. Not allowing catcher vessels to take all of their annual cap in a single quarter will likely provide additional protection for the non-AFA catcher vessels. However, it will also result in more numerous and smaller caps, making management and enforcement more burdensome for NMFS.

Table 7.37: Quarterly catch distribution of all AFA catcher vessels

Species by TAC Grouping	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Gulf (1995 through 1996)	80%	0%	20%	0%	100%
Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
Atka Mackerel - Western Gulf (1995 through 1996)	6%	57%	37%	0%	100%
Arrowtooth Flounder - Central Gulf	11%	27%	42%	20%	100%
Arrowtooth Flounder - Eastern Gulf	9%	17%	55%	19%	100%
Arrowtooth Flounder - Western Gulf	65%	3%	27%	5%	100%
Deep Water Flatfish - Central Gulf	11%	71%	16%	2%	100%
Deep Water Flatfish - Eastern Gulf	0%	6%	64%	31%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	16%	36%	32%	16%	100%
Flathead Sole - Eastern Gulf	0%	2%	34%	63%	100%
Flathead Sole - Western Gulf	81%	0%	17%	2%	100%
Northern Rockfish - Central Gulf	3%	2%	93%	3%	100%
Northern Rockfish - Eastern Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Western Gulf	100%	0%	0%	0%	100%
Other Species - Gulf of Alaska	20%	36%	26%	19%	100%
Pacific Cod (Inshore) - Central Gulf	82%	3%	2%	13%	100%
Pacific Cod (Offshore) - Central Gulf	99%	1%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	78%	0%	21%	0%	100%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	99%	1%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	97%	0%	3%	0%	100%
Pelagic Shelf Rockfish - Central Gulf	5%	0%	93%	1%	100%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Eastern Gulf	0%	5%	95%	0%	100%
Pelagic Shelf Rockfish - Western Gulf	100%	0%	0%	0%	100%
Pollock - Chirikof District	33%	19%	47%	1%	100%
Pollock - Eastern Gulf	100%	0%	0%	0%	100%
Pollock - Kodiak	19%	23%	30%	27%	100%
Pollock - Shumagin District	24%	16%	47%	12%	100%
Pacific Ocean Perch - Central Gulf	0%	2%	98%	0%	100%

Table 7.37 continued					
Pacific Ocean Perch - Eastern Gulf	2%	1%	97%	0%	100%
Pacific Ocean Perch - Western Gulf	0%	0%	95%	5%	100%
Rex Sole - Central Gulf	9%	29%	49%	12%	100%
Rex Sole - Eastern Gulf	1%	6%	40%	53%	100%
Rex Sole - Western Gulf	87%	0%	7%	7%	100%
Slope Rockfish - Central Gulf	30%	20%	35%	15%	100%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	3%	27%	68%	1%	100%
Sablefish (Trawl Gear) - Southeast	0%	0%	100%	0%	100%
Sablefish (Trawl Gear) - Western Gulf	75%	0%	25%	0%	100%
Sablefish (Trawl Gear) - Western Yakutat	0%	0%	81%	19%	100%
Shallow Water Flatfish - Central Gulf	28%	25%	23%	24%	100%
Shallow Water Flatfish - Eastern Gulf	10%	19%	67%	4%	100%
Shallow Water Flatfish - Western Gulf	45%	51%	3%	1%	100%
Shortraker / Rougheye - Central Gulf	5%	40%	55%	0%	100%
Shortraker / Rougheye - Eastern Gulf	26%	5%	63%	5%	100%
Shortraker / Rougheye - Western Gulf	0%	0%	100%	0%	100%
Thornyhead - Gulf of Alaska	8%	49%	41%	1%	100%

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

Table 7.38: Quarterly Catch of Catcher Vessels Inshore in the Gulf of Alaska (1995-97)

Species by TAC Grouping	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Gulf (1995 through 1996)	71%	0%	29%	0%	100%
Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
Atka Mackerel - Western Gulf (1995 through 1996)	4%	56%	40%	0%	100%
Arrowtooth Flounder - Central Gulf	12%	24%	44%	20%	100%
Arrowtooth Flounder - Eastern Gulf	10%	0%	66%	24%	100%
Arrowtooth Flounder - Western Gulf	66%	3%	27%	4%	100%
Deep Water Flatfish - Central Gulf	12%	70%	16%	3%	100%
Deep Water Flatfish - Eastern Gulf	0%	0%	62%	38%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	18%	34%	32%	16%	100%
Flathead Sole - Eastern Gulf	0%	0%	26%	74%	100%
Flathead Sole - Western Gulf	80%	0%	19%	1%	100%
Northern Rockfish - Central Gulf	3%	2%	93%	3%	100%
Northern Rockfish - Eastern Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Western Gulf	100%	0%	0%	0%	100%
Other Species - Gulf of Alaska	21%	34%	26%	20%	100%
Pacific Cod (Inshore) - Central Gulf	81%	3%	3%	14%	100%
Pacific Cod (Offshore) - Central Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Eastern Gulf	80%	0%	20%	0%	100%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	99%	1%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Central Gulf	5%	0%	93%	1%	100%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Western Gulf	100%	0%	0%	0%	100%
Pollock - Chirikof District	33%	19%	48%	1%	100%
Pollock - Eastern Gulf	100%	0%	0%	0%	100%
Pollock - Kodiak	21%	20%	31%	28%	100%
Pollock - Shumagin District	23%	16%	49%	12%	100%
Pacific Ocean Perch - Central Gulf	0%	1%	98%	0%	100%
Pacific Ocean Perch - Eastern Gulf	43%	0%	57%	0%	100%
Pacific Ocean Perch - Western Gulf	0%	0%	95%	5%	100%
Rex Sole - Central Gulf	11%	24%	52%	14%	100%
Rex Sole - Eastern Gulf	1%	0%	38%	62%	100%
Rex Sole - Western Gulf	87%	0%	7%	7%	100%
Slope Rockfish - Central Gulf	33%	22%	39%	6%	100%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	4%	27%	68%	1%	100%

Table 7.38 continued

Sablefish (Trawl Gear) - Southeast					
Sablefish (Trawl Gear) - Western Gulf	75%	0%	25%	0%	100%
Sablefish (Trawl Gear) - Western Yakutat	0%	0%	60%	40%	100%
Shallow Water Flatfish - Central Gulf	29%	24%	23%	24%	100%
Shallow Water Flatfish - Eastern Gulf	31%	15%	38%	15%	100%
Shallow Water Flatfish - Western Gulf	37%	59%	3%	1%	100%
Shortraker / Rougheye - Central Gulf	6%	39%	56%	0%	100%
Shortraker / Rougheye - Eastern Gulf	67%	0%	17%	17%	100%
Shortraker / Rougheye - Western Gulf	0%	0%	100%	0%	100%
Thornyhead - Gulf of Alaska	9%	52%	37%	2%	100%

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

Table 7.39: Quarterly Catch of Catcher Vessels Inshore / Motherships in the Gulf of Alaska (1995-97)

Species by TAC Grouping	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Gulf (1995 through 1996)	100%	0%	0%	0%	100%
Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
Atka Mackerel - Western Gulf (1995 through 1996)	-	-	-	-	-
Arrowtooth Flounder - Central Gulf	0%	100%	0%	0%	100%
Arrowtooth Flounder - Eastern Gulf	-	-	-	-	-
Arrowtooth Flounder - Western Gulf	0%	0%	100%	0%	100%
Deep Water Flatfish - Central Gulf	-	-	-	-	-
Deep Water Flatfish - Eastern Gulf	-	-	-	-	-
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	100%	0%	0%	100%
Flathead Sole - Eastern Gulf	-	-	-	-	-
Flathead Sole - Western Gulf	-	-	-	-	-
Northern Rockfish - Central Gulf	-	-	-	-	-
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	0%	100%	0%	0%	100%
Pacific Cod (Inshore) - Central Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Central Gulf	78%	22%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Western Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	100%	0%	0%	0%	100%
Pollock - Eastern Gulf	-	-	-	-	-
Pollock - Kodiak	0%	100%	0%	0%	100%
Pollock - Shumagin District	0%	0%	100%	0%	100%
Pacific Ocean Perch - Central Gulf	0%	100%	0%	0%	100%
Pacific Ocean Perch - Eastern Gulf	-	-	-	-	-
Pacific Ocean Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	100%	0%	0%	100%
Rex Sole - Eastern Gulf	-	-	-	-	-
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	-	-	-	-	-
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	-	-	-	-	-

Table 7.39 continued					
Sablefish (Trawl Gear) - Southeast	-	-	-	-	-
Sablefish (Trawl Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Western Yakutat	-	-	-	-	-
Shallow Water Flatfish - Central Gulf	100%	0%	0%	0%	100%
Shallow Water Flatfish - Eastern Gulf	-	-	-	-	-
Shallow Water Flatfish -Western Gulf	-	-	-	-	-
Shortraker / Rougheye - Central Gulf	-	-	-	-	-
Shortraker / Rougheye - Eastern Gulf	-	-	-	-	-
Shortraker / Rougheye - Western Gulf	-	-	-	-	-
Thornyhead - Gulf of Alaska	-	-	-	-	-

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

Table 7.40: Quarterly Catch of Catcher Vessels to Motherships in the Gulf of Alaska (1995-97)

Species by TAC Grouping	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Gulf (1995 through 1996)	-	-	-	-	-
Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
Atka Mackerel - Western Gulf (1995 through 1996)	0%	100%	0%	0%	100%
Arrowtooth Flounder - Central Gulf	1%	75%	5%	18%	100%
Arrowtooth Flounder - Eastern Gulf	4%	96%	0%	0%	100%
Arrowtooth Flounder - Western Gulf	33%	0%	0%	67%	100%
Deep Water Flatfish - Central Gulf	0%	94%	6%	0%	100%
Deep Water Flatfish - Eastern Gulf	0%	100%	0%	0%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	25%	75%	0%	100%
Flathead Sole - Eastern Gulf	0%	100%	0%	0%	100%
Flathead Sole - Western Gulf	92%	0%	0%	8%	100%
Northern Rockfish - Central Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	20%	70%	0%	10%	100%
Pacific Cod (Inshore) - Central Gulf	98%	1%	0%	1%	100%
Pacific Cod (Offshore) - Central Gulf	100%	0%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	100%	0%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	94%	0%	6%	1%	100%
Pelagic Shelf Rockfish - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	0%	100%	0%	0%	100%
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	39%	61%	0%	0%	100%
Pollock - Eastern Gulf	100%	0%	0%	0%	100%
Pollock - Kodiak	3%	48%	27%	22%	100%
Pollock - Shumagin District	52%	15%	6%	27%	100%
Pacific Ocean Perch - Central Gulf	0%	14%	86%	0%	100%
Pacific Ocean Perch - Eastern Gulf	0%	100%	0%	0%	100%
Pacific Ocean Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	50%	50%	0%	100%
Rex Sole - Eastern Gulf	0%	100%	0%	0%	100%
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	0%	0%	0%	100%	100%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	0%	28%	72%	0%	100%

Table 7.40 continued					
Sablefish (Trawl Gear) - Southeast					
Sablefish (Trawl Gear) - Western Gulf					
Sablefish (Trawl Gear) - Western Yakutat					
Shallow Water Flatfish - Central Gulf	18%	45%	34%	4%	100%
Shallow Water Flatfish - Eastern Gulf	0%	100%	0%	0%	100%
Shallow Water Flatfish - Western Gulf	89%	0%	0%	11%	100%
Shortraker / Rougheye - Central Gulf	0%	100%	0%	0%	100%
Shortraker / Rougheye - Eastern Gulf	50%	50%	0%	0%	100%
Shortraker / Rougheye - Western Gulf					
Thornyhead - Gulf of Alaska	0%	71%	29%	0%	100%

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

Table 7.41: Quarterly Catch of Catcher Vessels to Catcher Processors in the Gulf of Alaska (1995-97)

Species by TAC Grouping	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Gulf (1995 through 1996)	100%	0%	0%	0%	100%
Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
Atka Mackerel - Western Gulf (1995 through 1996)	100%	0%	0%	0%	100%
Arrowtooth Flounder - Central Gulf	0%	54%	22%	24%	100%
Arrowtooth Flounder - Eastern Gulf	0%	0%	100%	0%	100%
Arrowtooth Flounder - Western Gulf	-	-	-	-	-
Deep Water Flatfish - Central Gulf	0%	72%	20%	8%	100%
Deep Water Flatfish - Eastern Gulf	0%	0%	100%	05	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	52%	29%	19%	100%
Flathead Sole - Eastern Gulf	0%	0%	100%	0%	100%
Flathead Sole - Western Gulf	100%	0%	0%	0%	100%
Northern Rockfish - Central Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	10%	72%	13%	5%	100%
Pacific Cod (Inshore) - Central Gulf	0%	36%	11%	53%	100%
Pacific Cod (Offshore) - Central Gulf	100%	0%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	0%	0%	100%	0%	100%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	100%	0%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	100%	0%	0%	0%	100%
Pelagic Shelf Rockfish - Central Gulf	0%	17%	83%	0%	100%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	52%	48%	0%	0%	100%
Pollock - Eastern Gulf	98%	0%	2%	0%	100%
Pollock - Kodiak	0%	66%	22%	12%	100%
Pollock - Shumagin District	52%	48%	0%	0%	100%
Pacific Ocean Perch - Central Gulf	0%	0%	100%	0%	100%
Pacific Ocean Perch - Eastern Gulf	0%	0%	100%	0%	100%
Pacific Ocean Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	69%	25%	6%	100%
Rex Sole - Eastern Gulf	0%	0%	100%	0%	1005
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	-	-	-	-	-
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	0%	19%	75%	6%	100%

Table 7.41 continued					
Sablefish (Trawl Gear) - Southeast	0%	0%	100%	0%	100%
Sablefish (Trawl Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Western Yakutat	0%	0%	100%	0%	100%
Shallow Water Flatfish - Central Gulf	3%	38%	43%	17%	100%
Shallow Water Flatfish - Eastern Gulf	3%	0%	97%	0%	100%
Shallow Water Flatfish - Western Gulf	100%	0%	0%	0%	100%
Shortraker / Rougheye - Central Gulf	0%	67%	33%	0%	100%
Shortraker / Rougheye - Eastern Gulf	0%	0%	100%	0%	100%
Shortraker / Rougheye - Western Gulf	-	-	-	-	-
Thornyhead - Gulf of Alaska	0%	7%	93%	0%	100%

Source: ADF&G Fishtickets and NORPAC Observer data, 1995-97

To whom the sideboard caps apply is also addressed for the Gulf of Alaska. The sideboard caps could apply to either all AFA catcher vessels eligible under Section 208, or just the vessels that participate in a cooperative. The Council selected the option that the caps apply to all eligible catcher vessels. These are the same options that were discussed in the BSAI sideboard cap section, so those comments will not be repeated here. However, it is important to remember that vessels will only be allowed to contribute their catch history to a sideboard cap if they are subject to the cap.

that processes fish. Any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered to be the same entity as the other individual or entity for the purposes of this subparagraph.

Other sections of the AFA provide additional directives to the Council, paraphrased below:

1. The Council cannot alter the list of eligible processors, unless the TAC increases or an eligible plant is lost.
2. By July 1999 the Council must recommend measures to "protect processors not eligible to participate in the (BSAI) directed pollock fishery from adverse effects of the AFA or fishery cooperatives...".
3. The Council must have in place by January 2000 measures to prevent AFA motherships and shoreside processors from processing, in aggregate, a greater percentage of the total catch of BSAI crab than they processed in 1995-1997 (on average).
4. The Council must submit measures to establish excessive share caps for harvesting and processing of all groundfish and crab in the BSAI, though under no time certain.
5. The Council can develop any other measures it deems necessary (at any time) to protect other fisheries and participants under its jurisdiction from adverse impacts caused by the AFA or co-ops in the directed pollock fishery.

Non-AFA processors have testified to the Council that their basic concern is that AFA processors will have a competitive advantage that may allow them to use economic and operational leverage to increase their positions in processing other species. In effect resources normally spent ensuring AFA processors their share of the BSAI pollock fishery, may now be freed up to gain processing shares of other fisheries.

In response the Council has chosen to include the concept of AFA processing limits for all groundfish in the GOA, all groundfish other than pollock in the BSAI, and all crab in the BSAI. The limits would apply to all AFA processors and would be based on the processing shares of AFA processors during the years 1995, 1996, and 1997, or alternatively just 1996 and 1997.

There are three levels at which processing limits could be applied for each species:

1. Single overall limit for all AFA-eligible processors
2. Sector limits: Onshore, Mothership and Catcher processors
3. Individual limits

Within each level there are at least three layers of facilities that could be included and thus restricted by the limits:

1. All plants and vessels that are AFA-eligible
2. All facilities owned by companies that own AFA-eligible plants and vessels
3. All facilities associated with entities that combine facilities through a 10 percent ownership link.[1]

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[1]For purposes of this analysis, this language of §211(c)(2)(B) defining entities is called "the 10% Ownership Rule". The 10% Ownership Rule will be applied as follows:

If a company has a 10 percent or more ownership stake in an AFA-eligible processing facility, then all other processing facilities in which that company has a 10 percent ownership will also be considered part of the AFA-entity. For purposes of the analysis, the lease of a facility will be considered ownership of that facility.

The nine permutations of the above levels and layers are analyzed as options along with one additional option, which would apply individual company processing limits, but would include only AFA-eligible facilities within those companies.

The analysis first considers the perspectives of both non-AFA processors and AFA processors and of economic theory. Next, the analysis provides an overview of the structure and ownership of the groundfish processing industry. The analysis then focuses on specific options for processing limits. Decision points are identified that the Council will need to address in developing its preferred alternative. Embedded in the list of decision points is the question of how the processing limits should be applied, with specific definitions for the 10 options referred to in the previous paragraph. Following the list of decision points, the analysis examines each of the 10 options with implementation steps, tables showing the specific processing limits, and an assessment of impacts for each. The final section of the chapter summarizes the processing limit options and presents conclusions regarding their feasibility.

8.1 Perspectives on the Need and Objectives for Processing Limits

8.1.1 Perspectives of Non-AFA Processors

Processors that have not participated in the BSAI pollock fisheries in the past will not be allowed to participate in cooperatives for BSAI pollock. They believe that participants in cooperatives will be able to leverage the relative certainty of cash flows in the BSAI pollock fisheries to obtain a competitive advantage in non-pollock fisheries, and thus increase their processing share of non-pollock fisheries. Here is a summary of views expressed by non-AFA processors:

- Inshore processors will move from 36 percent of the total pollock TAC under inshore-offshore allocations approved by the NPFMC in 1998 to 45 percent of the total under AFA. This increase alone has the potential to increase revenue and profits for AFA inshore processors relative to non-AFA processors.
- AFA processors operating in cooperatives will be relatively certain of taking deliveries of a fixed amount of pollock, regardless of unforeseen events such as processing plant breakdowns or adverse weather conditions.
- Because of their relatively certain flows of pollock, AFA processors operating with cooperatives will be able to pace their pollock processing to take advantage of market conditions and processing technologies that will allow them to enhance recovery rates and revenues.
- With higher revenues and profits from pollock, AFA processors will have more of their own profits that could be invested in machinery and facilities that can take advantage of non-pollock fisheries.
- Higher profits and more certain cash flows from pollock will enable AFA processors to offer higher prices to catcher vessels for delivery of non-pollock species.
- The relative certainty of cash flow and potentially higher profits of AFA processors make it more likely that AFA processors will be able to raise new capital, either through new equity investment by external sources or through institutional lenders.
- To limit the ability of AFA processors to expand their share of other crab and non-pollock groundfish in the BSAI and all groundfish in the GOA, AFA processors should be restricted to processing amounts of these species that do not exceed amounts they have processed in the past.
- It is not enough to simply limit non-pollock processing by facilities that will be allowed to participate in cooperatives. Companies that own these facilities could easily evade the restrictions by expanding processing at their other facilities.

- It is also not enough to set processing limits on all facilities owned by AFA companies, because AFA companies could evade the restrictions by hiding their ownership of other non-pollock processing facilities under different company names. The restrictions on non-pollock processing must be applied to all companies in which AFA processors have a significant level of ownership or control.
- The appropriate level of ownership by which to measure AFA affiliation is 10 percent. Ownership levels less than 10 percent do not indicate significant ownership or control.

8.1.2 Perspectives of AFA Processors

AFA processors express the view that:

- Declines in the overall pollock TAC have eroded the profitability of existing investments in pollock processing equipment and pollock processing facilities.
- Restrictions placed on the pollock fisheries to protect the habitat of Steller sea lions further reduce the ability of pollock processors to profitably utilize their existing equipment and facilities.
- Several owners of AFA-eligible facilities, in an effort to diversify their interests, have made significant investments in non-pollock processing lines, plants, and vessels in recent years. Some came on line in 1998 before the AFA. Under the proposed limits much of the potential earning power of these investments would be eroded.
- Other owners of AFA-eligible facilities, particularly those that may have an interest in selling their facilities, have expressed the concern that the processing limits, as proposed, severely restrict the market value of their pollock processing plants. This concern stems from the language in the act that would include all facilities that are related to AFA processors by minor amounts of common ownership under the processing restriction. Owners interested in selling their facilities, perhaps to CDQ groups, are concerned that a literal interpretation of the AFA would mean that if a CDQ organization, for example, purchased an AFA processing facility, all other processing facilities in which the CDQ organization has an interest would be limited by the processing restriction. Restrictions would be imposed even though there may be no direct link between the organization's pollock interests and its non-pollock interests.
- Without the ability to operate with pollock cooperatives, the value of existing pollock investments would continue to decline and pollock processors would be susceptible to takeover by the very firms that are calling for AFA processing limits.
- Even with the ability to operate with pollock cooperatives, at least one large AFA processing entity is available for sale, indicating that future profitability of AFA processors may be lower than other opportunities outside the fish processing industry.
- Given these considerations, pollock processors believe the AFA is necessary to ensure the continued viability of the pollock processing industry, and does not merit the imposition of punitive restrictions.

8.1.3 Perspectives of Non-AFA Processors Who May Be Harmed By Processing Limits

The language in §211(c)(2)(A) regarding the 10 percent ownership linkage is of considerable concern to processors that are not directly involved in the pollock fishery, but which may be linked to AFA processors by this rule. The language is also a concern of CDQ organizations that are actively looking for investments in pollock processing facilities. Many CDQ organizations have already made investments in other non-pollock processing facilities. If the language in the 10% Ownership Rule is used in the context of processing limits, then many non-pollock processors will be restricted even though they have no direct pollock processing interests.

8.1.4 Perspectives of Economic Theory

Economic theory indicates that the formation of cooperatives will lead to more efficient utilization of the resources used in the pollock production process. Most investments in pollock processing capacity were made assuming a race for fish would exist throughout the expected life cycle of the investment. Cooperatives help eliminate the race for fish and allow pollock processors to utilize resources more efficiently and generate higher profits.

Though the existence of higher-than-expected profits generally induces additional investment in the form of new entrants, the AFA prohibits new entry into the pollock processing industry. Therefore additional investments in processing will be linked to existing processors and most likely be made to take advantage of the extra time allowed for processing that is achieved by the cooperative system. Or, excess profits might be made by these firms, without expanding pollock capacity. In an industry widely characterized as have substantial "excess processing capacity," it seems probable that, at least in the short- and intermediate-run, the latter pattern will emerge among pollock processors, rather that the former.

In any case, at some point, additional investments in pollock processing may generate lower returns than would be generated by additional investments to process other species. In addition, pollock processors may find it more profitable to shift the timing of their pollock operations so that their existing facilities can be used for processing of other species. Therefore, at some point it is likely that AFA processors, if unconstrained, will invest additional capital and time into the processing of species other than pollock. This underscores the primary concern of proponents of processing limits for AFA processors.

8.1.5 Effect of Design of Processing Limits

Impacts of non-pollock processing limits will vary depending on how they are configured. In general the limits will create two classes of processors for every species, with potentially very different impacts on each. For species other than pollock in the BSAI the two processor classes will be:

1. Non-AFA processors, which in aggregate will be guaranteed a minimum percentage of the processing of all crab and groundfish species other than BSAI pollock
2. AFA processors, which in aggregate will be limited to a maximum percentage, but not guaranteed that percentage, of the processing of all crab and groundfish species other than BSAI pollock

For non-AFA processors the limits may ease competition from AFA processors for species other than pollock in the BSAI, and in the short run, lead to increased profits. However, the unexpected profits will likely inspire additional investment, either from within the class or from new entries into the processing business, the latter being particularly important because, unlike AFA processors, entry in the non-AFA class is not restricted. New entrants will erode the profitability of existing plants until no further "excess profits" are being made in this sector.

For AFA processors the limits on processing do not represent a guaranteed percentage of the processing of a given species. AFA processors will face the prospect of being forced to end processing because of other AFA processors, but must also worry that non-AFA processors will increase their capacity and process at levels above their guaranteed minimums. Thus it appears that the processing limits may lead to increased price competition for fish other than pollock in the AFA processing class, and increase investments that accelerate processing, but do little to add value per unit of fish. The effect of intensified price competition would likely reduce net revenues for BSAI pollock processors, however, increased ex-vessel prices would benefit catcher

vessels. It is not possible to determine if ex-vessels prices would rise under this management scenario. If they did rise, they would only increase to a point that reflects their competitive value, in the long run.

Processing limits may also have unintended consequences which result primarily from the fact that ownership interests in the crab and groundfish processing industry are very intertwined. It is often very difficult to distinguish between one company and another in terms of ownership. Many of the owners of AFA-eligible facilities have interests in other facilities that are not AFA-eligible. Similarly, many owners of facilities that are not AFA-eligible have ownership stakes in AFA-eligible facilities. Therefore, it is very likely that AFA processors will be either too narrowly defined to effectively limit AFA processors, or too broadly defined, which will impose limits on companies that may have little or no interest in pollock processing.

8.1.6 Objectives and Effectiveness of Processing Limits

From the preceding discussion it is clear that the concept of processing limits will be controversial. To provide a consistent framework for qualitatively judging the effectiveness of the different options, this section develops a set of ten objectives based on the perspectives of the four groups directly affected.

From the perspective of non-AFA processors, processing limits should be imposed to prevent AFA processors from increasing their historical share of the processing of non-pollock species as a result of their ability to form cooperatives in the BSAI pollock fisheries. This perspective may be translated into three objectives:

Objective 1: Processing limits should limit AFA processing of non-pollock species to levels achieved before AFA.

Objective 2: Processing limits should include all processing interests of AFA companies.

Objective 3: Processing limits should prevent AFA companies from evading the limits through subsidiaries or holding companies.

If processing limits must be imposed under AFA, then AFA processors' perspectives lead to the following three objectives:

Objective 4: Processing limits should allow AFA processors to maximize their ability to realize profits in the pollock processing industry.

Objective 5: Processing limits should allow AFA processors to utilize non-pollock processing capacity improvements completed before AFA.

Objective 6: Processing limits should not limit the market value of their AFA-eligible facilities.

In addition, non-pollock processors indirectly linked to AFA processors are likely to view the AFA processing limits with the following objective:

Objective 7: Processing limits should not restrict non-pollock processors that will not benefit directly from the AFA.

Finally, NMFS will have certain objectives relating to its ability to implement the limits and to reduce the expense of implementation, monitoring, and enforcement, such as the following:

Objective 8: Processing limits should not substantially increase paperwork requirements on processors.

Objective 9: Processing limits should be easy and inexpensive to set annually.

Objective 10: Processing limits should be easy and inexpensive to monitor and enforce.

The ten objectives are used to evaluate qualitatively the processing limits.

8.2 Structure of the Pollock Processing Industry as it Relates to Processing Limits

As noted earlier, ownership of crab and groundfish processors is very intertwined. Thus specification of processors will be critically important in determining the impacts of processors limits. This section examines the structure of the pollock processing industry and discusses how ownership may be defined in terms of the processing limits. It examines ownership of each of the AFA-eligible facilities and other facilities that may be related through ownership.

8.2.1 The 10% Ownership Rule

The AFA defines ownership linkages as follows: "Any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered to be the same entity as the other individual or entity for the purposes of this subparagraph." Entities that are linked by this "10% Ownership Rule" to AFA-eligible processing facilities are referred to as AFA entities.

The 10% Ownership Rule is applied in this analysis as follows:

> If a company has a 10 percent or more ownership stake in an AFA-eligible processing facility, then all other processing facilities in which that company has at least 10 percent ownership will also be considered part of the AFA entity. In the analysis, lease of a facility is considered the same as ownership.

In identifying AFA entities and linkages, the Council needs to be aware that verifiably accurate and complete ownership information is not currently available from any source. Therefore, only approximate levels can be identified for applying processing limits.

Federal and state processing permits provide initial data for tracking owners. Additional information comes from public licensing documents required by states in which companies do business. In addition, less formal information is available, such as trade journals or publications such as *Fishing Vessels of the United States*, which lists vessel owners and management companies. Finally, information on ownership may be obtained directly from company officials. By combining information from different sources it is possible to determine ownership levels as a first-order approximation of AFA entities and linkages. Actual implementation and monitoring will depend upon more accurate and complete information on ownership. Presumably, NMFS or MARAD will require full disclosure of ownership information to determine and monitor processing limits.

8.2.1.1 CDQ Organizations

CDQ organizations and companies are treated no differently from non-CDQ companies for purposes of defining AFA entities. Thus if a CDQ company has an ownership stake of 10 percent or more in an AFA-eligible processing facility, then all other processing facilities in which the CDQ company has at least 10 percent ownership also are considered part of the AFA entity.

8.2.1.2 Catcher Vessels

The 10% Ownership Rule is applied only to links between processing facilities. Links between processors solely through ownership of a catcher vessel are not considered links in terms of the 10% Ownership Rule. For example, two individuals may own a group of 5 catcher vessels in a 50-50 partnership. One of the individuals owns an AFA-eligible pollock processing facility, and the other owns a crab processing plant. Both facilities receive all of their deliveries from the 5 catcher vessels. Because the only link between the two companies is the catcher vessels, the two corporations are not considered part of a single AFA-entity. In its final decision the Council can change this interpretation.

8.2.1.3 Control

In providing the basis for the 10% Ownership Rule, the AFA includes not only ownership, but also the concept of control. This analysis focuses on ownership rather than control for two primary reasons:

1. Control is very difficult to define and does not lend itself to quantifiable measures.

2. An ownership share of as low as 10 percent in a processing company may imply control of the company. By associating all companies linked by 10 percent (or more) ownership levels, it is likely that all persons that have a controlling interest in an AFA company are also included.

Control is not a focus of this analysis. However, if the Council wants to consider control more closely, it should be noted that there are various indicators of control. For example, percent of ownership is often equated to percent of control of an organization. Ownership information often is a matter of public record, but other influences and controls may not be evident. Such influence may be exerted through joint management or management links, personal or familial relationships, contractual obligations, and other means.

Officers of publicly held corporations often exert considerable influence or control, although they may not own a majority of the stock. Officers of privately held or closely held corporations may be somewhat more limited in their level of control, although they would be anticipated to have considerable influence on the corporation's activities. The analysis assumes that links between processors exist when a corporate officer of an AFA-eligible processor is a corporate officer or director for another processor, or when a corporate officer of an AFA-eligible processor has at least a 10 percent ownership in another processor.

Contractual obligations can also enable an individual or firm to exert control over a processor. For example, industry representatives discussed possible loans made to individuals or organizations by larger companies that require the individuals or organizations to sell all their harvest or product to the larger companies. Marketing agreements between firms may have similar requirements. Another example of possible control is a loan made to an individual to purchase a vessel with terms of the loan such that the lender actually controls the vessel. Although interviews mentioned these examples, no corroborating information could be found to support these statements. Therefore, influence or control through potential contractual terms and obligations are not treated as links in terms of the 10% Ownership Rule.

For many individuals, working in the fishing or processing industry offshore Alaska is a family tradition of several generations. Siblings and spouses are often active participants in the businesses and share in the business decisions. Long-standing friendships and family ties have also evolved over the years, and these relationships are often used to start or finance new vessels or expand the current business. The analysis conducted for this section identified instances in which owners, officers, and directors of AFA-eligible

processors had spouses and other family members with ownership positions in other processors. No other information could be found indicating that the individuals related to the AFA-eligible processors had substantive influence or control over the other processors. Subsequently, relationships between family members and friends are not treated as links in terms of the 10% Ownership Rule: In its final decision the Council will have the latitude to change this interpretation of the 10% Ownership Rule and include links between family members.

8.2.2 Basis for Ownership Patterns

The ownership of AFA-eligible processing plants and vessels is based on federal permit data from NMFS and intent-to-operate data from ADF&G, corporate license data from the states of Washington and Alaska, as well other data bases from private sources such as Dunn and Bradstreet. Corporate officers also have provided ownership details. Organizational charts are used to show ownership linkages. They include notes on sources of information.

There are shortcomings in most data bases. Some firms do not provide information to Dunn and Bradstreet, and the company record is limited to publicly available information. State of Washington corporate records list corporate officers and directors, but do not indicate percent of ownership by these persons, or ownership percentages for persons or firms that are not corporate officers or directors. State of Alaska corporate records typically show ownership percentages for officers and directors, but controlling interest in a corporation may be held by an entity or individual that is not an officer or director.

Discussions with corporate officers or owners typically provided the most detailed information. Attempts were made to verify this information through conversation with other industry members or through public records. In some instances individuals requested that their names not be attributed to certain details for their companies or other organizations, so names are not tied to specific information. Persons contacted are listed in Table 8.1.

8.2.3 AFA-Eligible Pollock Processing Plants and Vessels

Table 8.2 lists pollock processing plants and vessels that are AFA-eligible, the company owning the plant or vessel, and the sector in which the vessel or plant participates. This list is the basis for developing further linkages in the pollock processing industry.

Table 8.1 Persons Contacted

Name	Company
Mike Atterberry	Alaska Ocean Seafood LLP
Bill Atkinson	Alaska Frontier Company
Dave Benson	Tyson Seafoods Group (now Trident)
Alec Brindle	Wards Cove Packing
John Bundy	Glacier Fish Company
Doug Christensen	Arctic Storm, Inc.
Mike Coleman	Yak/Yok Holdings
Barry Collier	Peter Pan Seafoods, Inc.
Craig Cross	Alaska Trawl Fisheries, Inc.
Robert Czeisler	Phoenix Processor Limited Partnership
Matt Doherty	Ocean Peace, Inc.
Bart Eaton	Trident Seafoods, Inc.
Jessie Gharrett	NMFS
Jay Ginter	NMFS
Don Goodfellow	Westward Seafoods, Inc.
Glen Haight	Alaska Department of Community and Regional Affairs
John Henderschedt	YDFDA
Mike Hyde	American Seafoods Co.
John Iani	Unisea, Inc.
John Lepore	NMFS
Terry Leitzell	Northern Victor Partnership
Dave Little	Clipper Seafoods
Mariuz Mazurek	TCW/Oak Tree Capital Management
John Moeller	APICDA
Judy Nelson	BBEDC
Barry Ohai	Aleutian Spray Fisheries
Brent Paine	United Catcher Boats
Joe Plesha	Trident Seafoods, Inc.
Joe Sullivan	Mundt, MacGregor
Cory Swasand	Aleutian Spray Fisheries
Arne Thomson	Alaska Crab Coalition
Dick Tremaine	CBSFA
Doug Wells	Baranof Seafoods
John Winther	Ocean Prowler, LLC
Rob Wurm	Alaskan Leader Fisheries, LLP

Information from the industry discussions was added to the database, and searches on the names of companies, vessels, officers, and directors were conducted to identify links that were not known or had not been identified in discussions with corporate officers.

Table 8.2 AFA-Eligible Pollock Processing Plants and Vessels

Company	Vessel Name/ Plant Location	Sector
Alaska Ocean Seafood LLP	*Alaska Ocean*	CP
Alaska Trawl Fisheries, Inc.	*Endurance*	CP
Aleutian Spray Fisheries	*Starbound*	CP
Alyeska Seafoods, Inc.	Dutch Harbor	INS
American Seafoods Co.	*American Dynasty*	CP
American Seafoods Co.	*American Empress*	CP
American Seafoods Co.	*American Triumph*	CP
American Seafoods Co.	*Browns Point*	CP
American Seafoods Co.	*Christina Ann*	CP
American Seafoods Co.	*Elizabeth Ann*	CP
American Seafoods Co.	*Katie Ann*	CP
American Seafoods Co.	*Northern Eagle*	CP
American Seafoods Co.	*Northern Hawk*	CP
American Seafoods Co.	*Northern Jaeger*	CP
American Seafoods Co.	*Ocean Rover*	CP
American Seafoods Co.	*Pacific Explorer*	CP
American Seafoods Co.	*Pacific Navigator*	CP
American Seafoods Co.	*Pacific Scout*	CP
American Seafoods Co.	*Rebecca Ann*	CP
American Seafoods Co.	*Victoria Ann*	CP
Arctic Storm, Inc.	*Arctic Fjord*	CP
Arctic Storm, Inc.	*Arctic Storm*	CP
Northern Victor Partnership	*Northern Victor*	INS
Norton Sound EDC	*Northern Glacier*	CP
Norton Sound EDC	*Pacific Glacier*	CP
Peter Pan Seafoods, Inc.	King Cove	INS
Peter Pan Seafoods, Inc.	*Golden Alaska*	MS
Phoenix Processor Limited Partnership	*Ocean Phoenix*	MS
Supreme Alaska Seafoods	*Excellence*	MS
Trident Seafoods Corporation	Akutan	INS
Trident Seafoods Corporation	Sand Point	INS
Trident Seafoods Corporation (Tyson)	*American Enterprise*	CP
Trident Seafoods Corporation (Tyson)	*Island Enterprise*	CP
Trident Seafoods Corporation (Tyson)	*Kodiak Enterprise*	CP
Trident Seafoods Corporation (Tyson)	*Seattle Enterprise*	CP
Trident Seafoods Corporation (Tyson)	*S. Enterprise*	CP
Trident Seafoods Corporation (Tyson)	*Arctic Enterprise*	INS
Unisea Inc	Dutch Harbor	INS
Westward Seafoods Inc	Dutch Harbor	INS
Yak/Yok Holdings	*Highland Light*	CP

Sector definitions:
CP = Catcher processor
MS = Mothership
INS = Shore plant or inshore floating processor
Source: NFMS permit and blend data files, ADFG intent-to-operate files

8.2.4 Organization Charts for AFA-Entities

The organizational structure focuses on AFA entities as groups of firms or individuals with some common threads of ownership and control. The AFA entity can include individuals, companies, and other organizations. It even may consist of a parent organization that owns 100 percent of one or more companies that control AFA-eligible plants or vessels. In other instances, the AFA entity may consist of a parent organization with subsidiaries that control AFA-eligible plants or vessels. At the AFA entity level of aggregation, the definition of a company and the distinction between these two examples are not critical. However, if the Council wishes to pursue a company-oriented ownership rule, the definition of a company will be very important. For example, is a wholly owned company with separate management a distinct company from the parent company? Or if a parent organization owns 100 percent of the capital stock in two companies, each of which has a separate management structure to operate separate AFA-eligible facilities, are all three organizations separate companies? A company-oriented ownership rule will require a definition capable of addressing such distinctions, and this definition does not yet exist, since the Council has not yet acted on processor sideboards.

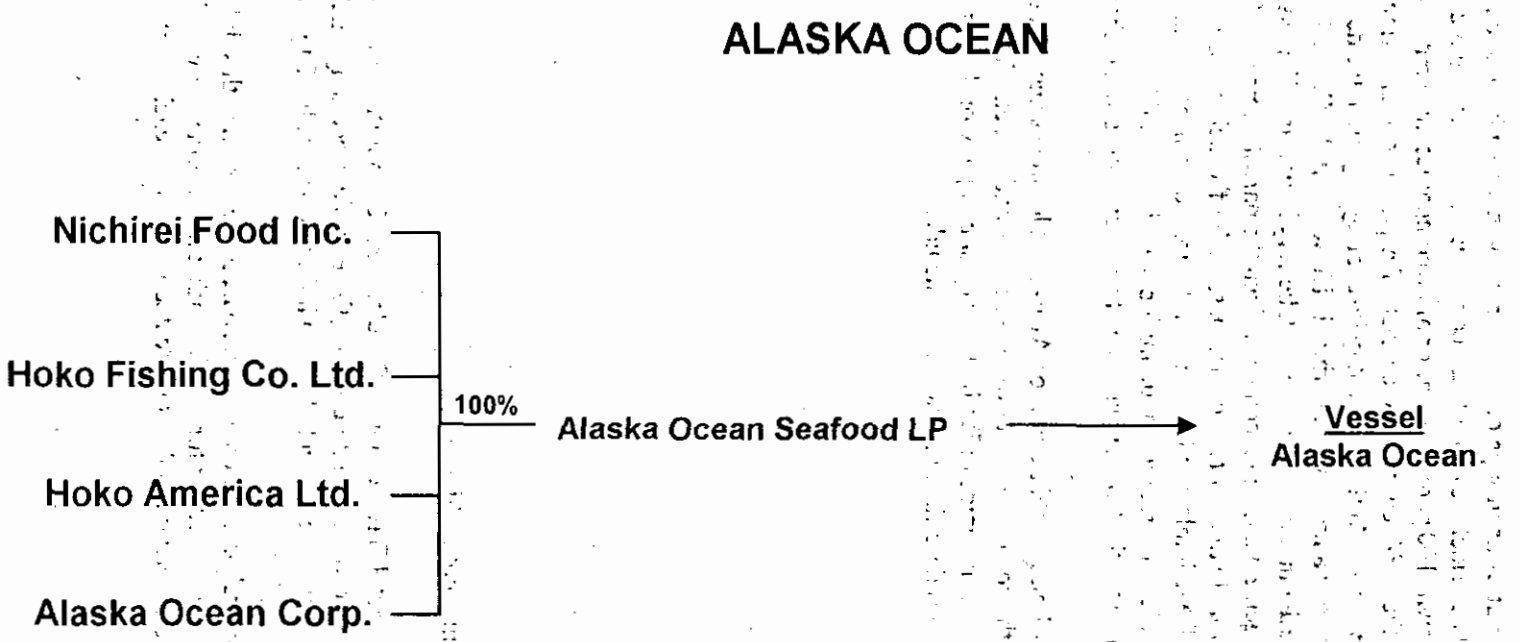
Figures 8.1 - 8.12 depict ownership or control linkages that exist for AFA-eligible processing plants and processing vessels, as well as linkages between the companies that own these plants and vessels. These links are presented at the entity level. Each overall structure is identified by the largest company or the firm with majority ownership in the others. The AFA entities described in this section include:

- Alaska Ocean
- Alaska Trawl
- Aleutian Spray
- American Seafoods
- Marubeni
- Maruha
- Nichiro Corporation
- Nippon Suisan Kaisha, Ltd.
- Trident Seafoods
- Tyson Seafoods Group, Inc.
- Unification Church
- Yardon Knot Holdings/Yardarm Knot Holdings

In addition to these entities, two CDQ groups (Bristol Bay Economic Development Corporation and Norton Sound Economic Development Corporation) have ownership interests in AFA-eligible processing facilities. Organization charts for these two entities are presented in Section 8.2.5 with information for all CDQ groups.

In the organizational charts, links that could be corroborated from several sources are shown with solid black lines. Links for which information could not be confirmed, or for which conflicting information was found, are shown with dashed lines. Information on these potential links is presented in notes for each chart.

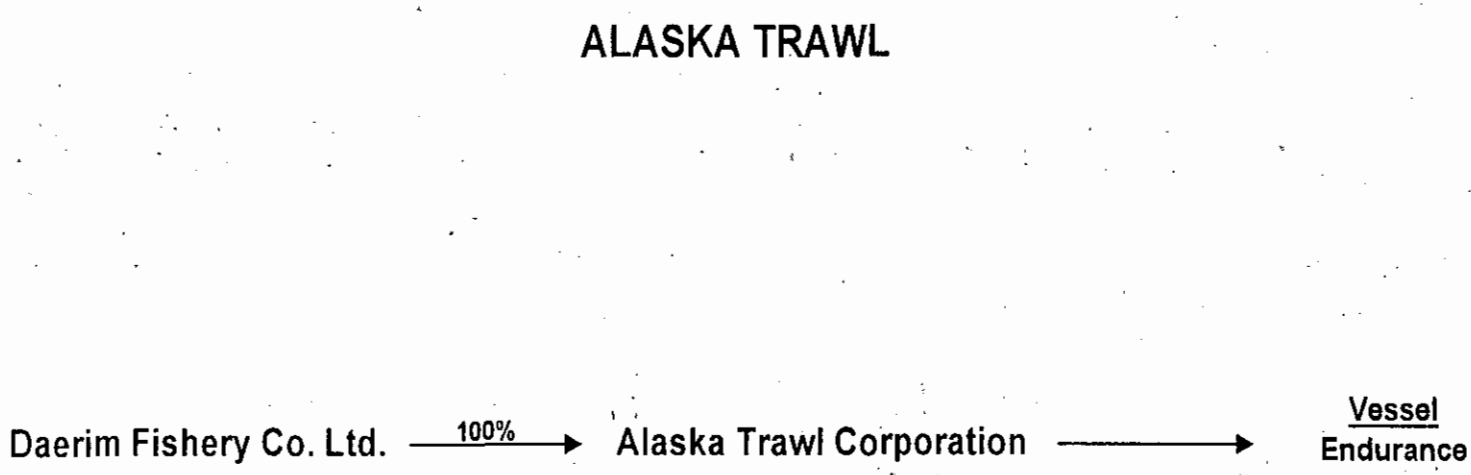
Figure 8.1 Organizational Chart for Alaska Ocean



Notes: Companies noted above are listed as partners in State of Washington Corporate records

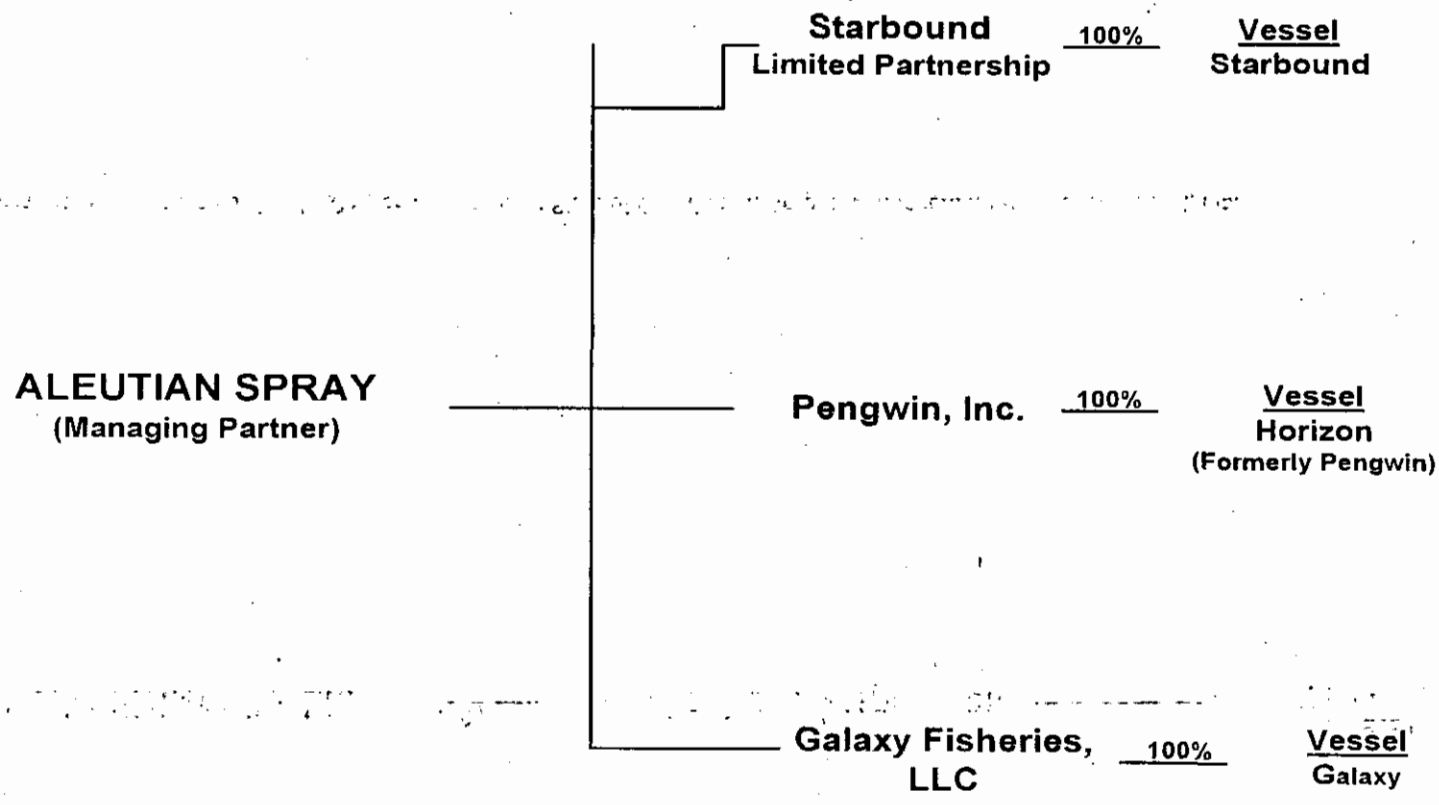
Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, In c.

Figure 8.2 Organizational Chart for Alaska Trawl



Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

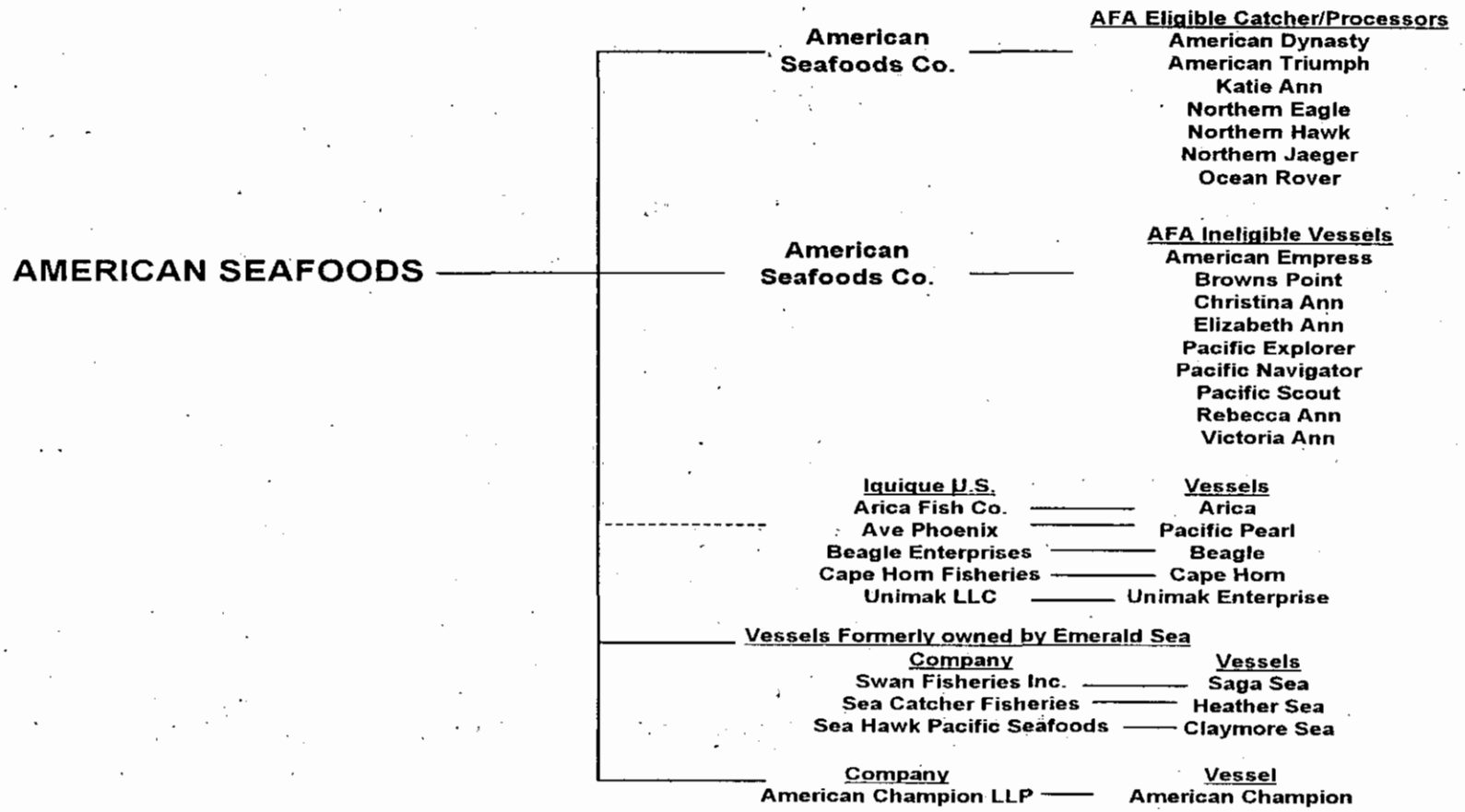
Figure 8.3 Organizational Chart for Aleutian Spray



Note: Galaxy Fisheries, LLC, owns the moratorium permit for the Northern Empire.

Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.; and industry representative discussions.

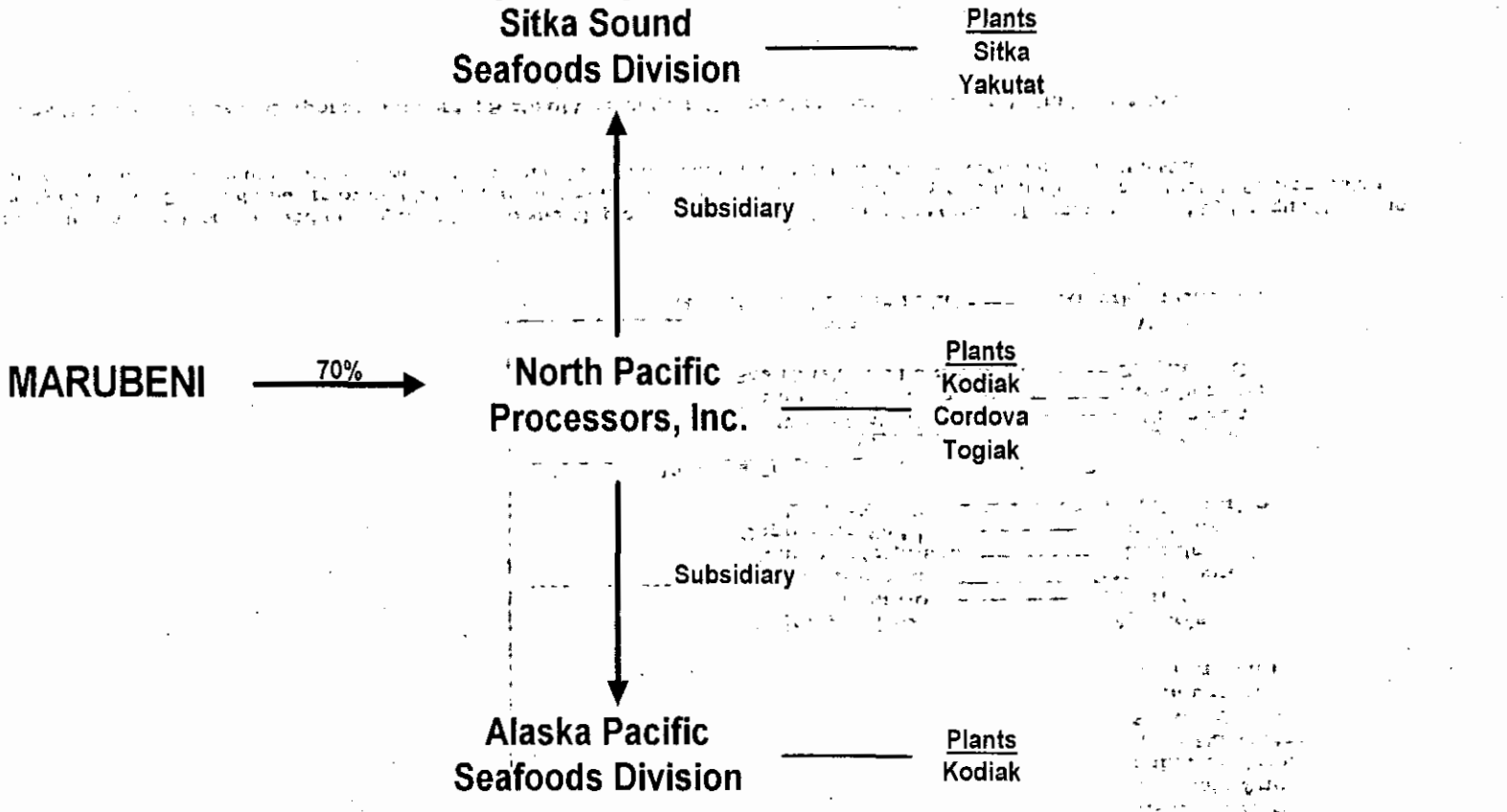
Figure 8.4 Organizational Chart for American Seafoods



Notes: An individual in American Seafood management has ownership or management interest in the group of boats managed by Iquique U.S. The vessels formerly owned by Emerald Sea are owned by owners of American Seafoods, but are currently operating in Russia. Their U.S. processing and fishing histories remain within the American Seafoods entity. The American Champion is no longer documented in the U.S.

Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

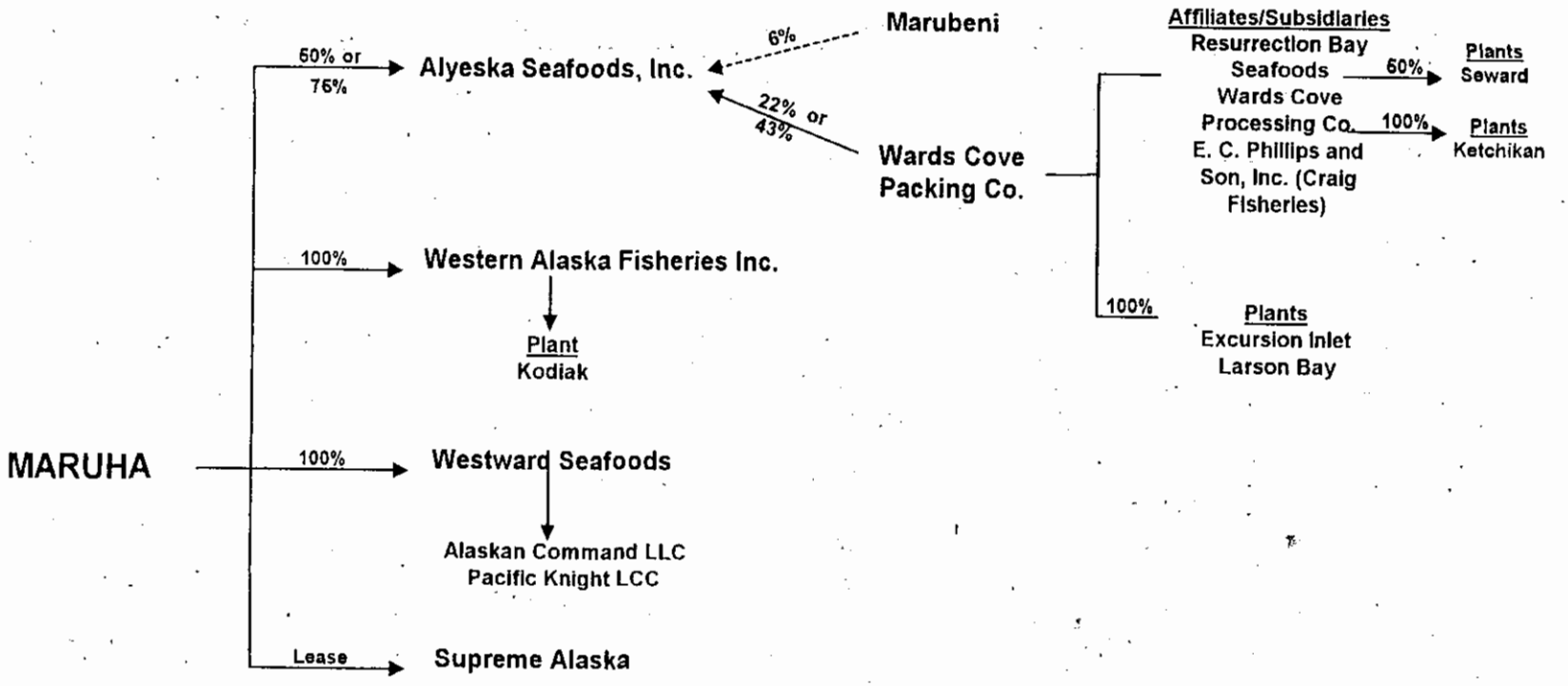
Figure 8.5 Organizational Chart for Marubeni



Note: Alaska Corporation records show Marubeni owns 70% of North Pacific. Other owners are not shown. Dun and Bradstreet records only indicate foreign parent is Marubeni.

Sources: *Ingens Database* of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

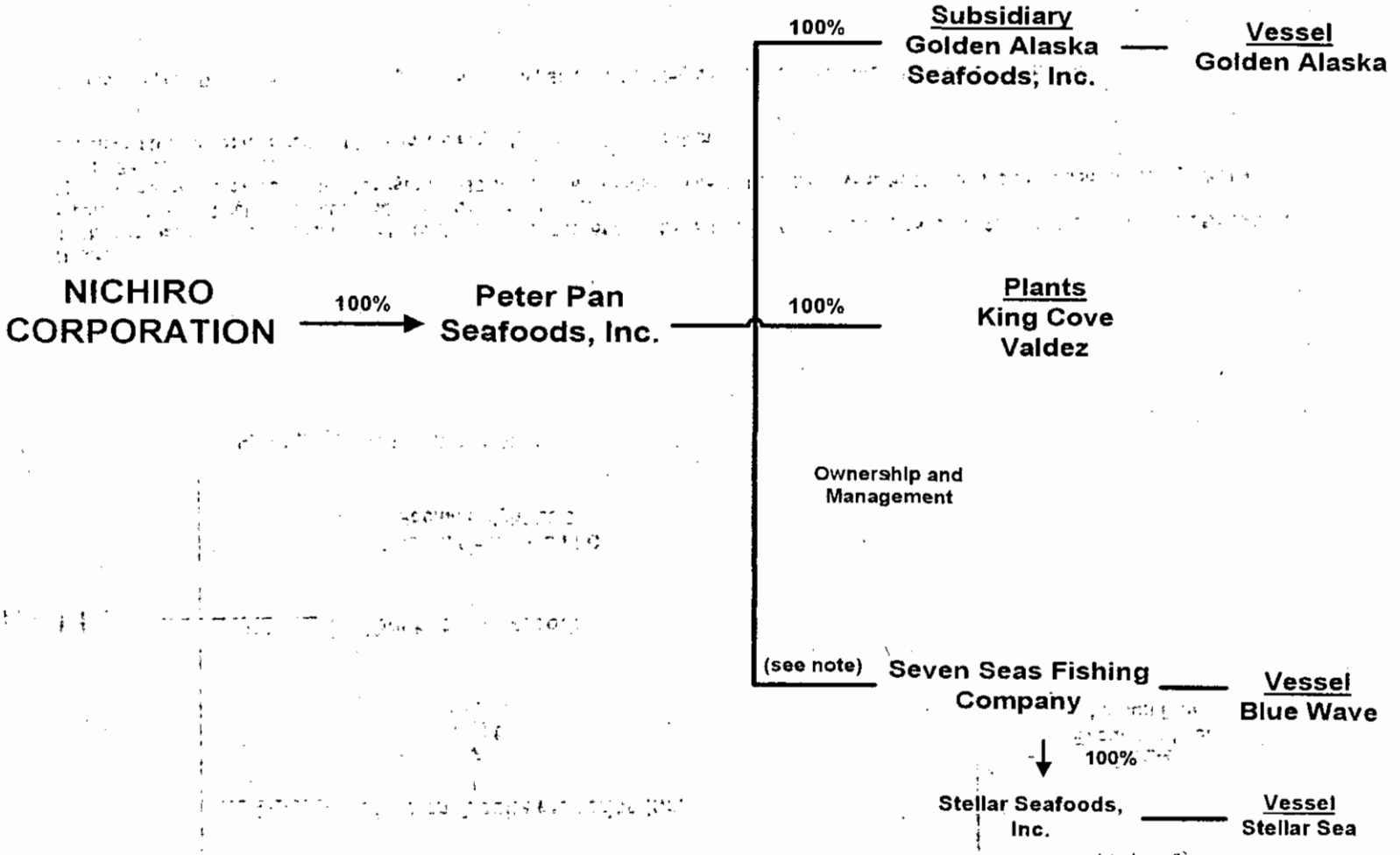
Figure 8.6 Organizational Chart for Maruha



Notes:
1) State of Alaska corporate records indicate Maruha owns 76% of Alyeska and Wards Cove Packing Co. owns 22% of Alyeska. Dun and Bradstreet reports state that Maruha owns 60% and Wards Cove owns 43%.
2) Dun and Bradstreet report dated August 11, 1998 indicates 6% of Alyeska capital stock is owned by Marubeni Corporation and 1% by Western Alaska Fisheries Inc.
3) Dun and Bradstreet reported that Maruha had majority ownership in Alaskan Command.

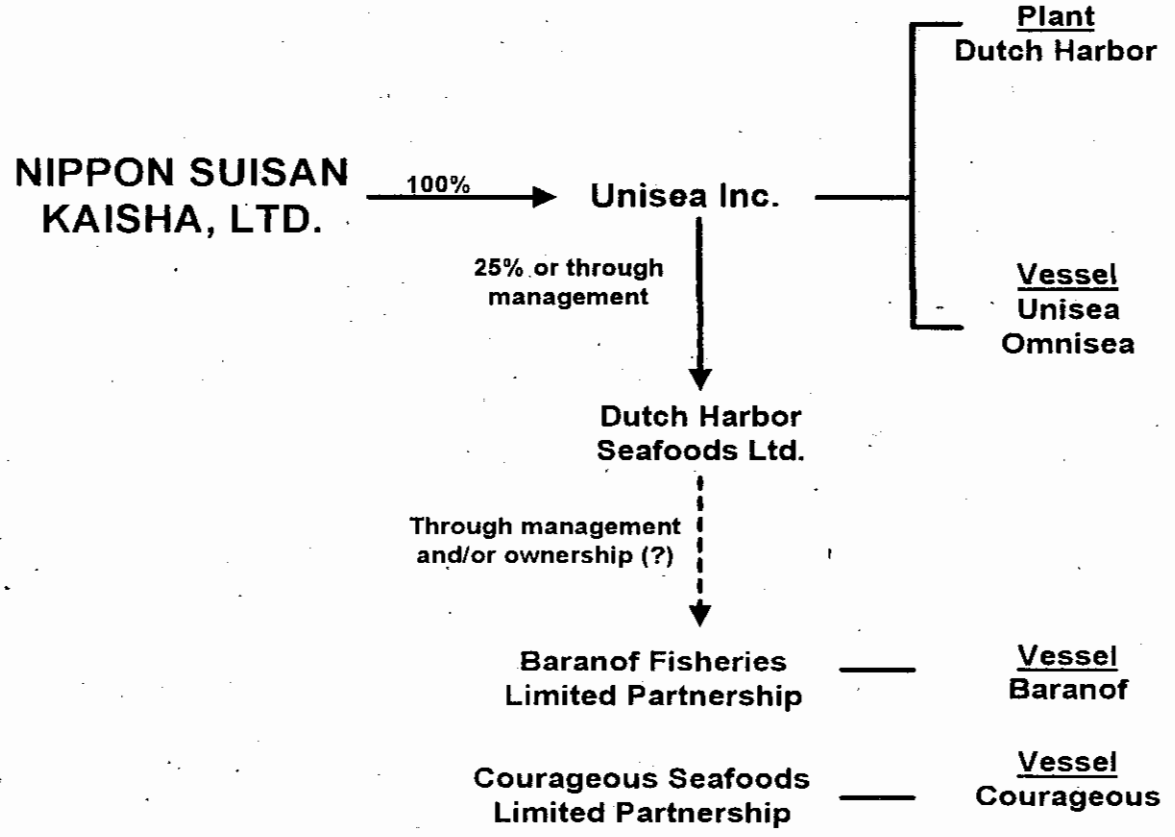
Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

Figure 8.7 Organizational Chart for Nichiro Corporation



Notes:
1) State of Alaska corporati on records for Seven Seas Fishing Company show Barry Collier, President of Peter Pan Seafoods with 75% of capital stock.
2) Peter Pan Seafoods has 10% and Nichiro Corporation has 15%.
Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

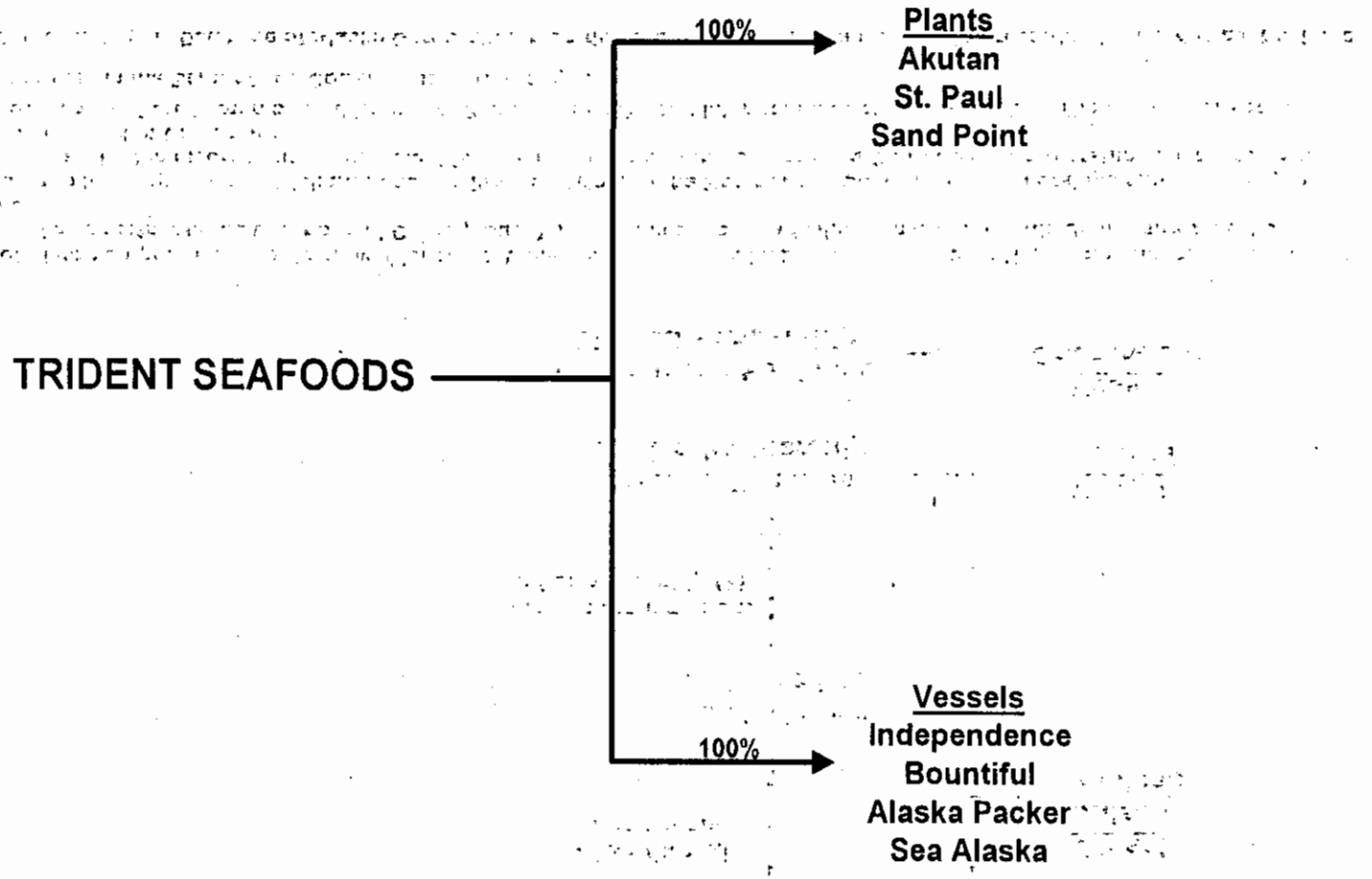
Figure 8.8 Organizational Chart for Nippon Suisan Kaisha, Ltd.



Notes:
1) State of Alaska corporation records show Richard C. White as President and a 20% owner in Dutch Harbor Seafoods. Mr. White is also listed as a partner in the Baranof and Courageous Partnerships although Washington State records do not show level of ownership.
2) According to industry sources, Richard Pace is a limited partner in the Baranof and Courageous Partnerships and according to the State of Washington records, Judith V. Pace, his wife, is a partner in the Baranof and Courageous Partnerships . Mr. Pace was a previous president of Unisea, Inc.
3) Aaron Gilman and Bert Gilman started Universal Seafoods in 1974 and later sold that business to NSK. The Gilmans are both listed as partners in the Baranof and Courageous Partnerships.

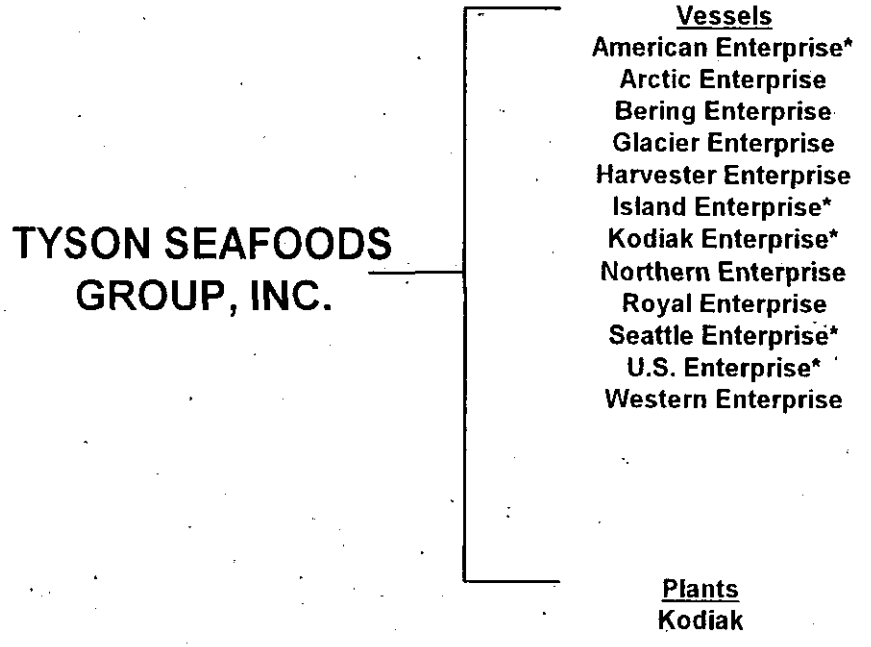
Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc

Figure 8.9 Organizational Chart for Trident Seafoods



Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

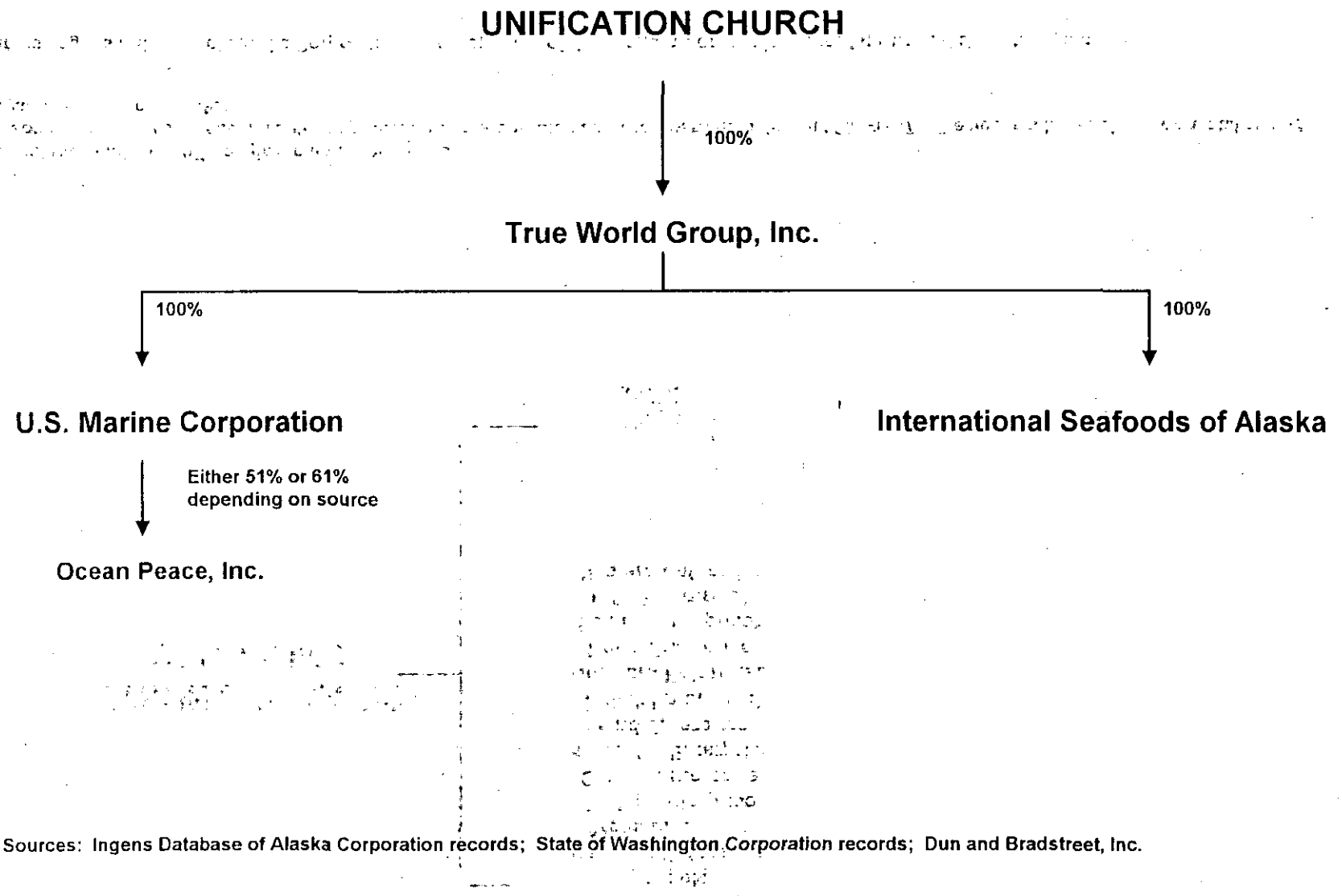
Figure 8.10 Organizational Chart for Tyson Seafoods Group, Inc.



Notes:
1) An asterics indicates AFA eligible catcher/processors.
2) Tyson has recently sold several catcher processors that operated as Tyson vessels between 1995-1997. The vessels listed above were still owned by Tyson as of March 20, 1999.

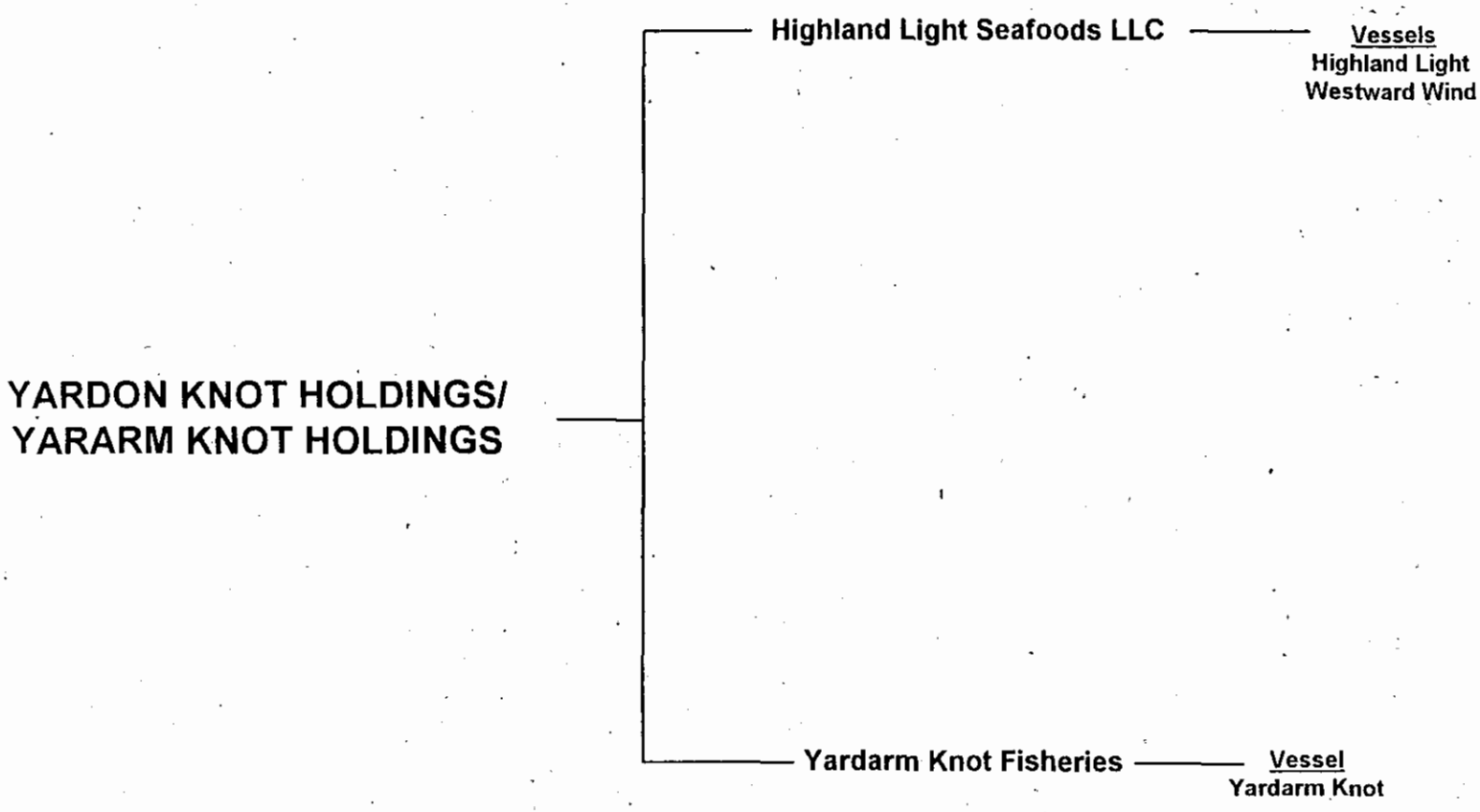
Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.

Figure 8.11 Organizational Chart for Unification Church



Sources: Ingens Database of Alaska Corporation records; State of Washington *Corporation* records; Dun and Bradstreet, Inc.

Figure 8.12 Organizational Chart for Yardon Knot Holdings/Yardarm Knot Holdings



Notes: Yardon Knot Holdings and Yardarm Knot Holdings were both reported in the data bases and have similar ownership structure.

Sources: Ingens Database of Alaska Corporation records; State of Washington Corporation records; Dun and Bradstreet, Inc.; Discussions with industry representatives.

8.2.5 CDQ Groups

Figures 8.13 - 8.18 depict the organization of the six primary CDQ groups. Bristol Bay Economic Development Corporation and Norton Sound Economic Development Corporation have direct investments in AFA-eligible processors. Aleutian Pribilof Island Community Development Association may be associated with an AFA-eligible processor under the 10% Ownership Rule. Basic information sources include the Alaska Department of Community and Regional Affairs. Industry discussions and research of corporate records revealed other links as noted in the charts.

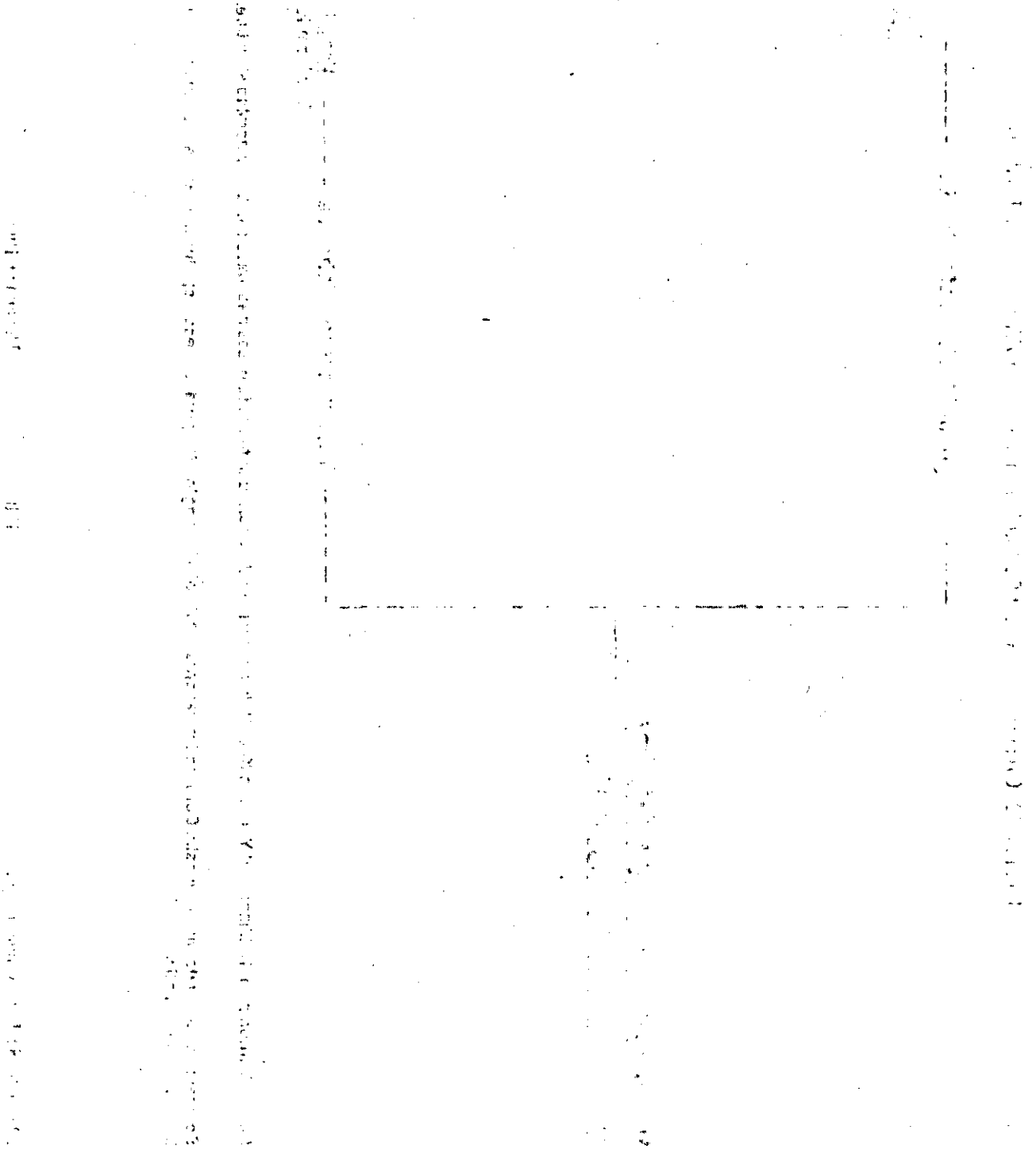
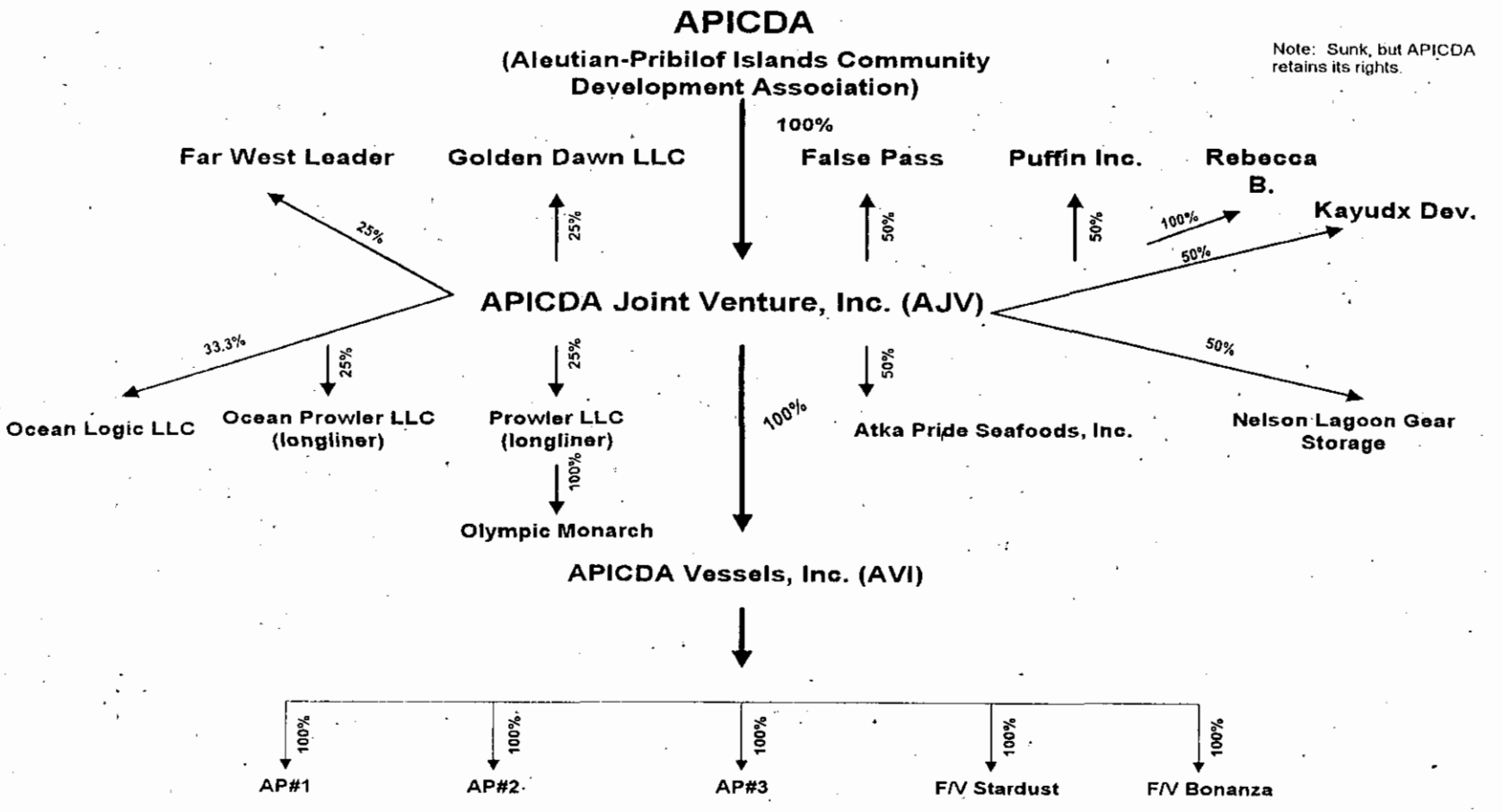


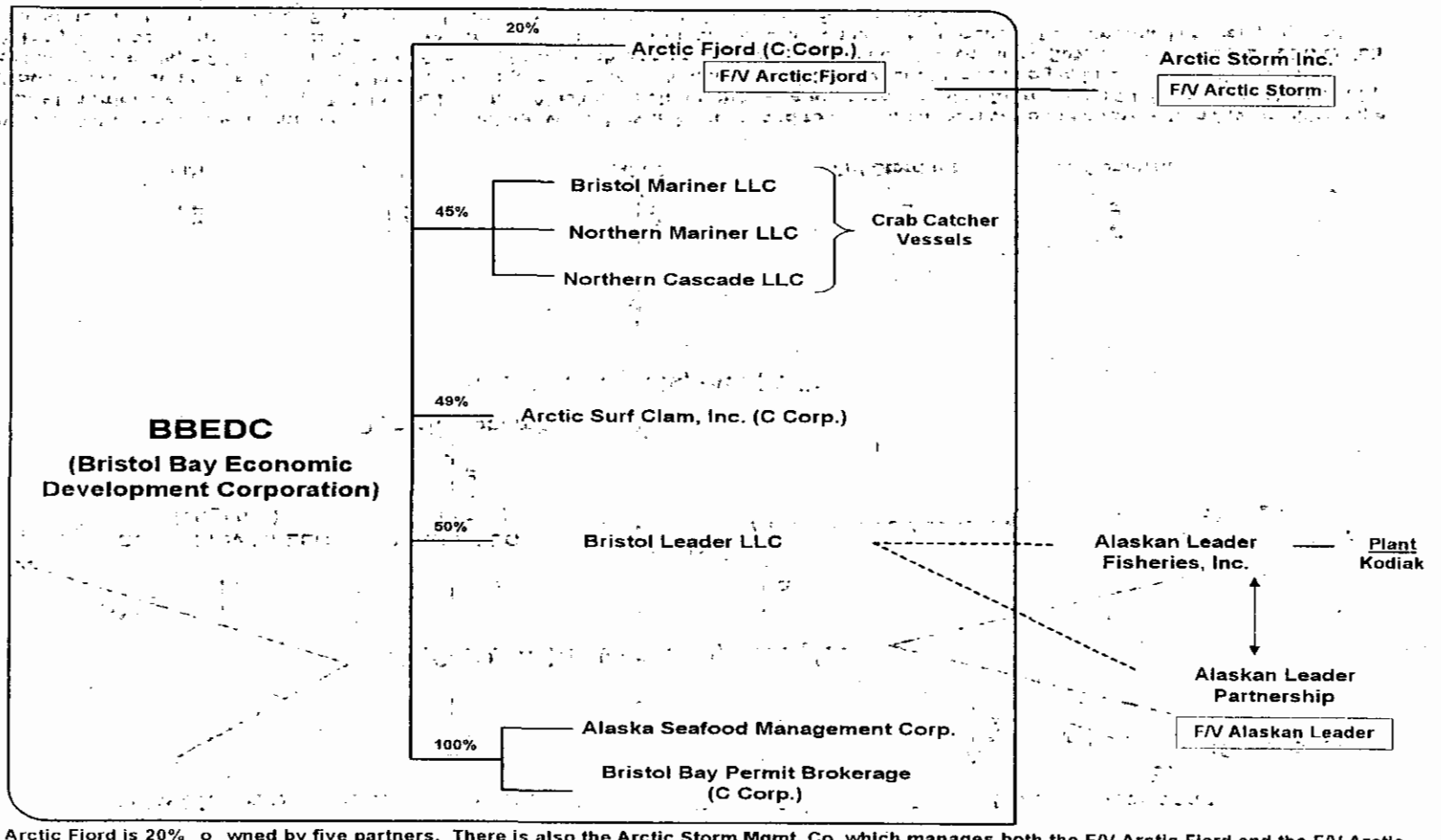
Figure 8.13 Organizational Chart for Aleutian-Pribilof Islands Community Development Association



Notes: AJV is a 100% owner of AVI, which purchas es fishing vessels which are leased to fishermen from various southwestern Alaska villages; a 50% owner of Atka Pride Seafoods, Inc. (APS), located in Atka, Alaska, which purchases and processes fish for resale; a 100% owner of Rebecca B, LLC; a 25% owner of Golden Dawn, LLC which is a vessel engaged in pollock fishery; a 33.3% owner of Ocean Logic, LLC which is developing software for fishing vessels; a 25% owner of Ocean Prowler, LLC which owns a 155' longline processing vessel; a 25% owner of Prowler, LLC which owns a 115' longline processing vessel; and a 50% owner of Kayudx Development, LLC which is in the process of commercially developing and planning to operate Tract 1 in the City of St. George, Alaska. Pollock partners: Trident and Starbound.

Prepared by: Glen Haight, DCRA Municipal and Regional Assistance Division, received February 19, 1999.

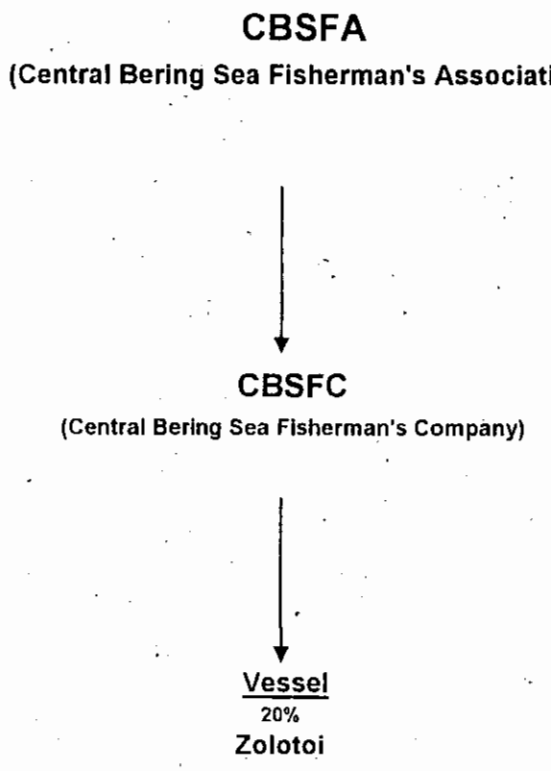
Figure 8.14 Organizational Chart for Bristol Bay Economic Development Corporation



Notes: Arctic Fjord is 20% owned by five partners. There is also the Arctic Storm Mgmt. Co. which manages both the F/V Arctic Fjord and the F/V Arctic Storm. The F/V Arctic Storm is currently owned 50% by Oyang (Korean Corp) and 50% by same five partners. BB Permit Brokerage and AK Seafood Mgmt Corp are now defunct. Pollock partner: Arctic Storm (previously Oceantrawl). State of Alaska records indicate that 42% of Bristol Leader LLC is owned by a group of six persons, each with 7% ownership, who also control the majority of ownership in the Alaskan Leader Partnership and Alaska Leader Fisheries. Arctic Fjord Inc and Arctic Storm Inc have 3 multiple owners. At least one person owns more than 10% ownership in both companies. Common ownership is approximately 80% for the Arctic Fjord and over 40% for the Arctic Storm.

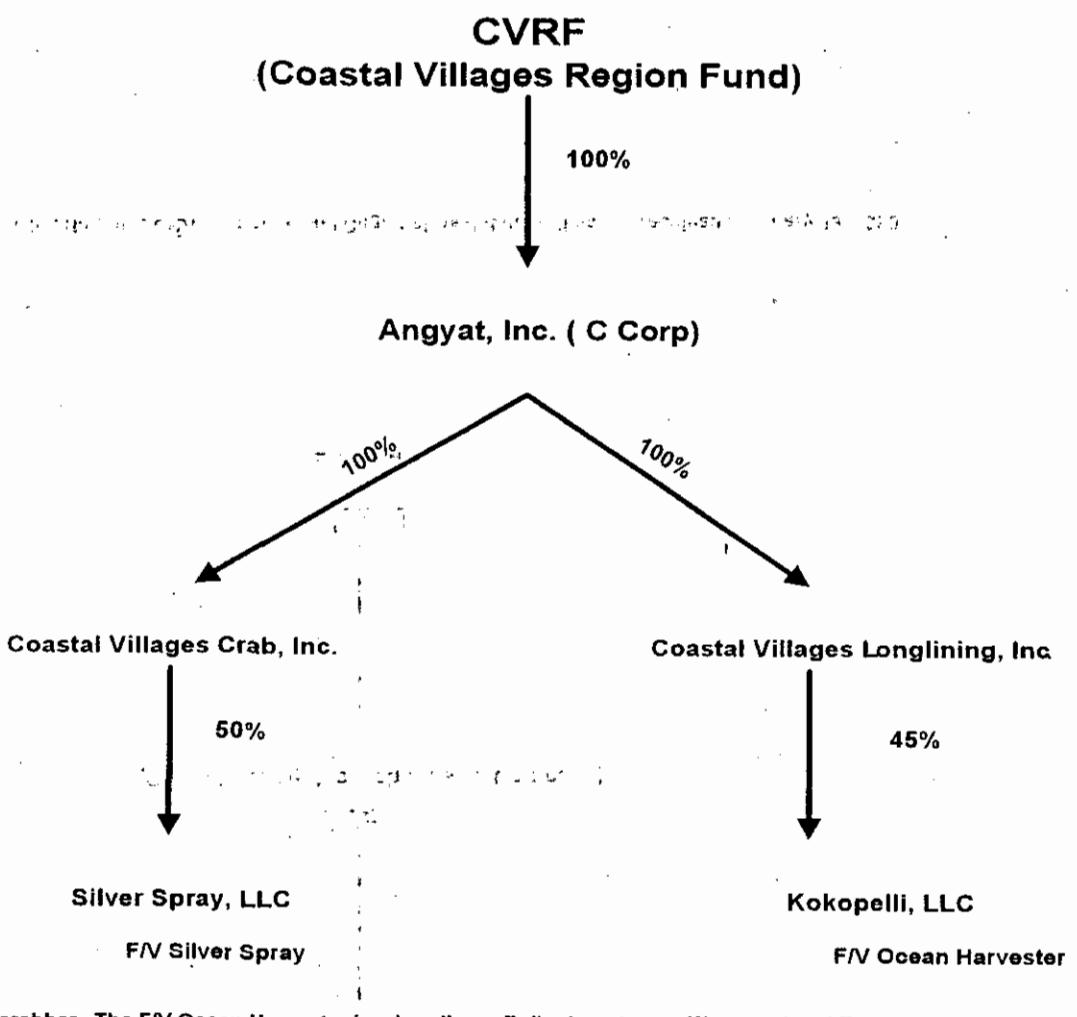
Sources: Information within the box was prepared by Glen Haight, DCRA Municipal and Regional Assistance Division, received February 19, 1999.; Other information is from the State of Alaska corporation records and discussions with industry representatives.

Figure 8.15 Organizational Chart for Central Bering Sea Fisherman's Association



Prepared by: Glen Haight, DCRA Municipal and Regional Assistance Division, received February 19, 1999.

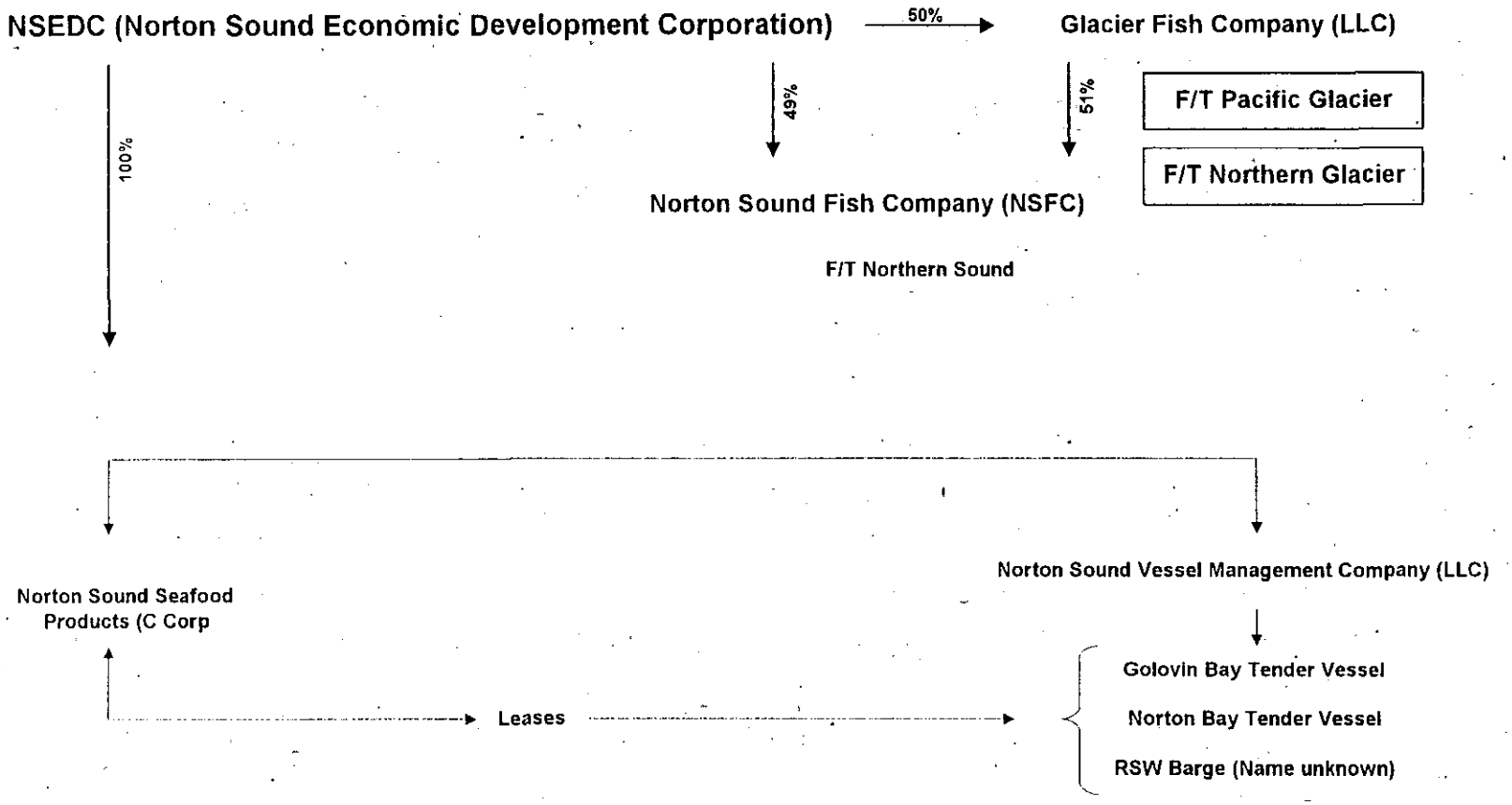
Figure 8.16 Organizational Chart for Coastal Villages Region Fund



Notes: The F/V Silver Spray is a crabber. The F/V Ocean Harvester is a longliner. Pollock partners: Westward and Tyson

Prepared: Glenn Haight, DCRA Municipal & Regional Assistance Division, received Februray 19, 1999.

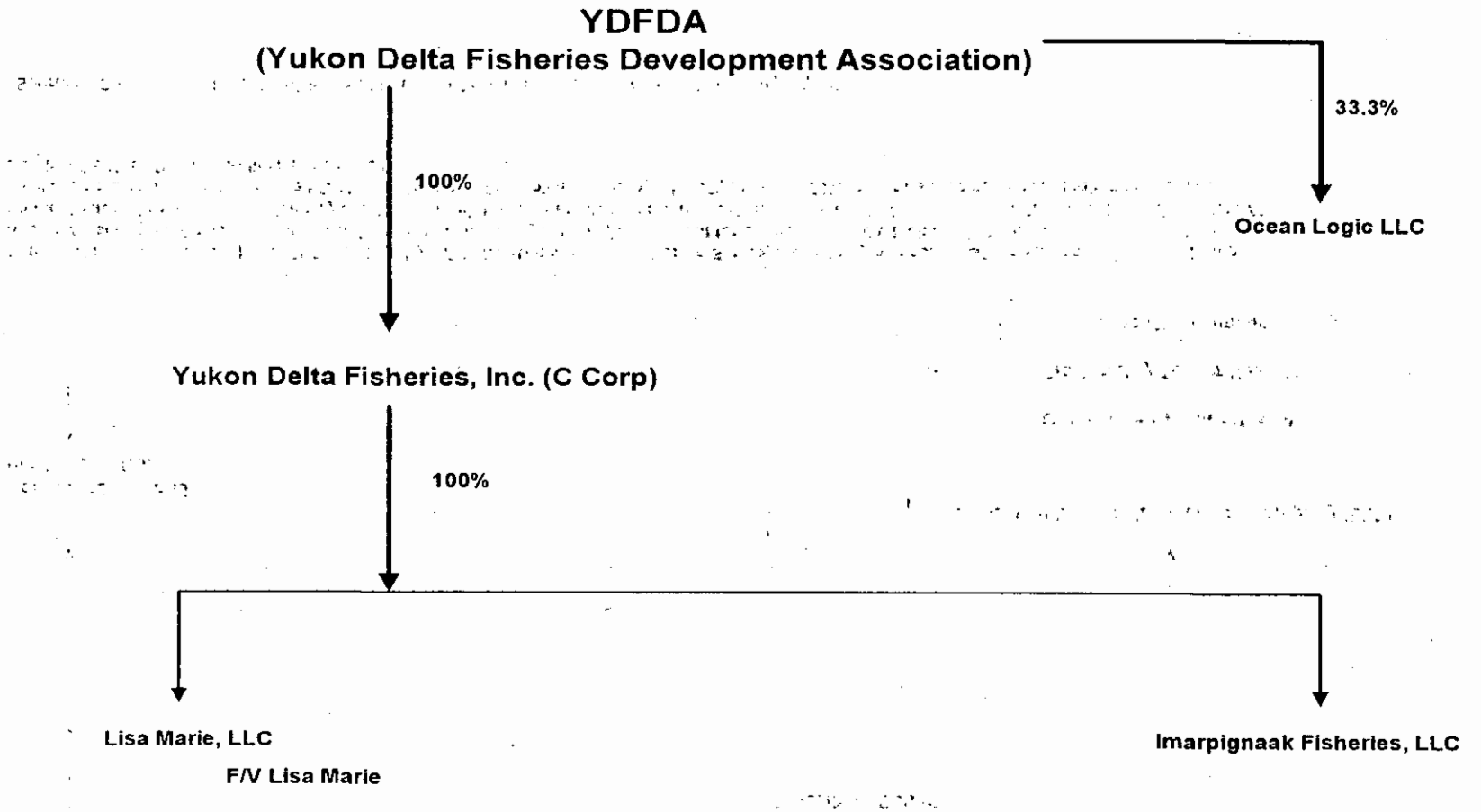
Figure 8.17 Organizational Chart for Norton Sound Economic Development Corporation



Notes: NSFC is owned 49% by NSEDC and 51% by GFC. NSFC owns the F/V Norton Sound, a 139' longline vessel. GFC operates the vessel, Norton Sound Vessel Mgmt. Co. is a subsidiary of NSEDC which manages two specially built tender vessels and which are 100% owned by NSEDC. Norton Sound Seafood Products is a subsidiary of NSEDC which buys and markets various seafood products. GFC owns the 201' Northern Glacier and the 276' Pacific Glacier and an interest in the F/V Norton Soudn. GFC is 50% owned by NSEDC, the other 50% owners are Seattle based individuals (5% John Bundy, 45% Erick Brevik). Pollock partner: GFC.

Sources: Glen Haight, DCRA Municipal and Reigonal Assistance Division, received February 19, 1999.

Figure 8.18 Organizational Chart for Yukon Delta Fisheries Development Association



Notes: Lisa Marie, LLC, is 1 00% owner of the F/V Lisa Marie which fishes for pollock. Imarpignaak Fisheries, LLC is in the process of purchasing 4 small vessels (for training purposes) from Yukon Delta Fisheries, Inc. Pollock partner: Golden Alaska Seafoods.

Prepared by: Glen Haight, DCRA Municipal and Regional Assistance Division, received February 19, 1999.

8.2.6 Summary of the Ownership Interests of AFA Processors

Table 8.3 summarizes ownership interests of AFA processors in companies and entities developed in the organization charts. These will be used in the estimates of processing limits.

Table 8.3 Specification of AFA Companies and Entities for the Analysis of Processing Limits

Entity	Company	Vessel Name or Location of Plant	ID	AFA Qualified	AFA Company	AFA Entity	Sector
Alaska Ocean LLP	Alaska Ocean LLP	*Alaska Ocean*	P3794	√	√	√	CP
Alaska Trawl Fisheries	Alaska Trawl Fisheries	*Endurance*	P3360	√	√	√	CP
Aleutian Spray Fisheries	Aleutian Spray Fisheries	*Starbound*	P3414	√	√	√	CP
	Aleutian Spray Fisheries	*Galaxy*	F0192		√	√	CP
	Aleutian Spray Fisheries	*Pengwin/Horizon*	P1301		√	√	INS
American Seafoods Co.	American Seafoods Co.	*American Dynasty*	P3681	√	√	√	CP
	American Seafoods Co.	*American Empress*	P2722	√	√	√	CP
	American Seafoods Co.	*American Triumph*	P4055	√	√	√	CP
	American Seafoods Co.	*Browns Point*	P2722	√	√	√	CP
	American Seafoods Co.	*Christina Ann*	P2850	√	√	√	CP
	American Seafoods Co.	*Elizabeth Ann*	P2722	√	√	√	CP
	American Seafoods Co.	*Katie Ann*	P1996	√	√	√	CP
	American Seafoods Co.	*Northern Eagle*	P3261	√	√	√	CP
	American Seafoods Co.	*Northern Hawk*	P4063	√	√	√	CP
	American Seafoods Co.	*Northern Jaeger*	P3896	√	√	√	CP
	American Seafoods Co.	*Ocean Rover*	P3442	√	√	√	CP
	American Seafoods Co.	*Pacific Explorer*	P3416	√	√	√	CP
	American Seafoods Co.	*Pacific Navigator*	P2799	√	√	√	CP
	American Seafoods Co.	*Pacific Scout*	P3383	√	√	√	CP
	American Seafoods Co.	*Rebecca Ann*	P2838	√	√	√	CP
	American Seafoods Co.	*Victoria Ann*	P2839	√	√	√	CP
	American Champion LLP	*American Champion*	F9692		√	√	INS
	Seahawk Pacific Seafoods	*Claymore Sea*	P3362			√	CP
	Seacatcher Fisheries, Inc.	*Heather Sea*	P3664			√	CP
	Swan Fisheries, Inc.	*Saga Sea*	P4056			√	CP
	Arica Fish Co. Ltd.	*Arica*	P3694			Probable	CP
	Cape Horn Fisheries	*Cape Horn*	P2110			Probable	CP
	Ave Phoenix	*Pacific Pearl*	P0276			Probable	CP
	Rebecca Irene, Inc.	*Rebecca Irene*	P1610			Probable	CP
	Unimak Fisheries LLC	*Unimak Enterprise*	P3369			Probable	CP
	Beagle Enterprises LLP	*Beagle*	P0528			Probable	INS
Bristol Bay EDC	Arctic Storm, Inc.	*Arctic Fjord*	P3396	√	√	√	CP
	Arctic Storm, Inc.	*Arctic Storm*	P2943	√	√	√	CP
	Bristol Leader LLC	*New Star/ Bristol Lead...*	P3491			√	CP
	Alaskan Leader LLP	*Alaskan Leader*	P4598			Probable	CP
	Alaskan Leader LLP	Kodiak	F1991			Probable	INS
Maruha Corp.	Alyeska Seafoods, Inc.	Dutch Harbor	F0753	√	√	√	INS
	Westward Seafoods, Inc.	Dutch Harbor	F1366	√	√	√	INS
	Supreme Alaska Seafoods	*Excellence*	M4111	√	√	√	MS
	Pacific Knight LLC	*Pacific Knight*	P2783		√	√	CP
	Alaskan Command LLC	*Alaskan Command*	P3391			√	CP
	Wards Cove Packing Co.	*Excursion Inlet*	F0274			√	INS

Entity	Company	Vessel Name or Location of Plant	ID	AFA Qualified	AFA Company	AFA Entity	Sector
Maruha Corp. (cont.)	Wards Cove Packing Co.	Ketchikan	F0110			√	INS
	Wards Cove Packing Co.	Ketchikan	F2185			√	INS
	Western Alaska Fisheries	Kodiak	F0320			√	INS
	Wards Cove Packing Co.	Larsen Bay	F0266			√	INS
	Wards Cove Packing Co.	Seward	F1379			√	INS
	Wards Cove Packing Co.	Seward	F2354			√	INS
Nichiro Corp.	Peter Pan Seafoods, Inc.	King Cove	F0142	√	√	√	INS
	Peter Pan Seafoods, Inc.	*Golden Alaska*	M1607	√	√	√	MS
	Peter Pan Seafoods, Inc.	Valdez	F1041		√	√	INS
	Peter Pan Seafoods, Inc.	*Blue Wave*	F1636		√	√	MS
	Peter Pan Seafoods, Inc.	*Stellar Sea*	M5362		√	√	MS
Nippon Suisan Kaisha	Unisea, Inc.	Dutch Harbor	F1180	√	√	√	INS
	Unisea, Inc.	St. Paul	F0188		√	√	INS
	Unisea, Inc.	*Omnisea*	F1066			√	MS
	Baranof Fisheries	*Baranof*	P1248			Probable	CP
	Courageous Seafoods	*Courageous*	P1276			Probable	CP
Northern Victor LLP	Northern Victor LLP	*Northern Victor*	F1319	√	√	√	INS
Norton Sound EDC	Norton Sound EDC	*Northern Glacier*	P0661	√	√	√	CP
	Norton Sound EDC	*Pacific Glacier*	P3357	√	√	√	CP
	Norton Sound EDC	*Norton Sound*	P5294		√	√	CP
	Norton Sound EDC	Nome	F1809		√	√	INS
	Norton Sound EDC	Unalakleet	F2290		√	√	INS
	Norton Sound EDC	Unknown	F2289		√	√	INS
Phoenix Processor LLP	Phoenix Processor LP	*Ocean Phoenix*	M3703	√	√	√	MS
Trident Seafoods Corp.	Trident Seafoods Corp.	Akutan	F0939	√	√	√	INS
	Trident Seafoods Corp.	Sand Point	F0940	√	√	√	INS
	Trident Seafoods Corp.	*Bountiful*	P0278		√	√	CP
	Trident Seafoods Corp.	South Naknek	F0942		√	√	INS
	Trident Seafoods Corp.	St. Paul	F1927		√	√	INS
	Trident Seafoods Corp.	*Alaska Packer*	F0944		√	√	MS
	Trident Seafoods Corp.	*Independence*	M3259		√	√	MS
	Trident Seafoods Corp.	*Sea Alaska*	F0945		√	√	MS
Tyson Seafoods Group	Tyson Seafoods Group	*American Enterprise*	P2760	√	√	√	CP
	Tyson Seafoods Group	*Island Enterprise*	P3870	√	√	√	CP
	Tyson Seafoods Group	*Kodiak Enterprise*	P3671	√	√	√	CP
	Tyson Seafoods Group	*Seattle Enterprise*	P3245	√	√	√	CP
	Tyson Seafoods Group	*U.S. Enterprise*	P3004	√	√	√	CP
	Tyson Seafoods Group	*Arctic Enterprise*	M5314	√	√	√	INS
	Tyson Seafoods Group	*Bering Enterprise*	P3003		√	√	CP
	Tyson Seafoods Group	*Glacier Enterprise*	F9720		√	√	CP
	Tyson Seafoods Group	*Harvester Enterprise*	P2732		√	√	CP
	Tyson Seafoods Group	*Northern Enterprise*	F9713		√	√	CP
	Tyson Seafoods Group	*Royal Enterprise*	F9723		√	√	CP
	Tyson Seafoods Group	*Western Enterprise*	F9716		√	√	CP
	Tyson Seafoods Group	Kodiak	F0222		√	√	INS
	Tyson Seafoods Group	Kodiak	F1936		√	√	INS
Yak/Yok Holdings	Yak/Yok Holdings	*Highland Light*	P3348	√	√	√	CP
	Yak/Yok Holdings	*Westward Wind*	F9715		√	√	CP
	Yak/Yok Holdings	*Yardarm Knot*	M3116		√	√	MS

8.3 Identification of Ten Options

Processing limits may be applied for each species or species group at three general levels:

1. Single overall limit for all AFA entities combined.
2. Sector limits for inshore, offshore catcher processors, and motherships.
3. Individual limits for an AFA facility, company, entity, etc.

In addition, each level has three layers of AFA eligibility:

1. Eligible plants and vessels
2. Companies that own such plants or vessels
3. Entities that combine eligible companies through 10% ownership

These nine combinations were analyzed along with a tenth option that applies individual company processing limits, but includes only AFA-eligible facilities within those companies.

Here are the ten options described in full:

Option 1 **Overall Limits Applied to All AFA-eligible Facilities**. A single overall processing limit would be set for each species. Only AFA processing facilities would be included. Once the overall limit is reached, no additional processing of the limited species by any included facility would be allowed.

Option 2 **Overall Limits Applied to All Facilities within AFA Companies.** A single overall processing limit would be set for each species. All processing facilities owned by companies that own AFA facilities would be included under the limits. Once the overall limit is reached, no additional processing of the limited species by any included facility would be allowed.

Option 3 **Overall Limits Applied to All Facilities within AFA Entities.** A single overall processing limit would be set for each species. AFA entities would be defined as an umbrella organization under which all processing facilities that are associated with AFA facilities by the 10% Ownership Rule are included under the limits. Once the overall limit is reached, no additional processing of the limited species by any included facility in any of the entities would be allowed.

Option 4 **Sector Level Limits Applied to AFA Facilities.** A processing limit for each species would be applied to each sector. There would be three sectors as defined in the AFA: (1) catcher processors, which include all AFA catcher processors, (2) motherships, which would include all AFA motherships, and (3) inshore, which would include all AFA shore plants and floating processors. Processing histories of all AFA facilities from each sector (including the nine catcher processors listed in §209) would be included in the calculation of the sector limits. Once a sector's limit for a particular species is reached, no additional processing of that species by any AFA facility included in the sector would be allowed.

Option 5 **Sector-Level Limits Applied to All Facilities within AFA Companies.** Sector level processing limits for each species would be imposed upon all facilities in AFA companies as defined by direct ownership of AFA facilities. Three sectors would be defined on the basis

of existing inshore-offshore regulations. The catcher-processor sector would include all catcher processors of any gear type greater than 125 feet LOA and all catcher processors less than 125 feet LOA that process more than 125 tons per week (round weight). The mothership sector would include any non-catching floating-processor that takes delivery of groundfish or BSAI crab species in more than one location during the year, or which takes deliveries outside of state waters. The inshore sector would include all shore plants and non-catching floating-processors that take delivery of groundfish and BSAI crab in a single location within state waters during the year, and all catcher processors less than 125 feet LOA that process less than 125 tons per week (round weight). Once a sector's limit is reached, no additional processing of the limited species by any facility owned by an AFA company included in the sector would be allowed.

Option 6 **Sector-Level Limits Applied to All Facilities within AFA Entities.** Sector-level processing limits for each species would be imposed upon all facilities in AFA entities, as defined by the 10% Ownership Rule. Three sectors would be defined on the basis of existing inshore-offshore regulations. The catcher-processor sector would include all catcher processors of any gear type greater than 125 feet LOA and all catcher processors less than 125 feet LOA that process more than 125 tons per week (round weight). The mothership sector would include any non-catching floating-processor that takes delivery of groundfish or BSAI crab species in more than one location during the year, or which takes deliveries outside of state waters. The inshore sector would include all shore plants and non-catching floating-processors that take delivery of groundfish and BSAI crab in a single location within state waters during the year, and all catcher processors less than 125 feet LOA that process less than 125 tons per week (round weight). Once a sector's limit is reached, no additional processing of the limited species by any facility associated with an AFA entity included in the sector would be allowed.

Option 7 **Individual Plant and Vessel Limits**. An individual facility level processing limit would be imposed. Each AFA plant or vessel would be limited according to its own percentage of the total of each species processed over the historical period. Once a facility's limit for a species is reached, that plant or vessel would not be allowed to process additional amounts of the species.

Option 8 **Individual Company Limits Applied to AFA Facilities**. Processing limits would be imposed on each company that owns AFA plants or vessels. The historical processing of all AFA facilities owned by the company would be included in the company limit. Processing histories of facilities owned by the company but which are not AFA facilities would not be included in the calculation of the company limits, nor would these facilities be affected by the limits. In other words, once a company's limit of a particular species is reached, only non-AFA facilities within the company could continue processing the species.

Option 9 **Individual Company Limits Applied to All Company Facilities**. Processing limits would be issued to each company that owns AFA plants or vessels. The historical processing of all facilities owned by the company would be included in the company limit. The company could decide how the processing of each species is allocated among its facilities. Once a company's limit is reached, no facility owned by the company could process additional amounts of that species.

Option 10 **Individual Entity Limits Applied to All Entity Facilities**: Processing limits would be imposed on each AFA entity. The historical processing of all facilities within the entity would be included in the entity's processing limit. The entity as a group could decide how the processing of each species is allocated among its facilities. Once an entity's limit for a given species is reached, no facility within the entity could process additional amounts of that species.

8.4 Assumptions and Issues

The following assumptions and issues underpin the specification of options above and the analysis, and need to be carefully considered by the Council.

1. Processing limits will not constitute an allocation.

2. Fisheries with processing limits.

Crab Fisheries in the BSAI: If crab fisheries are included, the analysis assumes that limits will be species-specific but not area-specific, i.e., there will be processing limits on Blue King Crab, Brown King Crab, Red King Crab, Bairdi Crab, and Opilio Crab, but not by area.

Groundfish other than pollock in the BSAI: Non-pollock BSAI groundfish limits will be applied to five species groups for the entire BSAI rather than by specific species for specific areas: Pacific Cod, Atka Mackerel, Flatfish, Rockfish, and Other Groundfish without reference to area.

All groundfish in the GOA: GOA groundfish limits will be applied to six species groups for the entire GOA rather than by specific species and area: Pollock, Pacific Cod, Atka Mackerel, Flatfish, Rockfish, and Other Groundfish. Processing limits in the GOA are in addition to the potentially more restrictive language in the AFA regarding Area 630 and pollock and Pacific cod processing. They will not supersede the language in the AFA unless that is the specific intent of Council.

3. Calculation of processing limits.

The following general formula will be used to calculate processing limits for each limited fishery:

$$\frac{\text{Historical Processing of Limited Processors}}{\text{Historical Processing of All Processors}} \times \text{Current Year TAC (or GHL for Crab)} = \text{AFA Processing Limit}$$

The analysis assumes that all AFA eligible facilities will participate in cooperatives.

4. Years included in processing history.

- 1995, 1996, and 1997. These years were indicated in the AFA.
- 1996, 1997 only. These years were proposed by the Council as an alternative.

5. Treatment of non-pollock processing histories of the nine removed catcher processors.

The processing histories of the nine catcher processors listed in section 209 are treated differently depending on how the processing limit is configured. For an overall limit, the histories will be included

in that overall limit. For sector limits, the histories are included in the offshore catcher processor limit. If individual limits are used, the histories will go to American Seafoods as a whole or be apportioned equally among its seven catcher processors.

6. GOA Groundfish processing limits of 20 named catcher processors.

The GOA groundfish processing limits of the 20 catcher processors listed in section 208 of AFA are included in the overall, sector, or individual catcher processors' limits, depending on options chosen. The AFA prohibits those 20 vessels from processing any BSAI crab (none did anyway during 1995-1997), any GOA pollock, any groundfish in GOA Area 630, or more than 10% of the Pacific cod in Areas 610, 620, and 640. However, non-AFA catcher processors included within AFA companies or entities could be allowed to process up to whatever limits are established.

7. Non-pollock processing histories of catcher processors that qualify under §208(e)(21) AFA and shore plants that qualify under §208(f)(1)(B).

It appears that two processing facilities, the *Ocean Peace*, and the shore plant in Kodiak owned by International Seafoods of Alaska, would qualify under these sections. Discussions with members of industry indicated that references to these facilities in the AFA were included to allow these facilities to continue to process pollock in directed fisheries as part of the allocations in §206 of the AFA, but that it was not intended that they would be limited unless they participated in cooperatives. Because it is not anticipated that these facilities will participate in cooperatives, their processing histories have not been included in the calculation of processing limits.

8. Processing histories of AFA-eligible facilities that choose not to participate in cooperatives.

All 23 catcher processors and motherships specified in the AFA, and the shore plants and floaters that processed 2,000 or more tons of pollock in 1996 and 1997, are assumed to participate in cooperatives. Therefore, their processing histories are included in the calculation of the limits. If their histories are included in calculating the limits, but they choose not to be in a cooperative, will the non-participating facilities have to cease processing if an applicable processing limit is reached? **In general, for all options presented, the Council will need to decide whether processing limits would be applied when facilities/companies do not participate in co-ops.**

9. Use of 10% Ownership Rule in the determination of AFA entities.

The analysis treats the ownership of each individual in a family separately. The Council may wish to treat the ownership of currently married individuals and the minor children as a single ownership stake for purposes of the 10% Ownership Rule. Further, the analysis assumes that CDQ companies and organization are treated no differently from other companies. Issues of "control" have been discussed earlier. As noted then, this analysis focuses more on ownership.

10. Fixed processing limits, or adjustable limits to account for changes in ownership patterns or the participation of AFA-eligible facilities in cooperatives.

For example, a non-AFA processing company purchases an AFA-eligible facility. The new owner would become an AFA company. If the limits are intended to preclude AFA companies from expanding their processing in non-pollock species, then it stands to reason that the new owner's

processing in its non-AFA plants would be added into the AFA processing total for that species. Once a processing limit for a given species is reached, then the new owner will have to cease processing that species at all of its facilities. If processing limits are fixed, then the new owner's processing history from its original plants would not be included in the processing limit calculation, but the current processing of its original non-AFA plants would count toward the limits. In this example, a closure could result before any of the facilities has processed its historical percentage of the species.

11. Vessels that are not eligible under the Crab and/or Groundfish License Limitation Program (LLP).

The analysis uses all catch and processing of all vessels and processing facilities that participated in 1995-1997, and does not verify whether all catcher processors would qualify for a license under the LLP. It is not believed that there were significant numbers of unqualified vessels participating in those years.

12. Processing totals of vessels or plants that have been destroyed or replaced.

Since 1995, there have been several vessels or plants that have been destroyed or replaced. In some of those cases, catch and processing histories have been transferred to new owners who have built new vessels or processing facilities to replace the old. It is possible that AFA companies or members of AFA entities own the catch and processing histories of some of the destroyed or replaced facilities. The analysis assumes that the catch and processing histories of such destroyed or replaced facilities will be included in the calculation of AFA processing limits. However, it should be noted that it is possible that some of the lost or destroyed vessels may not be eligible for licenses under the Crab LLP. Because of the difficulties in documenting destroyed or replaced vessels, the analysis includes processing of all facilities that participated in the fisheries between 1995 and 1997.

13. Processing totals of vessels that have been removed from U.S. documentation.

It is possible that some vessels that are no longer U.S.-documented fishing vessels (in addition to the nine vessels removed in the AFA) may contribute to the AFA processing limits. In some cases, the processing histories of those vessels may be sufficient to qualify replacement vessels under the LLP, and it is possible that the owners of those fishing histories have already built replacement vessels. Because of the difficulties of confirming current U.S. documentation of all vessels, the analysis includes the catch and processing of all vessels that participated in the fisheries between 1995 and 1997. If the Council chooses to exclude these vessels, then processing histories of all vessels that have given up their documentation should be removed from both the numerator and the denominator of the calculation for calculating limits.

14. Interactions of processing limits with Improved Retention and Improved Utilization (IRIU).

If a processing limit is reached for a species that is caught as bycatch in other fisheries, will processing of the other species be limited as well? As an example, assume that a processing limit for Pacific cod is reached, but the processing limit for flatfish has yet to be attained. Bycatch of Pacific cod is almost unavoidable in flatfish fisheries, and therefore it is likely that additional Pacific cod will be caught or delivered to flatfish processors. If those processors cannot process additional Pacific cod, and they cannot discard the Pacific cod because of IRIU, then in effect they cannot process additional flatfish (must refuse delivery).

15. Crab GHLs

How will processing limits be applied to crab species when the Guideline Harvest Level (GHL) is set as a range, or when crab species are managed by season?

16. Treatment of Bycatch

If a processing limit for a species is reached, the processors affected by that limit, whether at the individual, sector, or overall level, will be prohibited from processing additional amounts of that species, even if delivered as bycatch. NMFS may, however, employ a phased approach of imposing processing limits that would allow the processing of bycatch amounts of a limited species after a predetermined threshold is reached.

17. Defining AFA facilities, companies, and entities.

Processing limits will be set at the beginning of the year and may vary with the number of participating facilities and species TACs. Facilities, companies and entities must declare before the calendar year which facilities will participate in pollock cooperatives. That declaration will define which facilities, companies and entities are AFA-related. If a company or entity has at least one AFA eligible facility, that company or entity is defined as an AFA company or entity.

18. NMFS verification procedures.

NMFS will have the ultimate responsibility for defining AFA facilities, companies, and entities. Ownership structure will need to be detailed in affidavits showing ownership shares down to the 10 percent ownership level. If a company, corporation, or partnership owns the processor, then additional details showing the individual owners of the company, corporation, or partnership must also be provided. The processor's permit application will also contain signed affidavits from all companies, corporations, partnerships and individuals that own at least a 10 percent share of the processor. The affidavits will indicate all other processing facilities in which the company, partnership, or individual has at least a 10 percent ownership share. After defining AFA facilities, companies or entities, NMFS will send documentation to each one describing the company and ownership linkages. A representative of the facility, company or entity will have to acknowledge the ownership structure and agree to abide by the processing limits, or be denied a permit.

If sector limits are to be used, the representative will also have to declare which sector his facility will operate based on already established inshore-offshore criteria.

AFA-eligible inshore floating processors, if they participate in pollock cooperatives, must declare as part of the inshore sector, and may not process crab or groundfish in a location other than the location in which they process pollock.

8.5 Results of the Analysis of Ten Options

This section presents the results of the analysis of the ten options. It quantifies the limits as they pertain to various levels and layers within levels, and qualitatively assesses the efficacy of the option in meeting the objectives previously described.

8.5.1 Option 1: Overall Processing Limits Applied to All AFA Facilities

A single overall processing limit would be set for each species and would encompass all AFA facilities. Once the overall limit is reached, no additional processing of the limited species by any AFA facility would be allowed. Under this option, only AFA facilities would be limited. If a company owns an AFA facility and a non-AFA facility, only the AFA facility would be affected by the processing limits.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the overall processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other processors included within the AFA processing limits will be allowed to process the 20 catcher processors' historical portions of GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

A qualitative assessment of the effectiveness of this option in meeting the 10 objectives introduced in Subsection 8.1.5 is given in Table 8.5 along with an assessment for the other options. The table shows each of those objectives with a presumed rating from the perspective of an interest group. The objectives are rated "good", "fair" or "poor", relative to the other options, and where a "fair" rating implies that there are worse options and there are better options. The ratings are made from the analyst's presumption of the attitudes of the stated interest group, but do not necessarily reflect the actual judgement of the group.

Table 8.4 shows estimates of overall processing limits for AFA facilities for each species group, based first on the processing histories of AFA facilities in 1995-1997 and then on only 1996-1997.

Table 8.4 Option 1: Overall Limit Applied to All AFA Facilities, 1995-1997 and 1996-1997

	Percent of Total Processing					
Bering Sea Aleutian Islands Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Rockfish**	
1995-1997	13.64	33.57	22.78	37.95	19.23	
1996-1997	13.04	33.73	23.48	38.75	18.74	
Gulf of Alaska Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Pollock**	**Rockfish**
1995-1997	14.23	7.88	4.58	31.83	47.45	9.25
1996-1997	9.94	6.66	4.55	35.55	46.73	8.11
Crab						
	Bairdi	**Blue King**	**Brown King**	**Opilio**	**Red King**	
1995-1997	56.47	18.63	55.77	19.03	55.21	
1996-1997	61.09	16.61	55.08	19.70	57.43	

Ta 8.5 Summary of the Qualitative Analysis of Processing Limits

	Overall Limits			Sector Limits			Individual Limits			
	Option 1 Facility	Option 2 Company	Option 3 Entity	Option 4 Facility	Option 5 Company	Option 6 Entity	Option 7 Facility	Option 8 Company	Option 9 AFA/Co.	Option 10 Entity
Objectives from the Perspective of Proponents of Processing Limits										
1. How does the option rate in terms of limiting AFA processing of species other than BSAI pollock to the levels achieved prior to the passage of the AFA?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
2. How does the option rate in terms of including all processing interests of AFA companies?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
3. How does the option rate in terms of preventing AFA companies from evading the limits through subsidiaries or holding companies?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
Objectives from the Perspective of AFA Processors										
4. How does the option rate in terms of allowing AFA processors to maximize their ability to realize profits in the pollock processing industry?	Good	Good	Good	Good	Good	Good	Poor	Good	Good	Good
5. How does the option rate in terms of allowing AFA processors to be able to utilize non-pollock processing capacity improvements completed prior to passage of the AFA?	Fair	Fair	Poor	Fair	Poor	Poor	Fair	Fair	Good	Fair
6. How does the option rate in terms of its effect on the market value of AFA facilities?	Good	Fair	Poor	Fair	Fair	Poor	Good	Fair	Good	Poor
Objectives from the Perspective of Non-pollock Processors Linked to AFA Processors										
7. How does the option rate in terms of restricting non-pollock processors that will not benefit directly from the AFA?	Good	Good	Poor	Good	Good	Poor	Good	Good	Good	Poor
Objectives from the Perspective of NMFS										
8. How does the option rate in terms of the Paperwork Reduction Act?	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Good	Poor
9. How does the option rate in terms of the NMFS ability to determine and set the limits?	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Good	Poor
10. How does the option rate in terms of the NMFS ability to manage the limits in-season?	Good	Fair	Fair	Good	Poor	Poor	Fair	Fair	Fair	Fair

Notes:

1/ The objectives are given a presumed rating relative to the other options from the perspective of the interest group shown. A fair rating implies that there are worse options and better options.

2/ The column headed "AFA/Co." is for the option that imposes individual processing limits on the AFA facilities in a company, but does not limit non-AFA facilities in the company.

8.5.2 Option 2: Overall Limits Applied to All Facilities in AFA Companies

A single overall processing limit would be set for each species and would encompass all of the processing facilities of companies that have a direct majority ownership stake in AFA facilities. In effect the primary criterion under which two or more processing facilities are considered to be owned by a single company will be whether the majority of ownership in each facility is held by the same individuals or companies, regardless of whether each individual's or company's relative shares are identical In this section, companies that own AFA facilities are referred to as AFA companies. Once the overall limit is reached, no additional processing of the limited species by any facility owned by any AFA company would be allowed. The 10% Ownership Rule would not be applied under this option, and only those facilities that are within the AFA companies would be limited.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other non-AFA catcher processors included within AFA catcher-processor sector limits will be allowed to process up to the catcher-processor sector processing limits for crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Table 8.6 shows estimates of overall processing limits for AFA companies for each species group. The estimates are based on the processing histories of all facilities in AFA companies for 1995-1997 and 1996-1997. The effectiveness of the processing limits is shown in Table 8.5.

Table 8.6 Option 2: Overall Limit Applied to All Facilities within AFA Companies, 1995-1997 and 1996-1997.

	Percent of Total Processing					
Bering Sea Aleutian Islands Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Rockfish**	
1995-1997	13.93	36.82	26.09	42.19	25.99	
1996-1997	13.17	35.79	26.56	43.50	24.72	
Gulf of Alaska Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Pollock**	**Rockfish**
1995-1997	16.86	21.87	8.48	44.31	58.27	25.03
1996-1997	16.07	21.00	8.82	48.11	56.04	25.27
Crab						
	Bairdi	**Blue King**	**Brown King**	**Opilio**	**Red King**	
1995-1997	65.15	74.05	59.93	61.67	69.37	
1996-1997	61.09	74.52	55.79	62.64	70.04	

8.5.3 Option 3: Overall Limits Applied to All Facilities in AFA Entities

This section discusses a single overall processing limit that would be set for each species and would encompass all of the processing facilities of AFA entities, as defined by the 10% Ownership Rule. Once the overall limit is reached, no additional processing of the limited species by any facility associated with any AFA entity would be allowed.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other non-AFA catcher processors included within AFA catcher-processor sector limits will be allowed to process up to the catcher-processor sector processing limits for crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Tables 8.7 and Table 8.8 show estimates of overall processing limits for AFA entities for each species group. The entities are based on the organizational analysis from Section 8.2, and therefore the estimates should be viewed as analytical estimates rather than final limits. The tables provide ranges of estimated limits for each species group. The lower values are derived from facilities that the analysts were able to document as part of an AFA entity and are shown in the rows labeled "documented". Higher estimates of the limits are shown in rows labeled "possible." The higher estimates were derived by adding to the documented totals, the processing volumes of other facilities that may be considered part of an AFA entity once final rules are determined and additional information and verification has been gathered. As before, the qualitative analysis of the efficacy of this option is shown in Table 8.5.

Table 8.7 Option 3: Overall Limit Applied to All Facilities Within AFA Entities, 1995-1997

	Percent of Total Processing					
Bering Sea Aleutian Islands Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Rockfish**	
Documented	13.94	38.48	28.34	44.36	27.68	
Possible	15.01	54.26	39.07	51.09	43.53	
Gulf of Alaska Groundfish						
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Pollock**	**Rockfish**
Documented	17.21	28.72	17.40	50.56	66.93	29.39
Possible	19.48	32.37	20.93	51.27	67.10	37.20
Crab						
	Bairdi	**Blue King**	**Brown King**	**Opilio**	**Red King**	
Documented	65.38	74.05	59.93	61.67	69.37	
Possible	66.90	74.56	59.93	63.31	70.20	

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

Table 8.8 Option 3: Overall Limit Applied to All Facilities Within AFA Entities, 1996 and 1997.

	Percent of Total Processing				
Bering Sea Aleutian Islands Groundfish					
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Rockfish**
Documented	13.18	35.95	27.73	43.91	24.97
Possible	13.92	52.51	39.24	50.61	41.15
Gulf of Alaska Groundfish					
	Atka Mackerel	**Flatfish**	**Other Species**	**Pacific Cod**	**Pollock**	**Rockfish**
Documented	10.13	29.35	19.19	54.49	65.44	31.17
Possible	11.36	32.23	22.90	54.72	65.57	39.41
Crab					
	Bairdi	**Blue King**	**Brown King**	**Opilio**	**Red King**
Documented	61.83	74.52	55.79	62.64	70.04
Possible	62.40	74.90	55.79	64.41	70.92

Notes:
1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.
2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

8.5.4 Option 4: Sector-Level Processing Limits Applied to All AFA Facilities

Sector-level processing limits would be imposed for each species upon all AFA facilities as defined in the AFA aggregated across the offshore, mothership, and shoreside processors. Once the sector limit is reached, no additional processing of the limited species by any AFA facility would be allowed.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other non-AFA catcher processors included within AFA catcher-processor sector limits will be allowed to process up to the catcher-processor sector processing limits for crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Table 8.9 shows estimates of sector level processing limits for AFA facilities for each species group. The estimates are based on the processing histories of AFA facilities during the years 1995, 1996, and 1997. Table 8.10 shows estimates of sector level processing limits for AFA facilities for each species group, based on the processing histories of AFA facilities during the years 1996 and 1997. The efficacy of this option is evaluated in Table 8.5.

Table 8.9 Option 4: Sector-Level Limits Applied to AFA Facilities, 1995-1997

	Percent of Total Processing by Sectors			
Species by Area	**Catcher Processors**	**Inshore Processors**	**Motherships**	**Total**
Bering Sea Aleutian Islands Groundfish				
Atka Mackerel	12.81	0.23	0	13.64
Flatfish	25.41	7.86	0.46	33.73
Other Species	9.31	13.39	0.78	23.48
Pacific Cod	11.73	25.41	1.61	38.75
Rockfish	9.32	8.51	0.91	18.75
Gulf of Alaska Groundfish				
Atka Mackerel	0.27	9.67	-	9.94
Flatfish	4.64	2.02	0	6.66
Other Species	0.89	3.66	-	4.56
Pacific Cod	2.42	33.10	0.03	35.55
Pollock	0.96	45.68	0.09	46.72
Rockfish	6.87	1.24	-	8.11
Crab				
Bairdi	-	56.47	-	56.47
Blue King	-	18.63	-	18.63
Brown King	-	55.77	-	55.77
Opilio	-	19.03	-	19.03
Red King	-	55.21	-	55.21

Table 8.10 Option 4: Sector-Level Limits Applied to AFA Facilities, 1996 and 1997

	Percent of Total Processing by Sectors			
Species by Area	Catcher Processors	Inshore Processors	Motherships	Total
Bering Sea Aleutian Islands Groundfish				
Atka Mackerel	12.81	0.23	0	13.04
Flatfish	25.41	7.86	0.46	33.73
Other Species	9.31	13.39	0.78	23.48
Pacific Cod	11.73	25.41	1.61	38.75
Rockfish	9.32	8.51	0.91	18.74
Gulf of Alaska Groundfish				
Atka Mackerel	0.27	9.67	-	9.94
Flatfish	4.64	2.02	0	6.66
Other Species	0.89	3.66	-	4.55
Pacific Cod	2.42	33.10	0.03	35.55
Pollock	0.96	45.68	0.09	46.73
Rockfish	6.87	1.24	-	8.11
Crab				
Bairdi	-	61.09	-	61.09
Blue King	-	16.61	-	16.61
Brown King	-	55.08	-	55.08
Opilio	-	19.70	-	19.70
Red King	-	57.43	-	57.43

8.5.5 Option 5: Sector-Level Limits Applied to All Facilities in AFA Companies

Sector-level processing limits would be imposed for each species upon all facilities in AFA companies as defined by direct ownership of AFA facilities. Sectors would be defined on the basis of the existing inshore/offshore regulations. The catcher processor sector would include all catcher processors of any gear type greater than 125 feet LOA and all catcher processors less than 125 feet LOA that process more than 125 tons per week (round weight). The mothership sector would include any non-catching floating processor that takes delivery of groundfish or BSAI crab species in more than one location during the year, or which takes deliveries outside of state waters. The inshore sector would include all shore plants and non-catching floating processors that take delivery of groundfish and BSAI crab in a single location within state waters during the year, and all catcher processors of any gear type less than 125 feet LOA that process less than 125 tons per week (round weight). Once the sector limit is reached, no additional processing of the limited species by any AFA facility in the sector would be allowed.

The primary criterion under which two or more processing facilities are considered to be owned by a single company will be whether the majority of ownership in each facility is held by the same individuals or companies, regardless of whether each individual's company's relative shares are identical. Once the sector limit is reached, no additional processing of the limited species by any facility owned by an AFA company included in the sector would be allowed.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other non-AFA catcher processors included within AFA catcher-processor sector limits will be allowed to process up to the catcher-processor sector processing limits for crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Table 8.11 shows estimates of sector level processing limits for AFA companies for each species group. The estimates are based on the processing histories of all facilities in AFA companies during the years 1995, 1996, and 1997, and the assumptions delineated above. Table 8.12 shows similar information for 1996-1997.

Table 8.11 Option 5: Sector-Level Limits Applied to All Facilities Within AFA Companies, 1995-1997

	Percent of Total Processing by Sectors			
Species by Area	Catcher Processors	Inshore Processors	Motherships	Total
Bering Sea Aleutian Islands Groundfish				
Atka Mackerel	12.95	0.23	0	13.17
Flatfish	27.37	7.87	0.56	35.79
Other Species	12.11	13.41	1.04	26.56
Pacific Cod	14.81	25.49	3.20	43.50
Rockfish	15.08	8.52	1.12	24.72
Gulf of Alaska Groundfish				
Atka Mackerel	0.30	9.76		10.07
Flatfish	9.09	11.91	0	21.00
Other Species	1.96	6.86	0	8.82
Pacific Cod	2.84	44.03	1.25	48.11
Pollock	1.05	54.9	0.09	56.04
Rockfish	20.27	5.00	0	25.27
Crab				
Bairdi	3.31	58.91	2.94	65.15
Blue King	2.79	34.54	36.71	74.05
Brown King	3.56	56.37	0	59.93
Opilio	4.44	30.48	26.76	61.67
Red King	0.65	61.43	7.30	69.37

Table 8.12 Option 5: Sector-Level Limits Applied to All Facilities Within AFA Companies, 1996 and 1997

	Percent of Total Processing by Sectors			
Species by Area	Catcher Processors	Inshore Processors	Motherships	Total
Bering Sea Aleutian Islands Groundfish				
Atka Mackerel	12.95	0.23	0	13.17
Flatfish	27.37	7.87	0.56	35.79
Other Species	12.11	13.41	1.04	26.56
Pacific Cod	14.81	25.49	3.20	43.50
Rockfish	15.08	8.52	1.12	24.72
Gulf of Alaska Groundfish				
Atka Mackerel	0.30	9.76	-	10.07
Flatfish	9.09	11.91	0	21.00
Other Species	1.96	6.86	0	8.82
Pacific Cod	2.84	44.03	1.25	48.11
Pollock	1.05	54.90	0.09	56.04
Rockfish	20.27	5	0	25.27
Crab				
Bairdi	0	61.09	0	61.09
Blue King	0	35.31	39.21	74.52
Brown King	0	55.79	0	55.79
Opilio	4.22	31.56	26.86	62.64
Red King	0.69	61.76	7.59	70.04

8.5.6 Option 6: Sector-Level Limits Applied to All Facilities in AFA Entities

Sector-level processing limits would be applied for each species to all facilities in AFA entities, as defined by the 10% Ownership Rule. Sectors would be defined as in Option 5. Once the sector limit is reached, no additional processing of the limited species by any entity that owns an AFA-eligible facility included in the sector would be allowed. All processing facilities associated with an AFA entity would be affected by the limit.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other non-AFA catcher processors included within AFA catcher-processor sector limits will be allowed to process up to the catcher-processor sector processing limits for crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Tables 8.13 and 8.14 show, for the two time periods, estimates of sector level processing limits for AFA entities for each species group. The entities are based on the organizational analysis from Section 8.2, and therefore the estimates should be viewed as analytical estimates rather than final limits. The tables provide ranges of estimated limits for each species group. The lower values are derived from facilities that the analysts were able to document as part of an AFA entity and are shown in the rows labeled "documented." Higher estimates of the limits are shown in rows labeled "possible." The higher estimates were derived by adding to the documented totals, the processing volumes of other facilities that may be considered part of an AFA entity once final rules are determined and additional information and verification has been gathered.

Table 8.13 Option 6: Sector-Level Limits Applied to All Facilities Within AFA Entities, 1995-1997

Species by Area	AFA Links	Percent of Total Processing by Sectors			
		Catcher Processors	Inshore Processors	Motherships	Total
Bering Sea Aleutian Islands Groundfish					
Atka Mackerel	documented	12.95	0.23	0	13.18
	possible	13.69	0.23	0	13.92
Flatfish	documented	27.41	7.94	0.60	35.65
	possible	42.77	9.15	0.60	52.52
Other Species	documented	12.80	13.73	1.20	27.73
	possible	23.35	14.69	1.20	39.24
Pacific Cod	documented	14.99	25.49	3.43	43.91
	possible	21.49	25.69	3.43	50.61
Rockfish	documented	15.16	8.53	1.28	24.97
	possible	30.33	9.54	1.28	41.15
Gulf of Alaska Groundfish					
Atka Mackerel	documented	0.30	9.82	-	10.12
	possible	1.54	9.82	-	11.36
Flatfish	documented	9.09	19.05	1.21	29.35
	possible	10.73	20.29	1.21	32.23
Other Species	documented	1.96	17.10	0.13	19.19
	possible	3.23	19.54	0.13	22.90
Pacific Cod	documented	2.84	50.35	1.30	54.49
	possible	2.98	50.44	1.30	54.72
Pollock	documented	1.05	64.30	0.09	65.44
	possible	1.18	64.31	0.09	65.48
Rockfish	documented	20.27	10.64	0.26	31.17
	possible	28.14	11.01	0.26	39.41
Crab					
Bairdi	documented	3.31	59.13	2.94	65.38
	possible	4.83	59.13	2.94	66.90
Blue King	documented	2.79	34.54	36.71	74.05
	possible	3.31	34.54	36.71	74.56
Brown King	documented	3.56	56.37	0	59.93
	possible	3.56	56.37	0	59.93
Opilio	documented	4.44	30.48	26.76	61.67
	possible	6.08	30.48	26.76	63.31
Red King	documented	0.65	61.43	7.30	69.37
	possible	1.47	61.43	7.30	70.20

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

Table 8.14 Option 6 Sector-Level Limits Applied to All Facilities Within AFA Entities, 1996 and 1997

Species by Area	AFA Links	Percent of Total Processing by Sectors: Catcher Processors	Motherships	Inshore Processors	Total
Bering Sea Aleutian Islands Groundfish					
Atka Mackerel	documented	12.95	0	0.23	13.18
	possible	13.69	0	0.23	13.92
Flatfish	documented	27.41	0.60	7.94	35.95
	possible	42.77	0.60	9.15	52.51
Other Species	documented	12.80	1.20	13.73	27.73
	possible	23.35	1.20	14.69	39.24
Pacific Cod	documented	14.99	3.43	25.49	43.91
	possible	21.49	3.43	25.69	50.61
Rockfish	documented	15.16	1.28	8.53	24.97
	possible	30.33	1.28	9.54	41.15
Gulf of Alaska Groundfish					
Atka Mackerel	documented	0.30	-	9.82	10.13
	possible	1.54	-	9.82	11.36
Flatfish	documented	9.09	1.21	19.05	29.35
	possible	10.73	1.21	20.29	32.23
Other Species	documented	1.96	0.13	17.10	19.19
	possible	3.23	0.13	19.54	22.90
Pacific Cod	documented	2.84	1.30	50.35	54.49
	possible	2.98	1.30	50.44	54.72
Pollock	documented	1.05	0.09	64.30	65.44
	possible	1.18	0.09	64.31	65.57
Rockfish	documented	20.27	0.26	10.64	31.17
	possible	28.14	0.26	11.01	39.41
Crab					
Bairdi	documented	0	0	61.83	61.83
	possible	0.56	0	61.83	62.40
Blue King	documented	0	39.21	35.31	74.52
	possible	0.38	39.21	35.31	74.90
Brown King	documented	0	0	55.79	55.79
	possible	0	0	55.79	55.79
Opilio	documented	4.22	26.86	31.56	62.64
	possible	5.98	26.86	31.56	64.41
Red King	documented	0.69	7.59	61.76	70.04
	possible	1.58	7.59	61.70	70.92

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

8.5.7 Option 7: Individual Processing Limits Applied to Each AFA Facility

Individual processing limits for each species would be imposed upon each AFA eligible facility. Once the individual facility reaches a limit for a particular species, no additional processing of the limited species by that facility in the sector would be allowed. The limits would not constitute an allocation, and would not guarantee that a facility could process a specified percentage of the TAC. As with other sideboard alternatives, a decision has to be made as to whether the limit would apply in the event a facility does not participate in a co-op.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the catcher-processor sector processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. The Council should make a decision regarding the ability of these catcher processors to shift historical processing from Area 630 to other areas for purposes of the processing limits. (The 20 catchers listed in §208 of the AFA did not process any crab during the historical processing period.)

Tables 8-15-8.20 show estimates of individual processing limits for AFA facilities for each species group and two time periods. Actual plant identities have been hidden for reasons of confidentiality.

Table 8.15 Option 7: Individual Plant and Vessel Limits for Bering Sea Aleutian Island Groundfish, 1995-1997

AFA Plant Number	Sector	Percent of Total Processing				
		Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
1	CP	0	0.14	0.41	0.85	0.17
2	INS	0.03	3.93	2.75	3.76	1.35
3	INS	0	0.25	0.69	2.24	1.15
4	MS	0	0.56	0.35	0.88	0.57
5	CP	1.77	0.02	0.65	0.12	0.09
6	INS	0.06	0.69	3.09	7.66	2.54
7	CP	0	0.12	0.66	1.14	0.20
8	CP	1.37	0.70	0.91	0.91	0.52
9	CP	1.37	3.10	0.89	0.94	1.05
10	CP	0	2.50	0.37	0.18	0.49
11	CP	2.62	0.70	0.68	0.94	0.58
12	CP	0	1.98	0.27	0.14	0.45
13	INS	0	0.03	0.09	0.12	0.03
14	CP	-	0.03	0.04	0.03	0.01
15	CP	1.37	3.37	0.88	0.97	1.20
16	INS	0.11	0.19	0.76	1.46	1.37
17	INS	0.01	0.16	0.79	2.63	0.42
18	CP	1.37	0.73	0.66	0.87	0.53
19	CP	0	0.06	0.05	0.09	0.03
20	MS	0	0.04	0.18	0.35	0.07
21	INS	0.03	1.97	1.61	3.21	0.89
22	CP	-	6.08	0.82	0.39	1.17
23	CP	1.40	1.02	0.67	1.75	0.79
24	CP	0.72	1.78	0.69	0.26	1.57
25	CP	-	0.04	0.08	0.06	0.05
26	CP	-	0.01	0.01	0.01	0
27	CP	0.01	0.07	0.14	0.95	0.15
28	CP	0	0.07	0.10	0.15	0.04
29	CP	1.37	2.62	0.74	0.95	0.83
30	MS	0	0.07	0.10	0.12	0.07
31	INS	0.02	0.50	2.66	3.82	0.85
Total		**13.64**	**33.57**	**22.78**	**37.95**	**19.23**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods

Table 8.16 Option 7: Individual Plant and Vessel Limits Gulf of Alaska Groundfish, 1995-1997

AFA Plant Number	Sector	Percent of Total Processing					
		Atka Mackerel	Flatfish	Other Species	Pacific Cod	Pollock	Rockfish
1	CP	-	0	0	0	0.03	-
2	INS	2.98	0.06	0.33	0.56	3.26	0.04
3	INS	0	0.02	0.01	0.20	1.70	0
4	MS	-	0	-	0.01	0.08	-
5	CP	-	-	-	-	-	-
6	INS	0.16	0.06	0.02	0.89	0.82	0.04
7	CP	-	-	-	-	-	-
8	CP	0.03	0.77	0.10	0.21	0.14	0.43
9	CP	0.03	0.79	0.10	0.21	0.11	0.43
10	CP	-	-	-	-	-	-
11	CP	0.03	0.77	0.10	0.45	0.13	0.43
12	CP	-	0	-	0	0.04	-
13	INS	1.17	1.04	1.24	14.86	27.12	0.60
14	CP	-	0	0	0	0.05	-
15	CP	0.03	0.77	0.10	0.21	0.05	0.43
16	INS	0.34	0.12	0.01	0.31	0.40	0.01
17	INS	0.96	0.67	1.18	12.21	5.68	0.22
18	CP	0.03	0.77	0.10	0.21	0.05	0.43
19	CP	-	-	-	-	-	-
20	MS	-	0	-	0	0.01	-
21	INS	4.57	0.06	0.24	0.38	2.3	0.03
22	CP	-	-	-	-	-	-
23	CP	0.03	0.77	0.10	0.21	0.05	0.43
24	CP	0.08	0.10	0.34	0.34	0.04	5.22
25	CP	-	-	-	-	-	-
26	CP	-	-	-	-	-	-
27	CP	-	0.27	0.01	0.01	0.23	0.05
28	CP	-	0	0	0	0.08	-
29	CP	0.03	0.77	0.10	0.21	0.16	0.43
30	MS	-	0	-	0	0.02	-
31	INS	3.78	0.06	0.52	0.35	4.88	0.05
Total		**14.23**	**7.88**	**4.58**	**31.83**	**47.45**	**9.25**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods

Table 8.17 Option 7: Individual Plant and Vessel Limits for Crab, 1995-1997

AFA Plant Number	Sector	Percent of Total Processing				
		Bairdi	Blue King	Brown King	Opilio	Red King
1	CP	-	-	-	-	-
2	INS	12.14	1.68	7.72	2.55	12.45
3	INS	-	-	-	-	-
4	MS	-	-	-	-	-
5	CP	-	-	-	-	-
6	INS	16.65	2.92	0.67	2.24	14.09
7	CP	-	-	-	-	-
8	CP	-	-	-	-	-
9	CP	-	-	-	-	-
10	CP	-	-	-	-	-
11	CP	-	-	-	-	-
12	CP	-	-	-	-	-
13	INS	-	-	-	-	-
14	CP	-	-	-	-	-
15	CP	-	-	-	-	-
16	INS	-	-	-	-	-
17	INS	14.06	2.15	-	5.07	13.05
18	CP	-	-	-	-	-
19	CP	-	-	-	-	-
20	MS	-	-	-	-	-
21	INS	6.03	4.92	16.75	3.36	7.50
22	CP	-	-	-	-	-
23	CP	-	-	-	-	-
24	CP	-	-	-	-	-
25	CP	-	-	-	-	-
26	CP	-	-	-	-	-
27	CP	-	-	-	-	-
28	CP	-	-	-	-	-
29	CP	-	-	-	-	-
30	MS	-	-	-	-	-
31	INS	7.59	6.96	30.63	5.82	8.10
Total		**56.47**	**18.63**	**55.77**	**19.03**	**55.21**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods.

Table 8.18 Option 7: Individual Plant and Vessel Limits Bering Sea Aleutian Island Groundfish, 1996 and 1997

AFA Plant Number	Sector	Percent of Total Processing				
		Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
1	CP	0	0.1	0.36	0.93	0.18
2	INS	0.03	4.12	2.92	3.72	1.50
3	INS	0.01	0.25	0.86	2.33	1.12
4	MS	0	0.33	0.49	1.17	0.83
5	CP	2.11	0.02	0.86	0.13	0.11
6	INS	0.03	0.84	3.77	8.52	2.67
7	CP	0	0.13	0.59	1.44	0.24
8	CP	1.29	0.70	0.99	0.82	0.47
9	CP	1.29	3.22	0.75	0.90	0.96
10	CP	0	2.45	0.27	0.14	0.61
11	CP	2.49	0.69	0.66	0.86	0.52
12	CP	-	2.05	0.30	0.14	0.57
13	INS	0	0.03	0.08	0.12	0.04
14	CP	-	0.03	0.05	0.02	0.02
15	CP	1.29	3.61	0.90	0.95	1.29
16	INS	0.10	0.18	0.91	1.70	1.37
17	INS	0.01	0.19	0.84	2.82	0.45
18	CP	1.29	0.70	0.64	0.83	0.48
19	CP	0	0.08	0.06	0.09	0.05
20	MS	0	0.04	0.17	0.32	0.03
21	INS	0.02	1.85	1.52	2.61	0.75
22	CP	-	6.34	0.73	0.39	1.49
23	CP	1.29	1.03	0.62	1.73	0.75
24	CP	0.46	1.70	0.57	0.15	0.56
25	CP	-	0.04	0.10	0.06	0.07
26	CP	-	-	-	-	-
27	CP	0.01	0.07	0.16	1.14	0.16
28	CP	0	0.06	0.08	0.07	0.04
29	CP	1.29	2.38	0.63	0.93	0.75
30	MS	0	0.09	0.12	0.13	0.05
31	INS	0.02	0.41	2.49	3.58	0.62
Total		**13.04**	**33.73**	**23.48**	**38.75**	**18.75**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods

Table 8.19 Option 7: Individual Plant and Vessel Limits Gulf of Alaska Groundfish, 1996 and 1997

AFA Plant Number	Sector	Percent of Total Processing					
		Atka Mackerel	Flatfish	Other Species	Pacific Cod	Pollock	Rockfish
1	CP	-	0	0	0	0.05	-
2	INS	3.79	0.05	0.43	0.51	1.23	0.04
3	INS	0	0.01	0.01	0.13	2.14	0
4	MS	-	0	-	0.02	0.05	-
5	CP	-	-	-	-	-	-
6	INS	0	0.03	0.02	0.65	0.41	0.06
7	CP	-	-	-	-	-	-
8	CP	0.04	0.60	0.06	0.28	0.12	0.05
9	CP	0.04	0.60	0.06	0.28	0.06	0.05
10	CP	-	-	-	-	-	-
11	CP	0.04	0.60	0.06	0.65	0.18	0.05
12	CP	-	0	-	0	0.06	-
13	INS	0.16	1.09	1.48	17.39	30.32	0.82
14	CP	-	-	-	-	-	-
15	CP	0.04	0.60	0.06	0.28	0.06	0.05
16	INS	0.02	0.07	0.01	0.26	0.59	0
17	INS	0.09	0.68	1.09	13.68	6.25	0.25
18	CP	0.04	0.60	0.06	0.28	0.06	0.05
19	CP	-	-	-	-	-	-
20	MS	-	0	-	0.01	0.02	-
21	INS	5.43	0.04	0.08	0.11	1.76	0.01
22	CP	-	-	-	-	-	-
23	CP	0.04	0.60	0.06	0.28	0.06	0.05
24	CP	0.02	0.07	0.48	0.06	0.02	6.44
25	CP	-	-	-	-	-	-
26	CP	-	-	-	-	-	-
27	CP	-	0.38	0.02	0.02	0.08	0.08
28	CP	-	-	-	-	-	-
29	CP	0.04	0.60	0.06	0.28	0.23	0.05
30	MS	-	0	-	0	0.02	-
31	INS	0.17	0.04	0.54	0.37	2.98	0.05
Total		**9.94**	**6.66**	**4.56**	**35.55**	**46.72**	**8.11**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods.

Table 8.20 Option 7: Individual Plant and Vessel Limits for Crab, 1996 and 1997

AFA Plant Number	Sector	Percent of Total Processing				
		Bairdi	Blue King	Brown King	Opilio	Red King
1	CP	-	-	-	-	-
2	INS	13.67	2.52	9.68	2.91	13.35
3	INS	-	-	-	-	-
4	MS	-	-	-	-	-
5	CP	-	-	-	-	-
6	INS	13.09	2.80	1.04	1.68	14.76
7	CP	-	-	-	-	-
8	CP	-	-	-	-	-
9	CP	-	-	-	-	-
10	CP	-	-	-	-	-
11	CP	-	-	-	-	-
12	CP	-	-	-	-	-
13	INS	-	-	-	-	-
14	CP	-	-	-	-	-
15	CP	-	-	-	-	-
16	INS	-	-	-	-	-
17	INS	18.45	1.43	-	5.34	13.52
18	CP	-	-	-	-	-
19	CP	-	-	-	-	-
20	MS	-	-	-	-	-
21	INS	9.13	3.12	16.16	3.22	7.58
22	CP	-	-	-	-	-
23	CP	-	-	-	-	-
24	CP	-	-	-	-	-
25	CP	-	-	-	-	-
26	CP	-	-	-	-	-
27	CP	-	-	-	-	-
28	CP	-	-	-	-	-
29	CP	-	-	-	-	-
30	MS	-	-	-	-	-
31	INS	6.75	6.75	28.20	6.55	8.21
Total		**61.09**	**16.61**	**55.08**	**19.70**	**57.43**

Note: The processing of the nine facilities that were removed from the fishery according to AFA has been redistributed to the remaining seven facilities owned by American Seafoods.

8.5.8 Option 8: Individual Processing Limits Applied to the AFA Facilities Within Each AFA Company

Individual processing limits for each species would be imposed upon all AFA companies. However, unlike the previous option, only the AFA-eligible facilities within each company would be included. Once the company's limit for a species is reached, no additional processing of the limited species by any of the company's facilities participating in pollock cooperatives would be allowed. Although the processing limits do not constitute an allocation, each AFA company could determine how its own limit might be divided among its participating facilities. The analysis of individual-company processing limits on participating facilities uses the same assumptions that define the previous option. As with previous options, a decision has to be made as to whether the limit would apply when a company (or any of its AFA-eligible facilities) does not join a co-op. Each company would likely need to declare each year whether any of its facilities would be in a co-op.

Tables 8.21-8.26 show estimates of individual processing limits imposed on the AFA facilities that are participating in cooperatives within a company for each species group for the two time periods. Actual company identities have been hidden for reasons of confidentiality.

Table 8.21 Option 8: Individual Company Limits Applied to AFA Facilities for Bering Sea Aleutian Islands Groundfish, 1995-1997

Company Number	Percent of Total Processing				
	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Company 1	0.01	0.07	0.14	0.95	0.15
Company 2	0	0.12	0.66	1.14	0.20
Company 3	10.86	12.26	5.43	7.32	5.51
Company 4	0	0.21	0.51	1.01	0.21
Company 5	1.77	0.02	0.65	0.12	0.09
Company 6	0	0.25	0.69	2.24	1.15
Company 7	0.83	2.10	1.62	1.91	3.03
Company 8	-	6.08	0.82	0.39	1.17
Company 9	0	0.07	0.10	0.12	0.07
Company 10	0.02	0.50	2.66	3.82	0.85
Company 11	0.01	0.21	0.97	2.98	0.49
Company 12	0	0.56	0.35	0.88	0.57
Company 13	0.03	1.97	1.61	3.21	0.89
Company 14	0.06	0.72	3.18	7.78	2.57
Company 15	0.03	3.93	2.75	3.76	1.35
Company 16	0	4.48	0.64	0.32	0.94
Total	13.64	33.57	22.78	37.95	19.23

Table 8.22 Option 8: Individual Company Limits Applied to AFA Facilities for Gulf of Alaska Groundfish, 1995-1997

	Percent of Total Processing					
Company Number	Atka Mackerel	Flat fish	Other Species	Pacific Cod	Pollock	Rockfish
Company 1	-	0.27	0.01	0.01	0.23	0.05
Company 2	-	-	-	-	-	-
Company 3	0.19	5.41	0.67	1.70	0.70	2.98
Company 4	-	0	0	0	0.11	-
Company 5	-	-	-	-	-	-
Company 6	0	0.02	0.01	0.20	1.70	0
Company 7	0.41	0.22	0.36	0.65	0.49	5.23
Company 8	-	-	-	-	-	-
Company 9	-	0	-	0	0.02	-
Company 10	3.78	0.06	0.52	0.35	4.88	0.05
Company 11	0.96	0.67	1.18	12.21	5.69	0.22
Company 12	-	0	-	0.01	0.08	-
Company 13	4.57	0.06	0.24	0.38	2.30	0.03
Company 14	1.33	1.10	1.26	15.75	27.94	0.64
Company 15	2.98	0.06	0.33	0.56	3.26	0.04
Company 16	-	0	-	0	0.04	-
Total	**14.23**	**7.88**	**4.58**	**31.83**	**47.45**	**9.25**

Table 8.23 Option 8: Individual Company Limits Applied to AFA Facilities for Crab, 1995-1997

Company Number	Percent of Total Processing				
	Bairdi	Blue King	Brown King	Opilio	Red King
Company 1	-	-	-	-	-
Company 2	-	-	-	-	-
Company 3	-	-	-	0.07	0
Company 4	-	-	-	-	1.23
Company 5	-	-	-	-	-
Company 6	-	-	-	-	-
Company 7	-	-	-	-	-
Company 8	-	-	-	-	-
Company 9	-	-	-	-	-
Company 10	7.59	6.96	30.63	5.82	8.10
Company 11	14.06	2.15	0	5.07	13.05
Company 12	-	-	-	-	-
Company 13	6.03	4.92	16.75	3.36	7.50
Company 14	16.65	2.92	0.67	2.24	14.09
Company 15	12.14	1.68	7.72	2.55	12.45
Company 16	-	-	-	-	-
Total	56.47	18.63	55.77	19.10	56.44

Table 8.24 Option 8: Individual Company Limits Applied to AFA Facilities for Bering Sea Aleutian Islands Groundfish, 1996 and 1997

Company Number	Percent of Total Processing				
	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Company 1	0.01	0.07	0.16	1.14	0.16
Company 2	0	0.13	0.59	1.44	0.24
Company 3	10.23	12.34	5.18	7.02	5.22
Company 4	0	0.16	0.44	1.00	0.22
Company 5	2.11	0.02	0.86	0.13	0.11
Company 6	0.01	0.25	0.86	2.33	1.12
Company 7	0.56	2.02	1.68	2.03	2.06
Company 8	-	6.34	0.73	0.39	1.49
Company 9	0	0.09	0.12	0.13	0.05
Company 10	0.02	0.41	2.49	3.58	0.62
Company 11	0.01	0.22	1.01	3.14	0.48
Company 12	0	0.33	0.49	1.17	0.83
Company 13	0.02	1.85	1.52	2.61	0.75
Company 14	0.03	0.87	3.85	8.64	2.70
Company 15	0.03	4.12	2.92	3.72	1.50
Company 16	0	4.50	0.57	0.29	1.19
Total	13.04	33.73	23.48	38.75	18.75

Table 8.25 Option 8: Individual Company Limits Applied to AFA Facilities for Gulf of Alaska Groundfish, 1996 and 1997

	Percent of Total Processing					
Company Number	Atka Mackerel	Flat fish	Other Species	Pacific Cod	Pollock	Rockfish
Company 1	-	0.38	0.02	0.02	0.08	0.08
Company 2	-	-	-	-	-	-
Company 3	0.26	4.19	0.39	2.34	0.75	0.35
Company 4	-	0	0	0	0.05	-
Company 5	-	-	-	-	-	-
Company 6	0	0.01	0.01	0.13	2.14	0
Company 7	0.03	0.14	0.49	0.33	0.61	6.45
Company 8	-	-	-	-	-	-
Company 9	-	0	-	0	0.02	-
Company 10	0.17	0.04	0.54	0.37	2.98	0.05
Company 11	0.09	0.68	1.09	13.68	6.26	0.25
Company 12	-	0	-	0.02	0.05	-
Company 13	5.43	0.04	0.08	0.11	1.76	0.01
Company 14	0.17	1.13	1.50	18.04	30.73	0.88
Company 15	3.79	0.05	0.43	0.51	1.23	0.04
Company 16	-	0	-	0	0.06	-
Total	**9.94**	**6.66**	**4.56**	**35.55**	**46.72**	**8.11**

Table 8.26 Option 8: Individual Company Limits Applied to AFA Facilities for Crab, 1996 and 1997

Company Number	Percent of Total Processing				
	Bairdi	Blue King	Brown King	Opilio	Red King
Company 1	-	-	-	-	-
Company 2	-	-	-	-	-
Company 3	-	-	-	-	-
Company 4	-	-	-	-	-
Company 5	-	-	-	-	-
Company 6	-	-	-	-	-
Company 7	-	-	-	-	-
Company 8	-	-	-	-	-
Company 9	-	-	-	-	-
Company 10	6.75	6.75	28.20	6.55	8.21
Company 11	18.45	1.43	-	5.34	13.52
Company 12	-	-	-	-	-
Company 13	9.13	3.12	16.16	3.22	7.58
Company 14	13.09	2.80	1.04	1.68	14.76
Company 15	13.67	2.52	9.68	2.91	13.35
Company 16	-	-	-	-	-
Total	61.09	16.61	55.08	19.70	57.43

8.5.9 Option 9: Individual Processing Limits Applied to All AFA Companies

8.5.9 Individual Limits Applied to All Facilities within a Company

Individual processing limits would be imposed for each species upon each AFA company. The primary criterion under which two or more processing facilities are considered to be owned by a single company will be whether the majority of ownership in each facility is held by the same individuals or companies, regardless of whether each individual's or company's relative shares are identical. Once the company's limit for a species is reached, no additional processing of the limited species by any facility owned by that company would be allowed. Although the processing limits do not constitute an allocation, each AFA company could determine how its own limit might be divided among its processing facilities.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the individual company processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other facilities included within AFA companies, will be allowed to process that company's processing history of crab and GOA groundfish species. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Tables 8.27–8.32 show estimates of individual processing limits for AFA company facilities for each species group for the two time periods. Actual company identities have been hidden for reasons of confidentiality.

Table 8.27 Option 9: Individual Company Limits Applied to All Company Facilities for Bering Sea Aleutian Islands Groundfish, 1995-1997

Company Number	Percent of Total Processing				
	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Company 1	0.01	0.65	0.32	1.12	0.23
Company 2	-	6.08	0.82	0.39	1.17
Company 3	10.86	12.26	5.43	7.32	5.51
Company 4	0	0.30	2.23	2.40	0.23
Company 5	1.77	0.02	0.65	0.12	0.09
Company 6	0	0.25	0.69	2.24	1.15
Company 7	1.12	4.59	2.81	2.79	9.49
Company 8	0	0.12	0.66	1.14	0.20
Company 9	0	0.07	0.10	0.12	0.07
Company 10	0.02	0.50	2.66	3.82	0.85
Company 11	0.01	0.21	0.98	3.02	0.49
Company 12	0	0.56	0.35	0.88	0.57
Company 13	0.03	1.97	1.61	3.21	0.89
Company 14	0.06	0.82	3.38	9.52	2.77
Company 15	0.03	3.94	2.76	3.76	1.35
Company 16	0	4.48	0.64	0.32	0.94
Total	**13.93**	**36.82**	**26.09**	**42.19**	**25.99**

Table 8.28 Option 9: Individual Company Limits Applied to All Company Facilities for Gulf of Alaska Groundfish, 1995-1997

	Percent of Total Processing					
Company Number	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Pollock	Rockfish
Company 1	-	0.27	0.01	0.02	0.23	0.05
Company 2	-	-	-	-	-	-
Company 3	0.19	5.41	0.67	1.70	0.70	2.98
Company 4	-	0	0	0.03	0.11	-
Company 5	-	-	-	-	-	-
Company 6	0	0.02	0.01	0.20	1.70	0
Company 7	2.97	14.18	4.04	11.08	11.29	20.98
Company 8	-	-	-	-	-	-
Company 9	-	0	-	0	0.02	-
Company 10	3.78	0.06	0.52	0.35	4.88	0.05
Company 11	0.96	0.68	1.37	13.24	5.70	0.24
Company 12	-	0	-	0.01	0.08	-
Company 13	4.57	0.06	0.24	0.38	2.30	0.03
Company 14	1.40	1.12	1.27	16.74	27.96	0.65
Company 15	2.98	0.06	0.33	0.56	3.26	0.04
Company 16	-	0	-	0	0.04	-
Total	**16.86**	**21.87**	**8.48**	**44.31**	**58.27**	**25.03**

Table 8.29 Option 9: Individual Company Limits Applied to All Company Facilities for Crab, 1995-1997

Company Number	Percent of Total Processing				
	Bairdi	Blue King	Brown King	Opilio	Red King
Company 1	4.06	-	-	6.33	1.38
Company 2	-	2.79	3.56	0.72	-
Company 3	-	-	-	0.07	-
Company 4	-	-	-	-	1.23
Company 5	-	-	-	-	-
Company 6	-	-	-	-	-
Company 7	2.18	-	-	2.30	0.39
Company 8	-	-	-	-	-
Company 9	-	-	-	-	-
Company 10	7.59	6.96	30.63	5.82	8.10
Company 11	14.06	21.21	-	14.38	16.09
Company 12	-	-	-	-	-
Company 13	6.03	4.92	16.75	3.36	7.50
Company 14	16.95	28.89	1.19	19.73	20.59
Company 15	14.27	9.27	7.80	8.96	14.09
Company 16	-	-	-	-	-
Total	65.15	74.05	59.93	61.67	69.37

Table 8.30 Option 9: Individual Company Limits Applied to All Company Facilities for Bering Sea Aleutian Islands Groundfish, 1996 and 1997

Company Number	Percent of Total Processing				
	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Company 1	0.01	0.07	0.23	1.36	0.17
Company 2	0	0.14	0.59	1.52	0.24
Company 3	10.23	12.34	5.18	7.02	5.22
Company 4	0	0.27	2.13	2.59	0.25
Company 5	2.11	0.02	0.86	0.13	0.11
Company 6	0.01	0.25	0.86	2.33	1.12
Company 7	0.70	3.85	2.76	2.63	7.79
Company 8	-	6.34	0.73	0.39	1.49
Company 9	0	0.09	0.12	0.13	0.05
Company 10	0.02	0.41	2.49	3.58	0.62
Company 11	0.01	0.22	1.02	3.21	0.48
Company 12	0	0.33	0.49	1.17	0.83
Company 13	0.02	1.85	1.52	2.61	0.75
Company 14	0.03	0.99	4.07	10.83	2.90
Company 15	0.03	4.12	2.94	3.72	1.50
Company 16	0	4.50	0.57	0.29	1.19
Total	13.17	35.79	26.56	43.50	24.72

Table 8.31 Option 9: Individual Company Limits Applied to All Company Facilities for Gulf of Alaska Groundfish, 1996 and 1997

Company Number	Percent of Total Processing					
	Atka Mackerel	Flat fish	Other Species	Pacific Cod	Pollock	Rock fish
Company 1	-	0.38	0.02	0.02	0.08	0.08
Company 2	-	-	-	-	-	-
Company 3	0.26	4.19	0.39	2.34	0.75	0.35
Company 4	-	0	0.01	0.05	0.05	-
Company 5	-	-	-	-	-	-
Company 6	0	0.01	0.01	0.13	2.14	0
Company 7	0.16	14.47	4.69	11.62	9.92	23.60
Company 8	-	-	-	-	-	-
Company 9	-	0	-	0	0.02	-
Company 10	0.17	0.04	0.54	0.37	2.98	0.05
Company 11	0.09	0.68	1.15	14.28	6.26	0.26
Company 12	-	0	-	0.02	0.05	-
Company 13	5.43	0.04	0.08	0.11	1.76	0.01
Company 14	0.17	1.13	1.50	18.67	30.73	0.88
Company 15	3.79	0.05	0.43	0.51	1.23	0.05
Company 16	-	0	-	0	0.06	-
Total	10.07	21.00	8.82	48.11	56.04	25.27

Table 8.32 Option 9: Individual Company Limits Applied to All Company Facilities for Crab, 1996 and 1997

Company Number	Percent of Total Processing				
	Bairdi	Blue King	Brown King	Opilio	Red King
Company 1	-	-	-	-	-
Company 2	-	-	-	-	-
Company 3	-	-	-	0.53	-
Company 4	9.13	3.12	16.16	3.22	7.58
Company 5	-	-	-	-	-
Company 6	-	-	-	-	-
Company 7	-	-	-	-	-
Company 8	-	-	-	-	0.77
Company 9	18.45	22.74	-	14.94	16.54
Company 10	-	-	-	-	-
Company 11	-	-	-	-	-
Company 12	13.09	29.53	1.65	19.13	20.48
Company 13	-	-	-	2.19	0.42
Company 14	13.67	12.37	9.78	9.30	14.55
Company 15	6.75	6.75	28.20	6.55	8.21
Company 16	-	-	-	6.77	1.48
Total	**61.09**	**74.52**	**55.79**	**62.64**	**70.04**

8.5.10 Option 10: Individual Processing Limits Applied to All AFA Entities

Individual processing limits are applied to each AFA entity for each species, as defined by the 10% Ownership Rule. Once the entity's limit for a species is reached, no additional processing of the limited species by any facility within the entity would be allowed. Although the processing limits do not constitute an allocation, each AFA entity could determine how its own limit might be divided among its processing facilities.

The GOA groundfish processing histories of the 20 catcher processors listed in §208 of the AFA are included in the individual entity processing limits. The AFA prohibits those 20 vessels from processing any BSAI crab, any pollock in the GOA, any groundfish in Area 630 of the GOA, and more than 10 percent of the Pacific cod in Areas 610, 620, and 640. However, other facilities included within AFA entities will be allowed to process the share crab and GOA groundfish species generated by the entity's catcher processors. (The 20 catcher processors listed in §208 of the AFA did not process any crab during the historical processing period.)

Tables 8.33-8.38 show estimates of individual processing limits for AFA entities for each species group for the two periods. The entities are based on the organizational analysis from Section 8.2, and therefore the estimates should be viewed as analytical estimates rather than final limits. The tables provide ranges of estimated limits for each species group. The lower values are derived from facilities that the analysts were able to document as part of an AFA entity and are shown in the rows labeled "documented". Higher estimates of the limits are shown in rows labeled "possible." The higher estimates were derived by adding to the documented totals, the processing volumes of other facilities that may be considered part of an AFA entity once final rules are determined and additional information and verification have been gathered.

Table 8.33 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Bering Sea Aleutian Island Groundfish, 1995-1997

Entity		Percent of Total Processing				
	AFA Links	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Entity 1	documented	0	0.12	0.66	1.19	0.20
	possible	0	0.12	0.66	1.19	0.20
Entity 2	documented	0.06	3.09	4.99	7.41	2.84
	possible	0.06	3.09	4.99	7.41	2.84
Entity 3	documented	0.01	0.65	0.32	1.12	0.23
	possible	0.01	0.65	0.32	1.12	0.23
Entity 4	documented	10.86	13.32	6.37	8.64	6.15
	possible	11.93	28.87	14.31	11.57	21.96
Entity 5	documented	0	0.30	2.23	2.40	0.23
	possible	0	0.30	2.23	2.40	0.23
Entity 6	documented	1.77	0.02	0.65	0.12	0.09
	possible	1.77	0.02	0.65	0.12	0.09
Entity 7	documented	0.03	3.94	2.78	3.84	1.36
	possible	0.04	3.99	3.56	5.08	1.40
Entity 8	documented	0.01	0.21	0.98	3.02	0.49
	possible	0.01	0.21	0.98	3.02	0.49
Entity 9	documented	0	4.51	1.32	0.79	0.94
	possible	0	4.69	3.33	3.35	0.95
Entity 10	documented	0	0.25	0.69	2.24	1.15
	possible	0	0.25	0.69	2.24	1.15
Entity 11	documented	1.12	4.59	2.81	2.79	9.49
	possible	1.12	4.59	2.81	2.79	9.49
Entity 12	documented	0.06	0.82	3.38	9.52	2.77
	possible	0.06	0.82	3.38	9.52	2.77
Entity 13	documented	-	6.08	0.82	0.39	1.17
	possible	-	6.08	0.82	0.39	1.17
Entity 14	documented	0	0.56	0.35	0.88	0.57
	possible	0	0.56	0.35	0.88	0.57
Total Documented		**13.94**	**38.48**	**28.34**	**44.36**	**27.68**
Total Possible		**15.01**	**54.26**	**39.07**	**51.09**	**43.53**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

Table 8.34 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Gulf of Alaska Groundfish, 1995-1997

Entity Number	AFA Links	Percent of Total Processing					
		Atka Mackerel	Flatfish	Other Species	Pacific Cod	Pollock	Rockfish
Entity 1	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 2	documented	8.70	6.98	9.66	6.98	15.86	4.44
	possible	8.70	6.98	9.66	6.98	15.86	4.44
Entity 3	documented	-	0.27	0.01	0.02	0.23	0.05
	possible	-	0.27	0.01	0.02	0.23	0.05
Entity 4	documented	0.19	5.41	0.67	1.70	0.70	2.98
	possible	2.46	8.98	2.08	2.39	0.87	10.62
Entity 5	documented	-	0.00	0.00	0.03	0.11	-
	possible	-	0.00	0.00	0.03	0.11	-
Entity 6	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 7	documented	2.98	0.06	0.33	0.56	3.26	0.04
	possible	2.98	0.10	1.09	0.57	3.26	0.15
Entity 8	documented	0.96	0.68	1.37	13.24	5.70	0.24
	possible	0.96	0.68	1.37	13.24	5.70	0.24
Entity 9	documented	-	0.00	0.02	0.00	0.04	0.00
	possible	-	0.03	1.38	0.00	0.04	0.07
Entity 10	documented	0.00	0.02	0.01	0.20	1.70	0.00
	possible	0.00	0.02	0.01	0.20	1.70	0.00
Entity 11	documented	2.97	14.18	4.04	11.08	11.29	20.98
	possible	2.97	14.18	4.04	11.08	11.29	20.98
Entity 12	documented	1.40	1.12	1.27	16.74	27.96	0.65
	possible	1.40	1.12	1.27	16.74	27.96	0.65
Entity 13	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 14	documented	-	0.00	-	0.01	0.08	-
	possible	-	0.00	-	0.01	0.08	-
Total Documented		**17.21**	**28.72**	**17.40**	**50.56**	**66.93**	**29.39**
Total Possible		**19.48**	**32.37**	**20.93**	**51.27**	**67.10**	**37.20**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

Table 8.35 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Crab, 1995-1997

Entity		Percent of Total Processing				
	AFA Links	Bairdi	Blue King	Brown King	Opilio	Red King
Entity 1	documented	-	2.79	3.56	0.72	-
	possible	-	2.79	3.56	0.72	-
Entity 2	documented	13.85	11.88	47.38	9.18	15.60
	possible	13.85	11.88	47.38	9.18	15.60
Entity 3	documented	4.06	-	-	6.33	1.38
	possible	4.06	-	-	6.33	1.38
Entity 4	documented	-	-	-	0.07	-
	possible	-	-	-	0.07	-
Entity 5	documented	-	-	-	-	1.23
	possible	-	-	-	-	1.23
Entity 6	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 7	documented	14.27	9.27	7.80	8.96	14.09
	possible	15.79	9.79	7.80	10.60	14.91
Entity 8	documented	14.06	21.21	-	14.38	16.09
	possible	14.06	21.21	-	14.38	16.09
Entity 9	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 10	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 11	documented	2.18	-	-	2.30	0.39
	possible	2.18	-	-	2.30	0.39
Entity 12	documented	16.95	28.89	1.19	19.73	20.59
	possible	16.95	28.89	1.19	19.73	20.59
Entity 13	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 14	documented	-	-	-	-	-
	possible	-	-	-	-	-
Total Documented		**65.38**	**74.05**	**59.93**	**61.67**	**69.37**
Total Possible		**66.90**	**74.56**	**59.93**	**63.31**	**70.20**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation

Table 8.36 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Bering Sea Aleutian Island Groundfish, 1996 and 1997

Entity		Percent of Total Processing				
	AFA Links	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Rockfish
Entity 1	documented	0	0.14	0.59	1.52	0.24
	possible	0	0.14	0.59	1.52	0.24
Entity 2	documented	0.04	2.46	4.58	6.42	1.58
	possible	0.04	2.46	4.58	6.42	1.58
Entity 3	documented	0.01	0.07	0.23	1.36	0.17
	possible	0.01	0.07	0.23	1.36	0.17
Entity 4	documented	10.23	12.38	5.85	7.15	5.30
	possible	10.97	28.73	14.50	10.03	21.42
Entity 5	documented	0	0.27	2.13	2.59	0.25
	possible	0	0.27	2.13	2.59	0.25
Entity 6	documented	2.11	0.02	0.86	0.13	0.11
	possible	2.11	0.02	0.86	0.13	0.11
Entity 7	documented	0.03	4.13	2.97	3.84	1.52
	possible	0.04	4.17	3.87	5.21	1.56
Entity 8	documented	0.01	0.22	1.02	3.21	0.48
	possible	0.01	0.22	1.02	3.21	0.48
Entity 9	documented	0	4.50	0.59	0.34	1.19
	possible	0	4.67	2.54	2.80	1.20
Entity 10	documented	0.01	0.25	0.86	2.33	1.12
	possible	0.01	0.25	0.86	2.33	1.12
Entity 11	documented	0.70	3.85	2.76	2.63	7.79
	possible	0.70	3.85	2.76	2.63	7.79
Entity 12	documented	0.03	0.99	4.07	10.83	2.90
	possible	0.03	0.99	4.07	10.83	2.90
Entity 13	documented	-	6.34	0.73	0.39	1.49
	possible	-	6.34	0.73	0.39	1.49
Entity 14	documented	0	0.33	0.49	1.17	0.83
	possible	0	0.33	0.49	1.17	0.83
Total Documented		**13.18**	**35.95**	**27.73**	**43.91**	**24.97**
Total Possible		**13.92**	**52.51**	**39.24**	**50.61**	**41.15**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation

Table 8.37 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Gulf of Alaska Groundfish, 1996 and 1997

Entity		Percent of Total Processing					
	AFA Links	Atka Mackerel	Flatfish	Other Species	Pacific Cod	Pollock	Rockfish
Entity 1	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 2	documented	5.66	8.43	10.99	6.86	14.17	5.96
	possible	5.66	8.43	10.99	6.86	14.17	5.96
Entity 3	documented	-	0.38	0.02	0.02	0.08	0.08
	possible	-	0.38	0.02	0.02	0.08	0.08
Entity 4	documented	0.26	4.19	0.39	2.34	0.75	0.35
	possible	1.49	7.02	1.55	2.57	0.89	8.42
Entity 5	documented	-	0	0.01	0.05	0.05	-
	possible	-	0	0.01	0.05	0.05	-
Entity 6	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 7	documented	3.79	0.05	0.43	0.51	1.23	0.05
	possible	3.79	0.06	0.98	0.51	1.23	0.12
Entity 8	documented	0.09	0.68	1.15	14.28	6.26	0.26
	possible	0.09	0.68	1.15	14.28	6.26	0.26
Entity 9	documented	-	0	-	0	0.06	-
	possible	-	0.04	2.00	0	0.06	0.10
Entity 10	documented	0	0.01	0.01	0.13	2.14	0
	possible	0	0.01	0.01	0.13	2.14	0
Entity 11	documented	0.16	14.47	4.69	11.62	9.92	23.60
	possible	0.16	14.47	4.69	11.62	9.92	23.60
Entity 12	documented	0.17	1.13	1.50	18.67	30.73	0.88
	possible	0.17	1.13	1.50	18.67	30.73	0.88
Entity 13	documented	-	-	-	-	-	-
	possible	-	-	-	-	-	-
Entity 14	documented	-	0	-	0.02	0.05	-
	possible	-	0	-	0.02	0.05	-
Total Documented		**10.13**	**29.35**	**19.19**	**54.49**	**65.44**	**31.17**
Total Possible		**11.36**	**32.23**	**22.90**	**54.72**	**65.57**	**39.41**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

Table 8.38 Option 10: Individual Limits Applied to All Facilities Within AFA Entities for Crab, 1996 and 1997

Entity		Percent of Total Processing				
	AFA Links	Bairdi	Blue King	Brown King	Opilio	Red King
Entity 1	documented	-	-	-	0.53	-
	possible	-	-	-	0.53	-
Entity 2	documented	16.62	9.87	44.36	9.77	15.80
	possible	16.62	9.87	44.36	9.77	15.80
Entity 3	documented	-	-	-	6.77	1.48
	possible	-	-	-	6.77	1.48
Entity 4	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 5	documented	-	-	-	-	0.77
	possible	-	-	-	-	0.77
Entity 6	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 7	documented	13.67	12.37	9.78	9.30	14.55
	possible	14.23	12.76	9.78	11.07	15.44
Entity 8	documented	18.45	22.74	-	14.94	16.54
	possible	18.45	22.74	-	14.94	16.54
Entity 9	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 10	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 11	documented	-	-	-	2.19	0.42
	possible	-	-	-	2.19	0.42
Entity 12	documented	13.09	29.53	1.65	19.13	20.48
	possible	13.09	29.53	1.65	19.13	20.48
Entity 13	documented	-	-	-	-	-
	possible	-	-	-	-	-
Entity 14	documented	-	-	-	-	-
	possible	-	-	-	-	-
Total Documented		**61.83**	**74.52**	**55.79**	**62.64**	**70.04**
Total Possible		**62.40**	**74.90**	**55.79**	**64.41**	**70.92**

Notes:

1/ Total documented percentages include facilities for which the analysis has documented linkages at the 10 percent level.

2/ Total possible percentages include all documented linkages as well as facilities that may be linked, depending on the application of the 10 percent rule or further investigation.

8.6 Summary and Conclusions

The subsections that follow summarize the findings of the analysis and offer conclusions regarding the imposition of processing limits on AFA processors. The overall conclusions about effectiveness of the 10 options in meeting the objectives are shown in Table 8.39 (the same as Table 8.5 introduced in Section 8.5.1). First, effectiveness of the levels at which the processing limits are imposed (overall limits, sector limits, or individual limits) is considered, followed by a comparison of effectiveness brought about by defining AFA processors at the facility, company, or entity level. Then some observations are presented regarding the interpretation of the 10% Ownership Rule. The final subsection provides a more generalized summary and conclusion from the analysis of processing limits.

Table 8.39 Summary of the Qualitative Analysis of Processing Limits

	Overall Limits			Sector Limits			Individual Limits			
	Option 1 Facility	Option 2 Company	Option 3 Entity	Option 4 Facility	Option 5 Company	Option 6 Entity	Option 7 Facility	Option 8 Company	Option 9 AFA/Co.	Option 10 Entity
Objectives from the Perspective of Proponents of Processing Limits										
1. How does the option rate in terms of limiting AFA processing of species other than BSAI pollock to the levels achieved prior to the passage of the AFA?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
2. How does the option rate in terms of including all processing interests of AFA companies?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
3. How does the option rate in terms of preventing AFA companies from evading the limits through subsidiaries or holding companies?	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Poor	Good
Objectives from the Perspective of AFA Processors										
4. How does the option rate in terms of allowing AFA processors to maximize their ability to realize profits in the pollock processing industry?	Good	Good	Good	Good	Good	Good	Poor	Good	Good	Good
5. How does the option rate in terms of allowing AFA processors to be able to utilize non-pollock processing capacity improvements completed prior to passage of the AFA?	Fair	Fair	Poor	Fair	Poor	Poor	Fair	Fair	Good	Fair
6. How does the option rate in terms of its effect on the market value of AFA facilities?	Good	Fair	Poor	Fair	Fair	Poor	Good	Fair	Good	Poor
Objectives from the Perspective of Non-pollock Processors Linked to AFA Processors										
7. How does the option rate in terms of restricting non-pollock processors that will not benefit directly from the AFA?	Good	Good	Poor	Good	Good	Poor	Good	Good	Good	Poor
Objectives from the Perspective of NMFS										
8. How does the option rate in terms of the Paperwork Reduction Act?	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Good	Poor
9. How does the option rate in terms of the NMFS ability to determine and set the limits?	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Good	Poor
10. How does the option rate in terms of the NMFS ability to manage the limits in-season?	Good	Fair	Fair	Good	Poor	Poor	Fair	Fair	Fair	Fair

Notes:
1/ The objectives are given a presumed rating relative to the other options from the perspective of the interest group shown. A fair rating implies that there are worse options and better options.
2/ The column headed "AFA/Co." is for the option that imposes individual processing limits on the AFA facilities in a company, but does not limit non-AFA facilities in the company.

8.6.1 Effectiveness of Limits: A Comparison of Overall, Sector, and Individual Limits

Processor caps were included in the AFA to help protect the market share of the non-AFA processors. While the AFA was being drafted, non-AFA processors expressed concerns that processors with the exclusive rights to process pollock could use profits from that fishery to increase their market share in other fisheries. The non-AFA processors would then be disadvantaged because they would be operating in a market that had a one way gate. AFA processors could increase their market share of crab, for example, but the non-AFA processors could not process any pollock from the directed fishery.

From the perspective of non-AFA processors, there do not appear to be significant differences if the processing limits are implemented as overall limits, sector limits, or individual limits. However, the level at which the limits are applied will make a significant difference to AFA processors and to NMFS.

If overall or sector-level limits are imposed, AFA processors will continue to compete against other AFA processors to attract fishermen to deliver crab and groundfish other than BSAI pollock. AFA processors will compete against other AFA processors to get their share of inputs (raw fish) before the AFA limit is reached, and will also need to compete against all non-AFA processors, who will not be restricted in any way except that they are precluded from processing pollock. Individual processing limits may reduce price competition among AFA processors. Although individual limits will not constitute an allocation and individual AFA processors will face continued competition from non-AFA processors, AFA processors will not need to compete with other AFA processors. Non-AFA processors would still be allowed to erode the AFA processor's share of these fisheries. So from a harvestors perspective, for the most part there is still a competitive market for their fish, even if the caps are set at the plant level. The harvestors may expericence difficulties making deliveries towards the end of the year if several of the AFA processors reach their individual cap and can no longer accept deliveries from catcher vessels. This will reduce marketing oportunuties for catcher vessels and may lead to lower prices, all other things being equal.

In general, individual processing limits will allow AFA processors more flexibility than with overall or sector-level limits to allocate their processing capacities and other resources, and allow them to realize more of the potential benefits of the AFA, within their historical processing shares. It should be noted however, that individual processing limits implemented at the AFA facility level could be less than optimal for AFA companies that have multiple AFA processing facilities. In such cases, AFA companies may not be able to achieve the same level of processing efficiency that might be possible if individual limits are imposed at the company level.

Annual implementation and in-season enforcement of overall processing limits appear to be less burdensome to NMFS than sector-level or individual-level limits. With overall or sector level processing limits, it is likely that NMFS will have to enforce at least two types of closures in order to enforce the processing limits and to still allow the processing of limited species as bycatch. The two types of closure would be:

1. A directed processing closure when the AFA processing total reaches a pre-determined percentage of the processing limits. A closure of directed processing will allow AFA processors to retain and process limited species when they are delivered as bycatch.

2. A closure to all processing when the full processing limit is reached.

If processing limits are imposed at the sector level, NMFS may have the additional burden of determining which processing facilities belong to which sector. This additional burden will occur if sector-level limits are

imposed on AFA companies or on AFA entities. If sector-level limits are imposed only on AFA-eligible facilities, then the sector definitions are predetermined.

If processing limits are imposed on individual processors, NMFS may be able to shift some of the monitoring burden onto the processors themselves. In such cases NMFS could report weekly cumulative processing totals to the processors, but the processors themselves would have the responsibility of determining when they should cease processing for directed fisheries. Under this scenario it may be possible to make enforcement a post-season process involving fines and sanctions for those processors that exceed their limits.

In conclusion, it appears that if processing limits are imposed, relative to other options, individual processing limits offer as much protection to non-AFA processors and may not be any more costly to implement and enforce. Individual processing limits may also allow AFA processors to realize more of the benefits of the AFA (by reducing market share competition amoung AFA processors). However, they would still be competeing in the market place with non-AFA processors to attact catcher vessels to deliver their non-pollock fish to them. This would help ensure they would continue paying the market price in most cases. Yet, as AFA processors reach their caps they will no longer be allowed to purchase fish. This will reduce the number of processors available to purchase fish from catcher vessels. If enough processors leave the market in an area, it could reduce the ex-vessel price paid to vessel owners, or increase the cost of delivering fish by forcing them to seek markets further from the fishing grounds.

8.6.2 Effectiveness of Limits: Comparisons of AFA Entities, AFA Companies, and AFA Facilities

Processing limits applied to AFA facilities will be restrictive, but less restrictive than limits applied to companies or entities. If processing limits are applied to facilities, either as a group or individually, AFA participating cooperatives would not be able to increase their shares of processing of crab and groundfish species under the jurisdiction of the NPFMC. AFA facilities would, however, be able to increase their relative processing shares of species managed solely by the State of Alaska, such as salmon, herring, and other shellfish. Additionally, limiting the processing of AFA facilities would not constrain the ability of the owners of the facilities to use AFA profits to increase their non-pollock processing shares at other facilities in which the AFA owners may have an interest.

Processing limits applied to AFA companies rather than to AFA facilities will be more effective in limiting the ability of owners of AFA facilities to increase their shares of non-pollock processing. The effectiveness of processing limits on AFA companies depends largely on the ability to define AFA companies. The analysis defines AFA companies on a conceptual basis that combines all of the processing facilities that have roughly the same ownership structure. Under this definition, non-AFA facilities owned by AFA companies or by subsidiaries of AFA companies are included in the processing limits. Thus if an AFA owner wishes to increase its shares of crab or groundfish other than BSAI pollock, it would have to do so as a minority partner. The processing limits would not place a constraint on AFA companies wishing to increase their processing shares of halibut or of species managed solely by the State of Alaska, such as salmon, herring, and other shellfish.

Processing limits applied to AFA entities as defined by the 10% Ownership Rule would appear to be more effective than limits imposed on AFA companies. With the 10% Ownership Rule it will be much more difficult for AFA owners to use profits resulting from the AFA to invest in greater processing capacity. If AFA owners wish to make new capital investments in non-pollock processing, they could make investments in salmon and herring fisheries or make investments at levels less than 10 percent of the capital value of the processors in which they are investing. In addition, because of the limits AFA processors would bring, existing owners may not welcome new investment associated with AFA profits.

Imposing processing limits on AFA entities will have some unintended and perhaps draconian consequences. Processing limits imposed on AFA entities will create significantly more paperwork for NMFS and the processing industry than the other options. This additional burden will be time-consuming and expensive, and may be viewed by many as a significant intrusion of government into private affairs of industry. Additionally, if limits are imposed on AFA entities, AFA owners will be prevented from investments in crab and groundfish processing capacity, and may choose instead to invest in additional processing capacity in species that are not limited, such as salmon, herring and halibut. Additional competition for the same processors that are calling for the limits could result.

Imposing processing limits on entities will also create other unintended consequences by limiting the activities of processors that may not be able to experience any of the benefits of the AFA. These consequences are perhaps most easily understood by using ownership interests of the Bristol Bay Economic Development Corporation as an example. As was shown Figure 8.14 in Section 8.2.5, BBEDC has a 20 percent ownership interest in the *Arctic Fjord*, an AFA catcher processor. BBEDC also has a 50 percent interest in the *Bristol Leader*, a factory longliner. Partners of Alaskan Leader Fisheries, which owns 2 other non-AFA processing facilities, own the remaining 50 percent of the Bristol Leader. Under the 10% Ownership Rule it is likely that the *Bristol Leader* and the two processing facilities owned by Alaskan Leader Fisheries would be included as part of an AFA entity and therefore be constrained by the processing limits. Furthermore, there do not appear to be any other linkages between the *Arctic Fjord* and the *Bristol Leader* or Alaskan Leader Fisheries.

The lack of a direct connection between the majority owners of the *Arctic Fjord* and the managing partners of the *Bristol Monarch* and Alaskan Leader Fisheries makes it unlikely that the *Bristol Leader* and Alaskan Leader Fisheries will realize higher processing shares of crab and groundfish in the North Pacific as a result of the AFA. Therefore, it could be argued that the *Bristol Leader* and Alaskan Leader Fisheries should not be included in the processing limits. On the other hand, it is certainly feasible that BBEDC could invest its pollock profits into additional processing capacity of the *Bristol Leader*, into the other processing facilities owned by Alaskan Leader Fisheries, or into any other processing facility. These new investments could result in higher processing shares of crab and groundfish other than pollock for the *Bristol Monarch*, Alaskan Leader Fisheries, or other BBEDC interests.

Thus it appears that although while the use of the 10% Ownership Rule in the application of processing limits will provide additional protection to processors that have no links or minor links to AFA owners, it may restrict and potentially harm other processors that are unlikely to actually benefit from the AFA. In addition, limits on AFA entities could lead to increased investments in salmon and herring processing. Finally, the paperwork and enforcement if limits are applied to AFA entities will be more burdensome and expensive for both NMFS and the industry. Therefore, it is uncertain whether the additional protection gained by applying processing limits to AFA entities outweighs the negative impacts.

Given the possibility of ambiguous results if processing limits are applied to AFA entities, the Council may wish instead to approve a less restrictive option in order to fulfill its mandate to protect processors not eligible to participate in the directed pollock fishery in the BSAI, or examine other options for defining AFA entities.

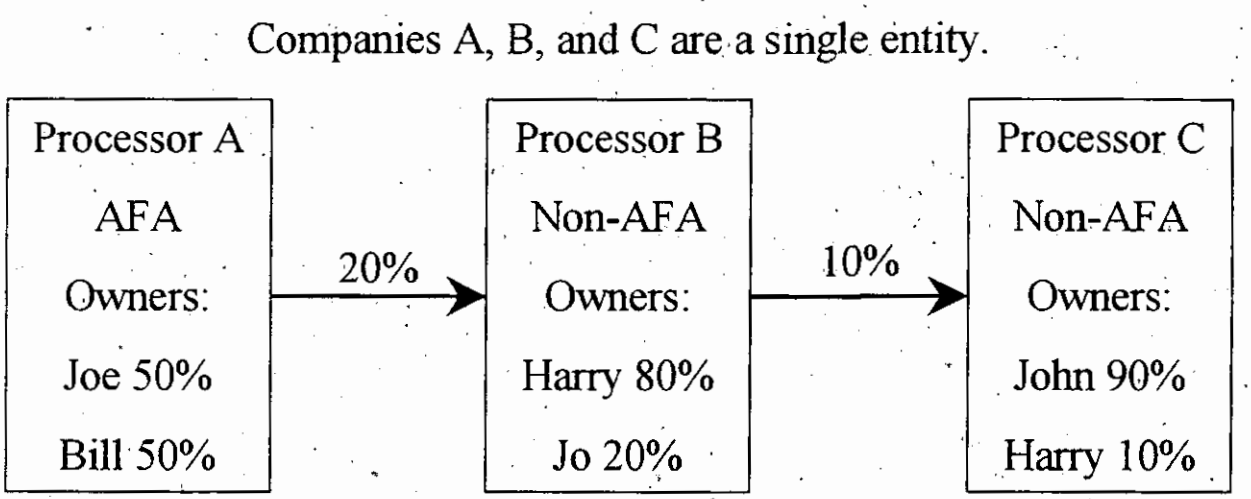
8.6.3 Alternative Interpretations of the 10% Ownership Rule

This subsection reexamines the literal interpretation of the 10% Ownership Rule as used in the analysis of processing limits and suggests alternative ways in which the 10% Ownership Rule could be applied if the Council chooses.

Although the 10% Ownership Rule was developed from language contained in the AFA, the Council has determined that Congress has given it the authority to adapt the language in the AFA to address its mandates. Therefore, the Council has the authority to interpret or adapt the 10% Ownership Rule as necessary to achieve the objectives for which the processing limits were proposed.

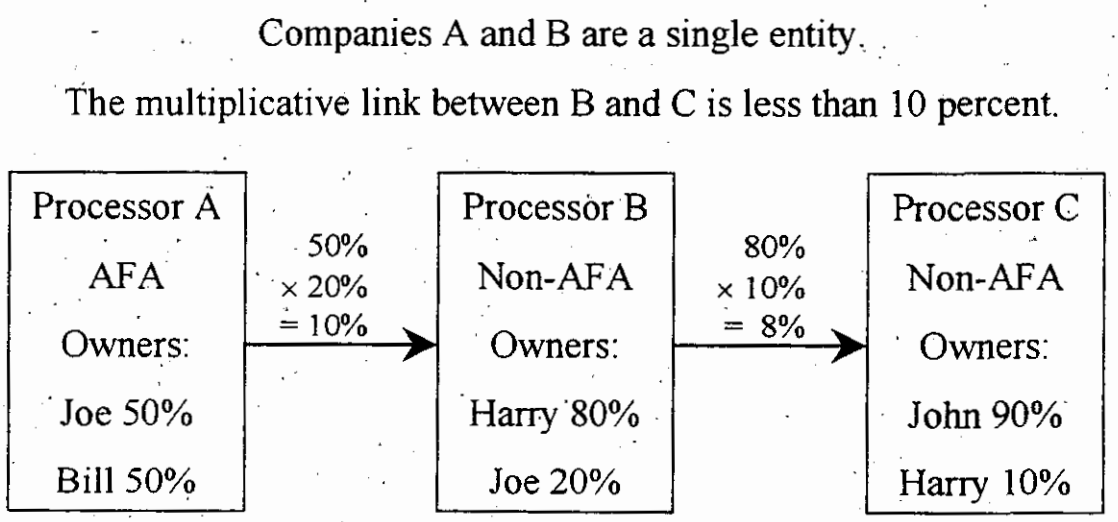
To date the 10% Ownership Rule has been interpreted in it simplest and most literal form, which considers processors to be linked if there is at least a 10 percent ownership connection, regardless of how that connection is developed. Figure 8.19 illustrates the literal interpretation of the 10% Ownership Rule. In the figure, Joe owns 50 percent of Processor A and 20 percent of Processor B, so Processor A and B are linked through Joe's 20 percent ownership in Processor B. Similarly, Processor B and Processor C are linked through Harry, with his 80 percent interest in Processor B and 10 percent interest in Processor C. Because A is linked to B and B is linked to C, all three processors are defined as a single entity.

Figure 8.19 Literal Interpretation of the 10% Ownership Rule



Another way to interpret the 10% Ownership Rule would use a multiplicative measure of ownership. In this case the shares of the common owners are multiplied together. Figure 8.20 shows how the situation from Figure 8.19 would be interpreted under a multiplicative interpretation. Joe's ownership share in Processor A is multiplied by Joe's share in Processor B. If the result is greater than 10 percent, then the Processor A is linked to Processor B. This interpretation measures the percentage of AFA interest in affiliated processors. In this case it can be said that Processor A has a 10 percent ownership interest in Processor B. The link between Processor B and Processor C has different implications. Even though Harry owns 10 percent of Processor C, the Processor B as a whole owns only 8 percent of Processor C. In this interpretation of the 10% Ownership Rule, Processor B is not linked to Processor C. An additional advantage of the multiplicative interpretation of the 10% Ownership Rule is that it provides a means by which to measure linkages that involve partnerships or more than one person.

Figure 8.20 Multiplicative Interpretation of the 10% Ownership Rule



It is also possible to interpret the 10% Ownership Rule as implying that the direct AFA interest in a processor must exceed 10 percent in order for 2 processors to be considered linked. In other words, the link must involve an owner of an AFA facility. Under this interpretation, Processors A and B would be linked in either the literal interpretation or the multiplicative interpretation of the 10% Ownership Rule, but Processor C would not be linked to the entity because Processor C has no direct AFA ownership.

Regardless of the interpretation of the 10% Ownership Rule, there still may be unintended consequences of its application. Analyzing and documenting these impacts is not possible, however, an example of these impacts is provided. Assume that the relationship between Harry and Joe began in 1990 when Processor B was constructed, and that Joe and Bill purchased Processor A in 1995. After Joe became involved with Bill in Processor A, he relinquished all management of Processor B to Harry. If processing limits are applied using the 10% Ownership Rule, Processor B will be limited, even though Harry, the managing partner and majority owner, has no interactions with Joe, except when he signs the check to Joe for 20 percent of the annual profit.

That is not to say that Processor B cannot benefit from AFA through Joe. If, for example, Joe invests some of his additional profits in Processor B to add a new crab line, then Processor B will be able to expand its percentage of crab processing as a result of Joe's participation in pollock cooperatives. However, absent any additional investment, any increases in processing shares that Processor B may be able to achieve cannot be directly linked to AFA.

Based on the discussion in this section it may be possible to craft an alternative means to restrict processors associated with the AFA facilities from increasing their shares of crab and groundfish species as a result of profits associated with AFA, without placing overly restrictive limits on processors that are only indirectly linked to the AFA. Although Chapter 8 does not specifically address any other definitions of the 10% Ownership Rule, there may be sufficient information in the analysis of the organization of the processing industry in Section 8.2 to allow the Council to develop a preferred alternative based on one of these alternative interpretations.

8.7 Overall Conclusions

The AFA instructs the Council to examine alternatives that would protect processors that will not be able to participate in pollock cooperatives from adverse effects resulting from the AFA. This chapter has examined the concept of imposing limits on the amounts of crab and groundfish other than pollock that AFA processors can process, as a means of protecting non-AFA processors.

Application of economic theory leads to the conclusion that pollock processors may be able to generate higher-than-expected profits from pollock processing because of the AFA. AFA processors may choose to reinvest those higher than expected returns into the processing of other species if it appears that returns from additional investment in processing of crab, groundfish, and other species will provide better returns than investments outside of fish processing. Because many other opportunities for investment exist, the stock market, for example, it is not certain that pollock processors will invest additional amounts into the processing of crab and other groundfish. If the processors do choose to invest in additional processing capacity, then it is likely they will be able to increase their share of the processing of other species.

It does not appear that any of the options that have been analyzed will fully address the concerns of the non-AFA processors without placing potentially harsh restrictions on processors that do not appear to be able to benefit directly from the AFA, and without imposing burdensome paperwork and enforcement costs on NMFS

and on the industry as a whole. This conclusion applies whether the processing limits are overall limits, sector limits or individual limits.

If the Council chooses to fulfill its mandate to protect non-AFA processors by imposing processing limits on crab and groundfish other than pollock, it appears that establishing limits on individual AFA companies will provide a relatively high level of protection with relatively few negative impacts.

9.0 ALTERNATIVES FOR THE IMPLEMENTATION AND MONITORING OF INSHORE COOPERATIVES

Under the AFA, the management of inshore and offshore cooperatives would differ significantly. The fishery cooperative formed by C/Ps and associated catcher vessels operate under a single offshore pollock TAC that may be apportioned among participants in the cooperative without intervention by NMFS. Under the AFA, any cooperative formed by listed motherships and associated catcher vessels could be formed and operate similarly. Because pollock TAC allocations remain at the sector level and are not sub-allocated to specific processors, management of the co-ops need differ little from traditional open access management of the pollock fishery.

However, management of the inshore co-ops authorized by the AFA pose a significantly more complex task because, unlike the offshore and mothership sectors, inshore co-ops may form around each AFA-eligible shoreside processor for a possible total of eight individual inshore co-ops, each with their own allocation of pollock TAC. The allocation of pollock to each co-op would be dependent on the aggregate pollock catch history of the catcher vessels delivering to a shoreside processor under a fishery cooperative agreement. A general summary of the issues associated with the adequacy of catch history data, database development, vessel permitting, and scheduling considerations is provided below.

9.1 Sources and Adequacy of Historic Data on Groundfish and PSC Catch by Vessel

ADF&G fish ticket data provide information, by vessel and species, of the fish landed by catcher vessels, and are available in electronic form. These data can be considered more reliable for fish with commercial value, and less reliable for species delivered but not purchased. They are not reliable for PSC catch or for groundfish discarded at sea.

Groundfish catcher-vessel logbooks, required for all catcher vessels over 60 ft LOA, document skippers' reports of groundfish and PSC at-sea discards. They do not document retained species weights. Catcher vessel logbook data are not in electronic form. Logbooks are archived with NMFS Enforcement.

Processor Weekly Production Reports provide no information on catcher vessel deliveries. They report aggregate landing amounts for a week.

Observer data, for observed catcher vessels, provide haul by haul weight estimates and species composition sampling for some hauls or sets and are available in electronic form. In some fisheries, where the observer has no opportunity to sample on a haul by haul basis, the species composition is determined for the delivery as a whole and pro-rated back out to the individual hauls. PSC management has never been done at the level of individual catcher vessels – rather data from CV observers are pooled and applied to groundfish catch by the shoreside sector as a whole.

In summary, a complete, reliable source of groundfish and PSC catch for catcher vessels suitable for determining quota allocations based on actual harvested amounts does not exist. Basing groundfish allocations on landed catch would lead to the fish tickets as the most reliable source, at least for commercially valuable species. PSC is problematic. Additional assumptions and analysis of existing observer data are likely needed to determine if using individual CV observer data would yield acceptable results. Accommodation for 30% covered vessels would have to be made. For example, one option could be to prorate PSC history to catcher vessels based on the amount of groundfish landed.

Inshore Cooperative Database Requirements. NMFS believes that a verified database of 1995-97 catcher vessel pollock landings must be developed from ADF&G fish ticket data, similar to the process for determining individual quota share for an IFQ program. Each catcher vessel would be assigned a proportion or percentage of the total 1995-97 inshore landings. This percentage would be analogous to IFQ quota share and NMFS would inform each catcher vessel owner of the official pollock quota share attributed to each AFA-listed catcher vessel. The co-op quota share of each individual inshore catcher vessel could be listed on each vessel's Alaska groundfish fishery permit. An inshore co-op's annual pollock allocation would be calculated as the sum of each participating catcher vessel's co-op pollock quota share, multiplied by the annual inshore pollock allocation.

Given the potential inaccuracies in the fish ticket data, and the allocative nature of the AFA inshore co-ops, NMFS further believes that vessel owners should be provided the opportunity to appeal the inshore co-op pollock "quota share" attributed to their vessel if the vessel owner has information to indicate the fish ticket data upon which the vessels quota shore was derived is wrong or incomplete. Therefore, a mechanism for administrating such appeals must be established. The AFA inshore co-op quota share appeals process could be similar or identical to the existing IFQ appeals procedure set out at 50 CFR 679.43

The process for developing the database on which to derive vessel-specific historic nonpollock groundfish harvest for purposes of sideboard harvest limitations would be similar to that used to establish vessel-specific pollock quota share, although NOAA General Counsel has opined that the need to provide an appeals process to address disputes about historical data on nonpollock groundfish landings is not as paramount given these data would be used to establish harvest limitations, not allocations.

The development of prohibited species catch estimates for AFA-eligible pollock catcher vessels delivering to inshore processors would be difficult without some widespread assumptions and extrapolations from limited observer data (see above discussion on adequacy of historical catch data).

9.2 New Permitting Requirements

To implement the provisions of the AFA, NMFS will need to establish a series of new permit requirements. To fulfill the statutory requirements of the AFA, this action would establish new permit requirements for AFA catcher/processors, AFA catcher vessels, AFA motherships, AFA inshore processors, and AFA inshore cooperatives. Any vessel used to engage in directed fishing for a non-CDQ allocation of pollock in the BSAI, and any processor that receives pollock harvested in a non-CDQ directed pollock fishery in the BSAI would be required to maintain a valid AFA permit onboard the vessel or at the plant location at all times that non-CDQ pollock is harvested or processed. These new AFA permits would not exempt a vessel operator, vessel owner, or pollock processor from any other applicable permit or licensing requirements required by State or Federal regulations. However, vessels fishing for BSAI pollock under the CDQ program and processors processing pollock harvested under the CDQ program would not be required to have AFA permits.

The owner of a vessel or processor could apply for an AFA permit at any time during the duration of the AFA. Once issued, AFA vessel and processor permits would be valid for the duration of the AFA and would expire on December 31, 2004. AFA vessel and processor permits could not be used on or transferred to any vessel or processor that is not listed on the permit. However, AFA permits could be amended to reflect any change in the ownership of the vessel or processor. In contrast to vessel and processor permits, AFA inshore cooperative permits would be valid only for the fishing year for which they are issued, but would be renewable on an annual basis.

AFA permit applications. NMFS will create application forms for all AFA permits that will be available upon request from the NMFS Alaska Region, and also will be available for downloading on the NMFS Alaska Region home page (http://www.fakr.noaa.gov). AFA vessel and processor permits would be issued to the current owner of a qualifying vessel or processor if he/she submits to the Regional Administrator a completed AFA permit application that is subsequently approved. NMFS also will establish an appeals process under which applicants could appeal the denial of an AFA permit or AFA permit endorsement. The appeals process for AFA permits would be similar to the process currently in place for the individual fishing quota (IFQ) program and license limitation program (LLP) appeals.

AFA catcher/processor permits. Under the AFA, the statutory list of qualified catcher/processors took effect on January 1, 1999 and NMFS has already issued AFA catcher/processor permits to the owners of all qualified catcher/processors. Currently permitted AFA catcher/processors would likely be issued new AFA permits that would be valid for the duration of the AFA. AFA catcher/processor permits will be reissued automatically and the owners of AFA catcher/processors would not be required to re-submit AFA permit applications. Two categories of AFA catcher/processor permits would be issued: Vessels listed by name in section 208(e)(1) through (20) of the AFA would be issued unrestricted AFA catcher/processor permits. Vessels qualifying for AFA catcher/processor permits under section 208(e)(21) would be issued restricted AFA catcher/processor permits, and would be limited in the aggregate to not more than 0.5 percent of the catcher/processor sector TAC allocation.

AFA catcher vessel permits. Under the AFA, a catcher vessel would qualify to fish for BSAI pollock if it is listed by name in the AFA, or, if its history of participation in the BSAI pollock fishery meets certain criteria set out in the AFA. AFA catcher vessel permits would be endorsed to authorize fishing for pollock for delivery to AFA catcher/processors, AFA inshore processors, or AFA motherships. An applicant for an AFA catcher vessel permit would be required to indicate the sector endorsement(s) that the vessel qualifies for. NMFS will establish an official AFA record that includes the relevant catch histories of all potentially qualifying vessels and will verify all claims of endorsement qualification against the official AFA record.

Members of industry have requested that a preliminary list of the AFA eligible catcher vessels be made available to the public. That list has been compiled and is included in Tables 9-1 to 9-4 below. Four separate groupings of catcher vessels are reported in this section. Those grouping correspond to the table structures in Chapter 7, where the catcher vessels that are likely eligible to make deliveries inshore, to inshore and motherships, to motherships only, and to catcher/processors are treated separately.

Table 9.1: Preliminary List of AFA Eligible Catcher Vessels in the Inshore Sector

ADF&G	Name	ADF&G	Name	ADF&G	Name
57934	AJ	55153	DONA PAULITA	48173	OCEAN HOPE 3
69765	ALASKA DAWN	14767	ELIZABETH F	64667	OCEAN STORM
38989	ALASKA ROSE	32554	ENDURANCE	51073	OCEAN ENTERPRISE
57321	ALASKAN COMMAND	54653	EXCALIBUR II	50759	PACIFIC ENTERPRISE
48215	ALDEBARAN	33112	EXODUS	54643	PACIFIC KNIGHT
40749	ALSEA	53247	F/V WESTWARD I	54645	PACIFIC MONARCH
00039	AMERICAN EAGLE	55111	FIERCE ALLEGIANCE	61450	PACIFIC PRINCE
00029	ANITA J	32473	FLYING CLOUD	61792	PACIFIC RAM
51092	ARCTIC I	40309	GOLD RUSH	00047	PACIFIC VIKING
55923	ARCTIC III	35687	GOLDEN DAWN	57149	PEGASUS
57440	ARCTIC IV	32817	GOLDEN PISCES	09200	PEGGY JO
64105	ARCTIC VI	37660	GREAT PACIFIC	12668	PERSEVERANCE
01112	ARCTIC WIND	41312	GUN-MAR	37036	POSEIDON
45978	ARCTURUS	39230	HALF MOON BAY	33744	PREDATOR
38547	ARGOSY	47795	HICKORY WIND	00006	PROGRESS
56153	AURIGA	62922	LADY JOANNE	56395	RAVEN
56154	AURORA	56119	LESLIE LEE	40840	ROYAL AMERICAN
40638	BERING ROSE	70221	LISA MARIE	00046	ROYAL ATLANTIC
62892	BLUE FOX	41520	LISA MELINDA	35957	SEA WOLF
59779	CAITLIN ANN	30332	LONESTAR	00077	SEADAWN
61432	CAPE KIWANDA	60650	MAJESTY	59476	SEEKER
57634	CARAVELLE	49617	MARATHON	00012	STAR FISH
62906	CHELSEA K	00055	MARCY J	34931	STARLITE
54648	COLLIER BROS	66196	MESSIAH	39197	STARWARD
39056	COLUMBIA	59123	MISS BERDIE	39860	STORM PETREL
53843	COMMODORE	38431	MORNING STAR	35527	SUNSET BAY
56676	DEFENDER	56164	MS AMY	40250	TOPAZ
60655	DESTINATION	00961	NORDIC STAR	00008	VIKING
08668	DOMINATOR	36808	NW ENTERPRISE	36045	VIKING EXPLORER
55199	DONA LILIANA	48171	OCEAN HOPE 1	34919	WALTER N
51672	DONA MARTITA				

Table 9.2: Preliminary List of AFA Eligible Catcher Vessels in both the Inshore and Mothership Sectors

ADF&G	Name	ADF&G	Name	ADF&G	Name
00045	ALYESKA	06440	MARK I	00033	PACIFIC FURY
00028	AMBER DAWN	00200	NORDIC FURY	58821	TRAVELER
24255	AMERICAN BEAUTY	00032	OCEAN LEADER	39946	VANGUARD
31672	MARGARET LYN	03404	OCEANIC	22294	WESTERN DAWN
12110	MAR-GUN	06931	PACIFIC CHALLENGER		

Table 9.3: Preliminary List of AFA Eligible Catcher Vessels in the Mothership Sector

ADF&G	Name	ADF&G	Name	ADF&G	Name
50570	ALEUTIAN CHALLENGER	68858	MISTY DAWN	55512	POPADO II
33697	CALIF HORIZON	38294	PACIFIC ALLIANCE	38342	VESTERAALEN
61372	FIERCE SEA				

Table 9.4: Preliminary List of AFA Eligible Catcher Vessels in the Catcher/Processor Sector

ADF&G	Name	ADF&G	Name	ADF&G	Name
62152	AMERICAN CHALLENGER	32858	NEAHKAHNIE	40969	SEA STORM
59687	FORUM STAR	00101	OCEAN HARVESTER	54654	TRACY ANNE
41021	MUIR MILACH				

AFA catcher vessel sideboard endorsements. The catcher vessel sideboard endorsements identified under the Council's preferred alternative in Chapter 7.0 would be implemented through endorsements on the catcher vessel's AFA permit. An AFA catcher vessel would be prohibited from retaining any BSAI crab species unless the catcher vessel's AFA permit contains an endorsement for that crab species. AFA catcher vessel permits could be endorsed for the Bristol Bay Red King Crab, St. Mathews Island blue king crab, Pribilof Island king crab, Aleutian Islands brown king crab, Aleutian Islands red king crab, Opilio Tanner crab, and Bairdi Tanner crab fisheries based on a vessel's history of participation in each of those fisheries and according to the criteria set out in the preferred alternative in Chapter 11.0. Applicants for AFA catcher vessel permits would be required to indicate on the permit application which AFA crab sideboard endorsements the vessel qualifies for based on the qualifying criteria set out in regulation. All claims of qualification will be verified by NMFS. To participate in a BSAI crab fishery, the operator of an AFA catcher vessel would have to have a valid LLP license for that crab fishery as well as an AFA catcher vessel permit containing an endorsement for that crab fishery.

AFA Mothership permits. Under the AFA, three motherships are authorized by name to process pollock harvested in the BSAI directed pollock fishery for delivery to motherships. The owner of a mothership would be issued an AFA mothership permit if the mothership is listed by name in section 208(d) of the AFA. However, the owner of a mothership wishing to process pollock harvested by a fishery cooperative also would be required to apply for and receive a cooperative processing endorsement on its AFA mothership permit.

Section 211(c)(2)(A) of the AFA, imposes crab processing restrictions on the owners of AFA mothership and AFA inshore that receive pollock from a fishery cooperative. These processing limits extend not just to the AFA processing facility itself, but to any other crab processing facility which shares a 10 percent or more common ownership with the AFA mothership or AFA inshore processor. To implement the crab processing restrictions contained in section 211(c)2)(A) of the AFA, NMFS would require that applicants for AFA mothership and AFA inshore processor permits disclose on their permit application the names of any crab processors in which the owners of the AFA mothership or AFA inshore processor share a 10 percent or greater ownership interest, collectively. An applicant for an AFA mothership or AFA inshore processor permit who does not disclose this crab processor ownership information would receive an AFA mothership permit or AFA inshore processor permit but would be denied an endorsement authorizing the processor to receive and process pollock harvested by a fishery cooperative.

AFA inshore processor permits. Under the AFA, inshore processors are authorized to receive and process BSAI pollock based on the processing history of the facility in 1996 and 1997. An applicant would receive an unrestricted AFA inshore processor permit if the Regional Administrator determines that the inshore processing facility processed more than 2,000 metric tons round-weight of pollock harvested in the inshore directed pollock fishery during both 1996 and 1997. An applicant would receive a restricted AFA inshore processor permit if the Regional Administrator determines that the inshore processing facility processed pollock harvested in the inshore directed pollock fishery during 1996 or 1997, but did not process more than 2,000 metric tons round-weight of pollock during both 1996 and 1997. A restricted AFA inshore processor permit would prohibit the inshore processing facility from processing more than 2,000 metric tons round-weight of BSAI pollock in any one year.

The owner of an AFA inshore processor wishing to process pollock harvested by a fishery cooperative also would be required to have a cooperative processing endorsement on the AFA inshore processing permit. The requirements for a AFA inshore processor cooperative processing endorsement would be the same as those listed for AFA motherships above.

The Council also recommended that each AFA inshore processor be restricted to operating in the single geographic location in which it operated in 1996 or 1997 when processing pollock harvested in the BSAI directed pollock fishery as set out in the options for single geographic location requirements in Chapter 4.0. To implement this restriction, land-based shoreside processors would be restricted to operating in the last physical location in which the facility processed BSAI pollock during 1996-1997 qualifying period. Stationary floating processors would be restricted to operating in a location within Alaska state waters that is within 5 nautical miles of the last position in which the floating inshore processor processed BSAI pollock during the 1996-1997 qualifying period.

Inshore cooperative fishing permits. To implement the statutory requirements of the AFA to grant allocations of pollock to inshore cooperatives, an inshore catcher vessel cooperative formed for the purpose of cooperatively managing directed fishing for pollock would be issued an AFA inshore cooperative fishing permit after submission of a completed application for an inshore cooperative fishing permit. To implement this provision of the law, an application deadline of December 1 is necessary so that NMFS and the Council can review cooperative agreements and make interim allocations of pollock TAC to cooperatives on an annual basis at the December Council meeting.

As part of the application for an inshore cooperative fishing permit, an inshore cooperative would be required to certify that: (1) The cooperative contract was signed by the owners of at least 80 percent of the qualified catcher vessels that delivered pollock to the cooperative's designated AFA inshore processor; (2) each catcher vessel in the cooperative delivered more BSAI pollock to the designated AFA inshore processor than to any other AFA inshore processor during the year prior to the year in which the cooperative fishing permit will be in effect, and (3) each member vessel is a qualified AFA catcher vessel, is otherwise eligible to fish for groundfish in the BSAI, and has no permit sanctions or other type of sanctions against it that would prevent it from fishing for groundfish in the BSAI. A catcher vessel that is ineligible to harvest BSAI pollock during the year in which the cooperative fishing permit will be in effect due to permit sanctions, lack of an AFA permit, lack of LLP permit, or lack of other required permit, could not become a member of an inshore cooperative that receives an inshore cooperative fishing permit. A cooperative fishing permit could be amended to add or subtract a qualified catcher vessel upon submission of a revised application that is received by the NMFS Alaska Region prior to the December 1 deadline and that is subsequently approved by the Regional Administrator.

Inshore cooperative fishing permits would be valid for one calendar year only, but could be renewed on an annual basis after submission of a new application that is received by NMFS prior to the application deadline and that is subsequently approved by the Regional Administrator.

Replacement vessels and processors. In the event of the actual total loss or constructive total loss of an AFA catcher vessel, AFA mothership, or AFA catcher/processor, the owner of such vessel would be able to replace the vessel with a replacement vessel that would be eligible in the same manner as the original vessel after submission of an application for an AFA replacement vessel that is subsequently approved by NMFS. The AFA contains detailed restrictions on replacement vessels and processors that are set out in Appendix 1.

9.3 Options for the allocation of pollock TAC to inshore cooperatives

9.3.1 Compensation for offshore catch history

Under the AFA, eligible inshore catcher vessels will be allowed to form cooperatives in 2000. The allocation of pollock to each cooperative will be based on the individual catch histories of each member vessel. The

Council is considering three options for calculating catch history, 1995-97, 1992-97, or the best two years from the two previous options. Section 210(b)(4) of the AFA specifically lists the years 1995, 1996 and 1997 as the years to be considered, but Section 213 of the AFA provides the Council with the authority to choose another method for allocating pollock to inshore cooperatives.

Some inshore pollock catcher vessels have made deliveries to both the inshore and offshore sectors during the qualifying years. Catcher vessels with histories split between the mothership sector and the inshore sector are able to fish both histories pursuant to the AFA. However, catcher vessels which made deliveries to both the inshore sector and the catcher vessel to catcher/processor sector lose the catch history that was delivered to the catcher/processor sector. This occurs because the AFA does not specifically create a mechanism for these catcher vessels to obtain credit for that catch history. The AFA states in section 210(b)(4) that *"any contract implementing a fishery cooperative under paragraph (1) which has been entered into by the owner of a qualified catcher vessel eligible under section 208(a), that harvested pollock for processing by catcher/processors or motherships in the directed pollock fishery during 1995, 1996, and 1997 shall, to the extent practicable, provide fair and equitable terms and conditions for the owners of such qualified catcher vessel."* This language seems to place the burden of compensating members of a cooperative on the cooperative itself. However if each inshore processor forms a separate cooperative, the burden of compensating members may be more onerous on some cooperatives than others. For example, a cooperative that did not have any members with offshore catch history would not need to "pay" any compensation, but a cooperative that had several members with offshore catch history could require substantial compensation "payments" by its members.

While the AFA states that both the catch delivered to catcher/processors and motherships would be eligible for compensation, the AFA allows catcher vessels to operate in both the inshore and mothership sectors, if they qualify for both. Therefore, several members of industry have indicated that the focus should only be on the lost catch in the catcher/processor sector. Vessels in the inshore sector that had deliveries to motherships during the qualifying years would simply lose that catch history if they did not meet the minimum requirements to be part of the mothership sector.

Section 210(b)(1) states that only catch delivered to the inshore sector will be considered by the Secretary when determining the amount of quota to be allocated to the inshore cooperative(s). Vessels will be disadvantaged in joining a cooperative if a substantial portion of their history was delivered to catcher/processors in the years used to determine catch history. As an example, a catcher vessel fishes for a catcher/processor in 1995 and 1996 and then fishes for a shore plant in 1997. That catcher vessel is not eligible under the AFA for the future to deliveries to catcher/processors. The vessel is eligible to fish for the inshore sector, but when cooperatives are formed will only receive credit for the fish delivered in 1997, while most of the other members will receive credit for 1995, 1996 and 1997. As a result, the catcher vessel in this example will be disadvantaged.

The Council authorized that a discussion paper be developed to outline *"options for compensation to inshore catcher vessels with catch history delivering to catcher/processors that is no longer available to them under AFA"*. The problem faced by these vessels could be addressed by a modification to the criteria by which the Secretary determines how much quota is allocated to each cooperative. Section 213(c)(3) of AFA provides that the Council may modify *"the criteria required in paragraph (1) of Section 210(b) to be used by the Secretary to set the percentage allowed to be harvested by such catcher vessels."*

The following change to Section 210(b)(1)(B) was recommended by Midwater Trawlers Cooperative (MTC) and would appear to remedy this problem:

". . . the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) to harvest the aggregate percentage of the directed fishing allowance under Section 206(b)(1) in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of pollock harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) in the directed pollock fishery for processing by the inshore component, together with the amount harvested by such vessels for processing by catcher/processors in the offshore component during 1995, 1996 and 1997, relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component together with the aggregate total amount harvested by all catcher vessels (excluding those eligible under 208(b)) for processing by catcher/processors in the offshore component during such years and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) from harvesting in the aggregate in excess of such percentage of such directed fishing allowance."

This modification would allow a catcher vessel with catch history based on deliveries to catcher/processors, that is otherwise lost under the AFA, to bring that catch history into a cooperative while sharing the burden among all members of the inshore cooperative/cooperatives. In addition, the modification does not change the AFA sector allocations.

Preliminary data indicates that 66,764 mt of pollock were delivered to catcher/processors by 42 different AFA catcher vessels from the inshore sector. The four vessels making the most deliveries accounted for 35,783 mt of the catch, or about 53 percent of the total.

A total of 1,126,275 mt of pollock was delivered by the AFA inshore catcher vessels to inshore processors between 1995-97. Adding the catch delivered inshore to the catch delivered to catcher processors will result in the total amount of pollock catch in the inshore quota pool, if vessels are compensated for their deliveries to catcher/processors. Dividing the deliveries to catcher/processors by the total quota pool yields the compensation, or "adjustment", payment that catcher vessels would be required to make.

Six sub-options setting minimum pollock delivery levels, below which a vessel would be ineligible for compensation, were included. The levels selected are 250 mt, 500 mt, 1,000 mt, 2,000 mt, 3,000 mt, and 5,000 mt. Table 10.5 reports the total amount of catch eligible for compensation at each of these thresholds in the cumulative total column. The "Inshore Adjustment" column reports the percentage of each vessels history that they would have to pay to compensate catcher vessels for their deliveries to catcher/processors. Note that the adjustment is based on the cumulative total column added to the inshore deliveries to estimate the total inshore catch pool. The bottom row of the table, titled <250 mt, shows the compensation required if no minimum catch histories were imposed.

Table 9.5: Compensation for inshore catcher vessels that had pollock deliveries to catcher/processors from 1995-97, break points are based on total catch.

Pollock to C/Ps	Number of Vessels	Pollock Catch	Avg /Vessel	Cum. Total	Inshore Adjustment
≥5,000 mt	3	31,745	10,582	31,745	-2.74%
3,000 - 4,999 mt	5	18,279	3,656	50,024	-4.25%
2,000 - 2,999 mt	2	Conf.	Conf.	Conf.	Conf.
1,000 - 1,999 mt	3	Conf.	Conf.	58,727	-4.96%
500- 999 mt	3	2,109	703	60,835	-5.12%
250 - 499 mt	11	3,831	348	65,148	-5.47%
<250 mt	15	1,400	93	66,764	-5.60%

The next two tables impose inshore catch history ceilings of 2,000 mt and 3,000 mt on the compensation calculation. The Council could also choose a ceiling of 5,000 mt, but the results are no different than the 3,000 mt ceiling. Vessels that landed an amount of pollock greater than the ceiling would not be compensated for their deliveries to catcher/processors. Including these options gives the Council the flexibility to compensate only the catcher vessels they feel have small amounts of inshore deliveries.

Table 9.6: Compensation for inshore catcher vessels that had pollock deliveries to catcher/processors and landed less than 2,000 mt to the inshore sector from 1995-97, based on total catch.

Pollock to C/Ps	Number of Vessels	Cum. Total	Inshore Adjustment
>5,000 mt	1	Conf.	Conf.
3,000 to 4,999 mt	4	21,199	-1.85%
2,000 to 2,999 mt	0	21,199	-1.85%
1,000 to 1,999 mt	1	Conf.	Conf.
500 to 999 mt	3	24,647	-2.14%
250 to 499 mt	1	Conf.	Conf.
<250 mt	2	25,200	-2.19%

Table 9.7: Compensation for inshore catcher vessels that had pollock deliveries to catcher/processors and landed less than 3,000 mt to the inshore sector from 1995-97, based on total catch.

Pollock to C/Ps	Number of Vessels	Cum. Total	Inshore Adjustment
≥5,000 mt	1	Conf.	Conf.
3,000 to 4,999 mt	4	21,199	-1.85%
2,000 to 2,999 mt	1	Conf	Conf.
1,000 to 1,999 mt	2	26,199	-2.27%
500 to 999 mt	3	28,307	-2.45%
250 to 499 mt	1	Conf.	Conf.
<250 mt	2	28,860	-2.50%

Note: Information in this table does not change if the inshore delivery ceiling is changed from 3,000 mt to 5,000 mt.

Table 9.8 provides information on the compensation of catcher vessels if the break points are based on average annual pollock catch from 1995-97, instead of total harvests during that time period. This method of describing catch history assigns the majority (28) of the vessels to the < 250 mt category. None of the vessels averaged 5,000 mt of pollock or more during the three years, which may be due to the limited amount of catch delivered by the these vessels to catcher/processors in 1997. Recall that 1997 was the sole qualifying year for catcher vessels in the catcher/processor sector.

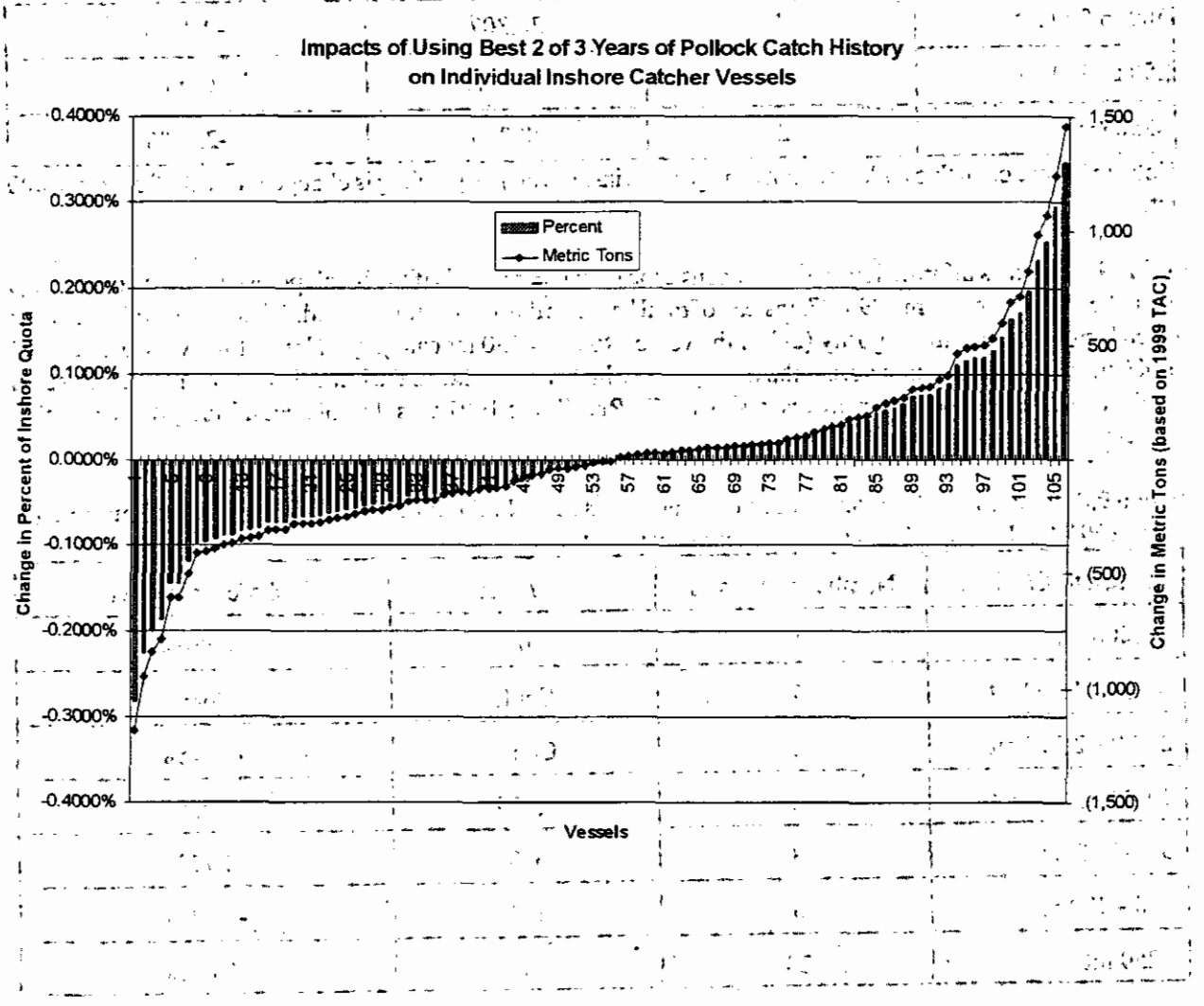
Table 9.8: Compensation for inshore catcher vessels that had pollock deliveries to catcher/processors from 1995-97, break points are based on average catch.

Pollock to C/Ps	Number of Vessels	Avg /Vessel	Inshore Adjustment
≥5,000 mt	0	0	-0.00%
3,000 - 4,999 mt	2	Conf.	Conf.
2,000 - 2,999 mt	1	Conf.	-2.74%
1,000 - 1,999 mt	5	1,219	-4.25%
500- 999 mt	3	653	-4.73%
250 - 499 mt	3	404	-5.02%
<250 mt	28	86	-5.60%

9.4 Determine Inshore and Mothership Pollock Catch History Based on Best 2 of 3 Years

The AFA prescribes the criteria for determining which catcher vessels are eligible to participate in the inshore and mothership cooperatives in Section 208 (a) and Section 208 (c) of the Act, respectively. Those sections of the AFA do not require that all three years of catch history be used to determine the amount of pollock catcher vessels would be allowed to take with them into a cooperative.

An alternative has been added that would allow catcher vessels in the inshore sector to use their best two years of pollock catch history during the three year qualification window. The impacts of that option are depicted in the chart below. It will make about half of the vessels better off and the other half of the inshore fleet will be worse off as a result of using 2 of 3 years catch history. In terms of who wins and loses, the winners are those vessels with inconsistent catch histories, and the losers are the vessels that made approximately equal amounts of landings each year. The tails of the graph represent the vessels with the largest catch histories. In terms of tons and percent of TAC, they are the biggest winners and losers. Vessels with smaller catch levels, whether they had consistent or inconsistent catch histories, and vessels with somewhat varied catch histories are depicted in the middle portion of the chart.



9.5 Schedule for Annual Specification of Pollock Co-op Allocations

Based on AFA references to annual cooperative arrangements, NMFS assumes that the duration of a fishery cooperative would be for a one-year period. Ideally, fishery cooperative agreements should be completed by late September of each year to allow NMFS sufficient time to calculate pollock allocations based on participating catcher vessel inshore pollock "quota shares," provide the Council opportunity to review and

assess inshore pollock cooperative arrangements, and to annually specify separate inshore cooperative pollock allocations in the interim specifications. The interim specifications also would include any non-pollock harvest specifications that would be applied at either the inshore sector or cooperative level. The interim specifications would be superseded by the final specifications for fishing activity after the pollock roe season. The AFA provides for vessel entry into a cooperative after a cooperative has been formed and before the calendar year in which fishing under the co-op would occur (section 210(b)(2)). This activity would essentially change the cooperative's allocation of pollock and harvest sideboard limitations. Administrative processes should be developed to avoid having to republish inshore allocations of pollock among different cooperatives pending such changes to co-op specific participants.

9.6 Management of Inshore Catcher Vessel Co-ops

The AFA authorizes the formation of pollock co-ops within each of the three pollock industry sectors established by the AFA. However, a fundamental difference exists between the current offshore co-ops and possible future inshore-sector co-ops. The catcher/processor, offshore catcher vessel, and potential mothership co-ops require no separate action or implementation by NMFS. NMFS will monitor and enforce sectoral pollock TAC allocations in the same manner regardless of the presence or absence of the co-op because the formation of a co-op does not require NMFS to sub-allocate amounts of pollock TAC. The individual catch shares harvested by different catcher/processors, offshore catcher vessels, and the mothership fleet are of no consequence to NMFS except as they contribute to each sector's catch in the aggregate.

The inshore catcher vessel co-operatives contemplated by the AFA pose an entirely different management issue. Section 211 (b) of the AFA specifies that NMFS set-aside separate TAC allocations to each co-op upon formation of the co-op and manage each co-op's TAC allocation separately:

> *(b) CATCHER VESSELS ONSHORE.—*
>
> *(1) CATCHER VESSEL COOPERATIVES.—Effective January 1, 2000, upon the filing of a contract implementing a fishery cooperative under subsection (a) which—*
>
> *(A) is signed by the owners of 80 percent or more of the qualified catcher vessels that delivered pollock for processing by a shoreside processor in the directed pollock fishery in the year prior to the year in which the fishery cooperative will be in effect; and*
>
> *(B) specifies, except as provided in paragraph (6), that such catcher vessels will deliver pollock in the directed pollock fishery only to such shoreside processor during the year in which the fishery cooperative will be in effect and that such shoreside processor has agreed to process such pollock,* ***the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) to harvest the aggregate percentage of the directed fishing allowance under section 206(b)(1) in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of pollock harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) in the directed pollock fishery for processing by the inshore component during 1995, 1996, and 1997 relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component during such years and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) from harvesting in aggregate in excess of such percentage of such directed fishing allowance.*** *[emphasis added]*
>
> *(2) VOLUNTARY PARTICIPATION.—Any contract implementing a fishery cooperative under paragraph (1) must allow the owners of other qualified catcher vessels to enter into such contract after it is filed and before the calender year in which fishing will begin under the same*

terms and conditions as the owners of the qualified catcher vessels who entered into such contract upon filing.

(3) QUALIFIED CATCHER VESSEL.—For the purposes of this subsection, a catcher vessel shall be considered a "qualified catcher vessel" if, during the year prior to the year in which the fishery cooperative will be in effect, it delivered more pollock to the shoreside processor to which it will deliver pollock under the fishery cooperative in paragraph (1) than to any other shoreside processor.

(4) CONSIDERATION OF CERTAIN VESSELS.—Any contract implementing a fishery cooperative under paragraph (1) which has been entered into by the owner of a qualified catcher vessel eligible under section 208(a) that harvested pollock for processing by catcher/processors or motherships in the directed pollock fishery during 1995, 1996, and 1997 shall, to the extent practicable, provide fair and equitable terms and conditions for the owner of such qualified catcher vessel.

(5) OPEN ACCESS.—A catcher vessel eligible under section 208(a) the catch history of which has not been attributed to a fishery cooperative under paragraph (1) may be used to deliver pollock harvested by such vessel from the directed fishing allowance under section 206(b)(1) (other than pollock reserved under paragraph (1) for a fishery cooperative) to any of the shoreside processors eligible under section 208(f). A catcher vessel eligible under section 208(a) the catch history of which has been attributed to a fishery cooperative under paragraph (1) during any calendar year may not harvest any pollock apportioned under section 206(b)(1) in such calendar year other than the pollock reserved under paragraph (1) for such fishery cooperative.

(6) TRANSFER OF COOPERATIVE HARVEST.—A contract implementing a fishery cooperative under paragraph (1) may, notwithstanding the other provisions of this subsection, provide for up to 10 percent of the pollock harvested under such cooperative to be processed by a shoreside processor eligible under section 208(f) other than the shoreside processor to which pollock will be delivered under paragraph (1).

Although the term "co-op" is used in the AFA, such a system is really closer to a voluntary IFQ system at the processor level. Implementation of such a program raises an entire suite of management issues associated with individual quota monitoring, such as those faced by the CDQ program and halibut/sablefish IFQ program. Consequently, a new regulatory and management infrastructure must be developed before NMFS can issue TAC allocations to individual inshore co-ops. The purpose of this section is to identify issues related to the management of inshore pollock co-ops.

9.6.1 Database Development and Determination of Co-op Shares

Section 211(b) of the AFA specifies in statute a formula for determining the share of the BSAI inshore pollock TAC allocation that each co-op would receive. Specifically, each co-op would receive a TAC allocation "equivalent to the aggregate total amount of pollock harvested by such catcher vessels... in the directed pollock fishery for processing by the inshore component during 1995, 1996, and 1997 relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component during such years."

To support the calculation of co-op pollock allocations, NMFS intends to establish a database known as the "Official NMFS AFA Record" (Official Record). This Official Record will enable NMFS to:

(a) establish harvest histories and vessel ownership for each catcher vessel which qualifies for the inshore directed fishing allowance in Section 206(b)(1);

(b) establish processing histories for shoreside processors eligible under 208(f)(1);

(c) determine appropriate co-op membership for 2000;
(d) comply with Section 210 which requires that the North Pacific Fishery Management Council (Council) and Secretary of Commerce (Secretary) make available to the public "...the amount of pollock and other fish to be harvested to each party to such contract..."; and
(e) maintain confidentiality of harvest records by distinguishing between the "owners" of confidential data; and those who seek privileges based on those data.

Official Record. The process of building the Official Record is anticipated to be similar to that used for the Individual Fishing Quota and License Limitation programs. For each inshore catcher vessel, the Official Record will be used to establish the 1995, 1996, 1997 and 1999 "fishing history". This will be compiled from Federal and State data and will contain harvest, permit, vessel, and demographic information about permit holders (including "skippers") and vessel owners. The Official Record will be presumed to be accurate but could be successfully challenged with appropriate and sufficient evidence that the Official Record is incomplete or incorrect. NMFS would notify constituents of the summarized contents of the Official Record (e.g., vessel characteristics and total pounds landed (by year and species) and afford them a finite opportunity to challenge NMFS' data. Claims that rebut the Official Record but which are not accepted by NMFS would be denied in an Initial Administrative Determination, and the constituent would be afforded the opportunity to appeal. Because the entire inshore directed fishing allowance of pollock for a year will be parsed based on the Official Record as it exists just prior to a fishing season, resolution of appeals in favor of appellants after that date would likely not affect established allocations and guideline harvest levels for that fishing year. NMFS will need to maintain records to document the data gathering/verification/denial/appeal process for each inshore delivering vessel and shoreside processor. Vessel harvest histories would be established once, and would result in calculation of the fractional share of the inshore allocation accrued to each catcher vessel.

Remaining time in 1999 is insufficient for NMFS to establish the regulatory framework, including PRA requirements; to provide summaries; and for constituents to challenge the Official Record prior to the start of fisheries in January 2000. In that case, NMFS might have to rely on the compiled Official Record without challenge for 2000 and defer that opportunity until the year 2000 for 2001 and future fisheries.

The NMFS Record will consist of (1) harvest data; (2) processing data; (3) permits data; (4) LLP eligibilities; (5) vessel characteristics, including LOA and ownership; and (6) demographic data about permit holders and vessel owners. Data would be derived from: (1) State of Alaska Fish Tickets; (2) NMFS Weekly Product Reports and/or State of Alaska Commercial Operators Annual Reports; (3) NMFS License Limitation eligibility data; (4) State of Alaska permit files; (5) NMFS and State of Alaska vessel permit and registration files; and (6) NMFS and State of Alaska demographic files. NMFS must protect confidentiality of harvest information and safeguard against inappropriate disclosure during eligibility testing and allocation/guideline harvest assignments. Therefore, in building this Official Record, NMFS must be able to unequivocally identify participating people, processors, and vessels; and must maintain confidentiality of certain data. State of Alaska data will have to be provided by the Commercial Fisheries Entry Commission, which can provide links among State harvest, permit, vessel, and person data without disclosure of Social Security numbers which are confidential under the Privacy Act.

Data Issues. Major data concerns include: (1) data accuracy and availability; (2) estimating discards and PSC; (3) basis for determining vessel pollock "quota shares;" (4) resolution of discrepancies between Fish Ticket and WPR harvest data sources; (5) time and staff resources required to process data and establish allocations and guideline harvest levels; and (6) confidentiality. Each is discussed below:

Data availability. The only complete source of inshore catcher vessel harvest information is State of Alaska fish tickets. ADF&G staff [2] has indicated that for the BSAI, groundfish and shellfish (crab) fish ticket data sets are reasonably complete, accurate and readily available through calendar year 1998 (and that little groundfish is reported on other types of fish tickets in that area). She suggested that NMFS obtain a more recent set of State data (fish tickets, vessel and permit ownership, and person demographics) than was provided for LLP implementation to date. Because of the need to receive data that are linked among data types and which use non-confidential person identifiers, NMFS needs to receive these data through the Commercial Fisheries Entry Commission (CFEC). ADF&G staff provided the following estimated schedule for reviewed fish ticket data availability from ADF&G to CFEC: data already in the fish ticket database system: within one to two months; data not yet in the system, one to two months for groundfish tickets, and within a month of the date of closure of any specific shellfish fishery. CFEC typically requires up to one month from the date of request to provide NMFS with data sets, depending on work priorities. Any data needed from NMFS' own databases are available within approximately one week.

Groundfish fish tickets for 1999 are the source of data to determine cooperative membership for 2000. These are expected to be available to NMFS between one and two months following the dates of landing. This schedule could prove problematic for co-ops that wish to operate in January 2000 if pollock fisheries extend into late 1999.

Discard data. No reliable source exists for inshore catcher vessel at-sea discards of groundfish and PSC. Additionally, several questions must be answered that will determine the method and relative ease with which discards are calculated and allocated.

First, are discards intended to be part of the individual vessel fishing histories; or at the co-op, sector, or TAC level? The answer depends on the aggregation level at which NMFS intends to "allocate" and manage groundfish and discards.

Second, what is the basis of extrapolating discards? NMFS might elect to calculate groundfish discards based on the retained catch in directed fisheries; or based on retention at any time; based solely on pollock, or on all groundfish species. PSC extrapolations might additionally depend on assignment of "target" fisheries.

Fish tickets are primarily landing documents and information on discards therein is incomplete and unreliable. Another potential data source, NMFS logbooks, are not required for catcher vessels less than 60 feet length overall (LOA); and in any case are not available electronically. The NMFS Weekly Processor Report (WPR) monitoring system uses observer-industry blended data to estimate groundfish discards and PSC bycatch on a weekly basis and for the entire inshore component. Results for the industry are extrapolated to individual processors on a prorated basis according to their groundfish product reports and an assigned "target" for the week, and are not based on, or provided at, the catcher vessel level. A serious difficulty in further extrapolating groundfish and PSC discards to catcher vessels is that fish tickets frequently "straddle" two or more weekly reporting periods (i.e., bases for WPR processor target assignments and blend discard extrapolations). Also, if any such extrapolation is made for establishing catcher vessel histories NMFS will need to establish a basis for the extrapolation (e.g., based on retained pollock or retained groundfish; or on a target fishery assignment). If based on total catch the PSC estimates would themselves be based in part on highly estimated groundfish discards. This is somewhat less of a problem if each co-op is in effect, equivalent to an entity that reported separately in a WPR although extrapolation also is required. The issue of calculating and applying discards

[2] State of Alaska Groundfish Coordinator, Gail Smith. March 1999.

in groundfish fisheries gets progressively more simple as the level of extrapolation and assignment of guideline harvest amounts is made at increasingly aggregated levels.

Basis for historical catch. For the purpose of determining directed pollock harvest histories for individual catcher vessels under section 210(b)(1), NMFS will have to consider the dates during which pollock was open for "directed fishing" in Section 210 (b) as they relate to determining vessel histories during 1995, 1996, and 1997. In particular, NMFS will determine which deliveries made after close of a directed pollock fishery should be included in that directed fishery. For groundfish other than pollock and for prohibited species, NMFS must answer the question of "what is the basis on which harvests are assigned to a vessel: catch or retained catch during the open directed fishery for that species; or any catch or retained catch of that species at any time?"

Data discrepancies. To avoid discrepancies between NMFS and fish ticket data sources resulting from any differences in product recovery rates, reporting compliance requirements, and reporting time frames, NMFS will use only fish tickets to establish both individual vessel harvest histories and to determine the total catch of pollock for the entire inshore component for each year. Blend data is the only source of groundfish discard and PSC data. As described above, extrapolating and apportioning discards and PSC is problematic.

Time and staff resources. Time and staff resources are limited. The process for determining vessel harvest histories for inshore pollock cooperatives is not substantially different from that used for implementing the Individual Fishing Quota Program (IFQ) and License Limitation Program (LLP). Much of the programming infrastructure to examine fish tickets in preparation for LLP can be applied to AFA inshore co-ops with little modification. One criterion for vessel participation in cooperatives is LLP authority to fish for pollock; and that information will expected to be available at the time NMFS needs to establish AFA catcher vessel histories later in 1999. Except for the problem of discard groundfish and PSC, there is no substantial difference in the amount of time or work required to establish a harvest history for all retained groundfish species as compared with that for pollock alone, because a complete fish tickets data set will include all groundfish species. However, it would likely require additional time for participants to rebut the NMFS Record if all species were included; and for NMFS staff to investigate the expected increased number of such instances. This could delay establishment of vessel histories and determinations of cooperative harvests limitations for non-pollock species.

Finally, 1999 deliveries by catcher vessels are needed to establish potential cooperative membership for 2000. Even a small delay in availability of late year 1999 fish tickets could delay final results and consequently, the establishment of co-op membership and allocations and guideline harvest levels for 2000 fisheries.

A significant additional problem is that no staff or consultant resources have been identified to construct or modify the Official Record for this project. Qualified persons are currently fully occupied on other priority tasks to support implementation of AFA, IFQ and IFQ/CDQ Cost Recovery, and LLP implementation.

Confidentiality. As has occurred in other programs, without specific waivers from permit holders who signed fish tickets, Alaska State confidentiality statutes may preclude NMFS' disclosure of vessel histories and subsequent review and opportunity for challenge of the Official Record by current vessel owners, who are presumed to "own" the history. This occurs fairly often.

State statute at AS 16.05.815(a)(5) prohibits the release of fish ticket data to other than the permit holder who signed the fish ticket. The permit holder signing the fish ticket often is not the vessel owner. Thus, vessel owners may not obtain historical fish ticket data for landings by their vessels without a signed waiver from each

permit holder documented on historical fish tickets. The existing limitations on the release of historical fish ticket data can be modified only through action by the Alaska State legislature.

Existing State statute does provide for the release of fish ticket or other confidential information to NMFS and the Council for purposes of fisheries management. NMFS might ameliorate concerns about access to historical landings data by providing each vessel owner the total pounds landed by species for her/his vessel over the relevant catch history period (1995 - 1997). However, NMFS could not provide specific landings data documented on specific fish tickets. Once co-op participants are identified, NMFS also could provide pollock allocations and non-pollock and PSC harvest limitations aggregated to the co-op level. NMFS' determination on co-op allocations will not be available until late in the year after co-op participants have been identified. This approach, therefore, will not address the interest of industry members to obtain historical landings information as soon as possible so the co-op negotiations may be initiated for 2000 immediately after final Council action on an FMP amendment establishing an infrastructure for inshore co-ops.

9.6.2 Annual Pollock Allocations

The formula set out in section 210(b) of the AFA generates a percentage of the annual pollock TAC that each inshore co-op would receive, but this percentage must be converted into a final TAC amount before it can be issued to a co-op by NMFS. As mentioned above, the annual amount of pollock allocated to a co-op would be calculated by summing the pollock "quota share" listed on each participating catcher vessel's fishing permit by the amount of pollock allocated to the inshore component. The resulting co-op pollock allocations would be specified annually.

These annual specification of co-op pollock allocations would be calculated and announced after determination of TACs and submission of catcher vessel membership lists. These allocations could be adjusted if additional vessels join a co-op prior to the beginning of a calendar year. The current process for establishing annual harvest specifications will require co-op allocations of pollock TAC under interim, followed by final, allocations and harvest limitations.

Co-op allocations would need to accommodate two types of harvest or share transfers. First, vessels joining co-ops after initial allocations are calculated and prior to the start of a calendar year (section 210(b)(2)) would bring their pollock "shares" into the co-op. Accommodating this is a simple matter of recalculating the co-op's allocation/limitations. Section 210(b)(6) also authorizes a co-op to transfer up to 10% of its pollock allocation to a shoreside processor eligible under section 208(f) other than the primary shoreside processor to which pollock will be delivered under the co-op agreement. Under section 210(a), these contract provisions would have to be identified prior to the start of a fishing year. Annual co-op specific pollock allocations would be specified accordingly.

At present, the pollock fishery begins on January 20 of each year under interim TACs equal to the proposed first seasonal allowance of pollock for the Bering Sea. Final TAC specifications do not become effective until late February or early March of each year due to the length of the public comment period on the proposed specifications and review required by NMFS. While the time lag between the start of the fishery on January 20 and the effective date of the final specifications is likely to be reduced under the TAC streamlining amendment adopted by the Council in 1998 and under development by NMFS, it is not likely to be completely eliminated. Consequently, if inshore co-op fishing is to begin on January 20, then provisions must be made for interim co-op shares until the final specifications become effective. This problem is not faced by the halibut and sablefish IFQ program because fishing for halibut and sablefish does not begin until March 15 of each year, after the effective date of the final specifications.

9.6.3 Management of Catcher Vessel Sideboards

Section 211 of the AFA states that "the North Pacific Council shall recommend for approval by the Secretary such conservation and management measures as it determines necessary to protect other fisheries under its jurisdiction and the participants in those fisheries, including processors, from adverse impacts caused by this Act or fishery cooperatives in the directed pollock fishery." With respect to catcher vessels, Section 211(c)(1)(A) requires that

> *By not later than July 1, 1999, the North Pacific Council shall recommend for approval by the Secretary conservation and management measures to—*
>
> *(A)* ***prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery****; [emphasis added] and*
>
> *(B) protect processors not eligible to participate in the directed pollock fishery from adverse effects as a result of this Act or fishery cooperatives in the directed pollock fishery. If the North Pacific Council does not recommend such conservation and management measures by such date, or if the Secretary determines that such conservation and management measures recommended by the North Pacific Council are not adequate to fulfill the purposes of this paragraph, the Secretary may by regulation restrict or change the authority in section 210(b) to the extent the Secretary deems appropriate,* ***including by preventing fishery cooperatives from being formed pursuant to such section*** *[emphasis added] and by providing greater flexibility with respect to the shoreside processor or shoreside processors to which catcher vessels in a fishery cooperative under section 210(b) may deliver pollock.*

These "sideboard" requirements are different in nature from the allocations of pollock TAC to inshore co-ops under Section 210 of the AFA. First, they are limits and not allocations. The AFA makes no provisions to assure that such catcher vessels actually have the right to harvest other groundfish species at their traditional levels. Second, the AFA specifically states that such management measures apply to the aggregate catch of eligible catcher vessels and not to catch by individual vessels or co-ops. While the Council is not limited to considering sideboard provisions that would apply to the entire AFA catcher vessels fleet in aggregate, the AFA clearly anticipates that such sideboards would be applied in the aggregate.

The AFA also provides the authority to prohibit the formation of inshore fishery co-ops if catcher vessel sideboard provisions are not recommended by the Council by July 1, 1999, or if the Secretary of Commerce determines the Council's recommended sideboard provisions are inadequate to protect other fisheries.

9.6.3.1 Monitoring Sideboards at the Aggregate Sector Level

NMFS currently is monitoring 1999 AFA sideboards in the aggregate for the catcher/processor sector of the pollock fleet. The 1999 sideboards for the catcher/processor fleet were published in the interim and final 1999 specifications and are being managed through directed fishing closures. At the beginning of the fishing year, NMFS closed a suite of BSAI fisheries to AFA-listed catcher/processors because the sideboard amounts for these fisheries were determined to be inadequate to support a directed fishery by the listed C/Ps. Several species such as Pacific cod, rock sole, and yellowfin sole remained open to AFA-listed catcher/processors because the sideboard amounts for those species were adequate to support directed fishing. NMFS is challenged to manage groundfish and PSC sideboard amounts in these fisheries to prevent the AFA-listed catcher processors from exceeding their sideboard limitations.

NMFS could use a similar approach for catcher vessels, closing directed fisheries to AFA-listed catcher vessels when sideboard amounts are inadequate to support directed fishing and leaving directed fishing open for fisheries in which adequate sideboard amounts exist to support directed fishing for those species. Existing observer coverage levels combined with a system of electronic catcher vessel delivery reports should be adequate to monitor the aggregate activity of AFA-listed catcher vessels. In the case of prohibited species, catch by observed vessels would be extrapolated to unobserved vessels fishing for the same species in the same area as is currently being done for all fisheries in which observer coverage is less than 100 percent.

9.6.3.2 Monitoring Sideboards at the Individual Co-op Level

Managing sideboards at the individual co-op level poses significant additional burdens compared to managing aggregate sideboards for the fleet as a whole. In the first place, NMFS cannot possibly manage multiple species sideboards at the individual co-op level through traditional in season management measures such as closures in the *Federal Register*. The responsibility for sideboard management at the individual co-op level would have to be the legal responsibility of the co-op itself and not NMFS, similar to the management of pollock shares by individual co-ops. Second, the monitoring of individual catch limits at the co-op level raises the same monitoring concerns present in the CDQ program and discussed above with respect to the monitoring of pollock shares by co-ops. For this reason, NMFS believes that management of sideboards at the individual co-op level requires the same monitoring and observer coverage levels required by the CDQ program (e.g. 100 percent observer coverage for all trawl vessels greater than or equal to 60 ft LOA and full retention of groundfish catch and salmon PSC). This additional monitoring is especially important for PSC species which are discarded at sea. Extrapolation of PSC rates from observed to unobserved vessels at the co-op level is probably not possible given the small numbers of vessels involved in each co-op and the incentives to misreport PSC catch in the absence of an observer.

Additional complexities arise if vessels in a pollock co-op affiliated with a particular processor wish to deliver non-pollock groundfish to other processors. Tracking sideboard amounts when co-op members are delivering to more than one processor will require that timely reports on catcher vessel deliveries, or electronic shoreside processor logbooks, be in place for all processors to which co-op members wish to deliver groundfish.

9.6.4 Subdivision of Co-op Shares by Area and Season

NMFS, through emergency rule, has recently implemented reasonable and prudent alternatives (RPAs) to avoid the likelihood of the pollock fisheries off Alaska jeopardizing the continued existence of the western population of Steller sea lions, or adversely modifying its critical habitat. Permanent regulations to implement Steller sea lion RPAs are currently under development. These RPAs are likely to further divide the Bering Sea inshore pollock TAC allocation into four separate seasonal allocations with separate catch limits inside a designated critical habitat/catcher vessel operational area (CH/CVOA) conservation zone during each fishing season. Additional spatial distribution requirements may be possible during the summer and fall fishing seasons. Consequently, under the Steller sea lion RPAs, the inshore pollock TAC allocation may be subdivided into between 8 and 12 separate catch limits based on area and season.

Option 1: Managing co-op shares by area and season: If individual co-ops form around all eight of the inshore processors and NMFS subdivides each co-op share by area and season this could generate upwards of 96 separate inshore pollock TAC allocations for the Bering Sea alone. NMFS does not have the capacity to manage dozens or hundreds of individual co-op allocations using traditional in season management methods such as closure notices in the *Federal Register*. Consequently, the burden for managing such co-op shares must be born by the participants themselves as is the case with the IFQ and CDQ programs.

Due to the complexities of implementing this management program within the short time-frame required by the AFA, NMFS is not proposing to implement a more complex system under which each individual inshore cooperative would receive allocations of pollock subdivided by each management area and season. One reason for this decision is that NMFS is currently revising Steller sea lion management measures for 2000 that could divide the Bering Sea Subarea pollock TAC into four seasons and two separate areas. However, a final rule to implement Steller sea lion protection measures has not yet been published and such measures, therefore, cannot be accommodated in this AFA proposed rule. A second reason is that the complexities of managing individual cooperative TAC allocations and accounting for individual cooperative harvest overages and underages by season and area are beyond the scope of this proposed rule. NMFS has not analyzed the observer coverage levels and enforcement burdens such an option would entail.

Option 2 (Preferred): Managing co-op shares in the aggregate. Under the proposed rule, NMFS would manage the inshore cooperative and inshore non-cooperative allocations as two separate inshore fisheries. The various inshore cooperatives would be managed as a group for the purpose of making TAC apportionments by season and area and for the purpose of issuing directed fishing closures. NMFS would continue to announce directed fishing closures for each inshore fishery when the Regional Administrator determines that the TAC allocated to that fishery for a particular season and area has been reached. Under this system, fishing by inshore cooperatives would be unaffected by catcher vessels fishing in the inshore non-cooperative fishery. However, the aggregate harvests by all inshore cooperatives would determine the inshore cooperative directed fishing closures for each season and area.

Under this option, each inshore cooperative would be guaranteed the opportunity to harvest its entire annual allocation of Bering Sea Subarea pollock but would not receive a specific guarantee of harvest levels for any particular season or management area within the Bering Sea Subarea. Cooperatives wishing to further rationalize their annual operations to work with each other to prevent the activities of one cooperative from preempting the harvest plans of another cooperative within a specific season or area.

9.6.5 Data Collection and Verification

To monitor pollock TAC allocations at the inshore co-op level, NMFS must have a reporting system that is able to discern pollock landings by individual catcher vessels. Similar standards also exist to monitor non-pollock groundfish and prohibited species harvest limitations. NMFS has already developed such a system for monitoring CDQ operations and is currently developing an electronic shoreside logbook system that would provide sufficient vessel-by-vessel landing information to monitor inshore co-op activity on a vessel-by-vessel basis. Interagency discussions are also underway regarding possible merger of State and Federal reporting requirements for fish delivered by catcher vessels. A suitable system could be developed by 2000, but would require significant revisions to the existing recordkeeping and reporting program. Serious reservations exist whether implementing regulations would be effective in time for the 2000 A season pollock fishery and a target implementation date for the 2000 B season likely is more reasonable.

If the opportunity to form inshore co-ops is mandated by 2000 and insufficient time exists to implement a new Federal electronic recordkeeping and reporting system to provide timely documentation of catcher vessel deliveries, interim revisions to existing processor logbook and Weekly Production Reports (WPRs) might be considered if non-pollock harvest limitations are monitored at the aggregate sector level. These changes would require separate logbook entries and WPRs for groundfish delivered by AFA-eligible vessels. NMFS notes, however, that even these seemingly minor changes will require significant changes to existing recordkeeping and reporting forms, regulations, and associated software used by NMFS to monitor fishery quotas.

At a minimum, NMFS believes that observer coverage at inshore processors must be increased to a level that would enable each catcher vessel delivery to be observed by a NMFS observer. At most inshore processors, this would require two observers to cover the 24-hour period of operation for the plant. In certain circumstances where an inshore processor is offloading and weighing pollock at multiple locations, more that two observers could be required.

Prior to the AFA, the inshore pollock fishery was managed in the aggregate across the entire sector with NMFS issuing a single closure for the entire inshore sector upon the attainment of a seasonal allocation of pollock TAC. Under the inshore cooperative system set out in the AFA, each inshore processor and its affiliated cooperative will be operating on its own proprietary pollock allocation. Because NMFS will no longer be managing the inshore sector in the aggregate, increased monitoring is required at each individual processor to insure that cooperative allocations are not exceeded. Under a fishery cooperative, contract agreements would be established that essentially allocate specific amounts of pollock to individual vessels for purposes of directed fishing. Although NMFS does not intend to actively manage individual vessel groundfish harvests under the cooperative, the agency is challenged to ensure that overall groundfish or prohibited species catch harvest limitations are not exceeded and that the incidental catch of pollock taken in non-pollock groundfish fisheries is not credited against the pollock directed fishing allowances. To meet these management challenges, NMFS believes that an observer must be available to observe and sample each catcher vessel delivery.

9.6.6 Summary of Co-op Monitoring and Management Issues

Because NMFS does not have the capacity to actively monitor each individual co-op share and announce closures for each individual co-op in the *Federal Register* the responsibility for in season management of co-ops must be born by the co-ops themselves. The individual co-op shares authorized by the AFA are quite similar to current allocations of pollock CDQ to individual CDQ groups. In both cases, an identified group is allocated a specific percentage of the pollock TAC and is responsible for managing its fishing activity to remain within its TAC allocation. NMFS believes, therefore, that it is appropriate and necessary to treat both CDQ groups and inshore pollock co-ops in the same manner with respect to recordkeeping and monitoring.

The extension of multiple species CDQ-type monitoring to catcher vessels participating in inshore co-ops would depend on whether nonpollock groundfish and prohibited species harvest limitations will be monitored at the sector level (i.e., all AFA-eligible catcher vessels, or all AFA catcher vessels participating in any inshore co-op), or the co-op level. If expectations exist to apportion sideboard limitations to different inshore co-ops and for NMFS to have the capability to monitor these co-op specific limitations, then the monitoring requirements and standards implemented for the MSCDQ program would need to be extended to the AFA co-op vessels as well. The complexity of database requirements and the regulatory infrastructure necessary to support multiple inshore co-ops poses concern about the ability of NMFS to implement such a program in time for the 2000 pollock A season. In the event NMFS is unable to do so, the management of the 2000 pollock fisheries would be similar to that experienced in 1999.

Current recordkeeping and observer coverage requirements for CDQ groups are contained in subpart C of 50 CFR 679. Key elements of the anticipated recordkeeping and monitoring requirements for AFA catcher vessels dependent on whether or not harvest limitations are apportioned at the sector or co-op level are summarized below:

Species Allocation	Monitoring and management standards	
	Allocated at level of multiple co-ops within a sector	Allocated at aggregate level of eligible catcher vessels within a sector
Pollock	Under section 210(b)(1), pollock must be allocated to inshore co-ops if such co-ops are developed. Given that all pollock in a directed fishery must be retained under IR/IU, NMFS expects shoreside landings of pollock to be representative of catch. At a minimum, processors would be required to maintain and submit separate logbook sheets and WPRs for co-op and non co-op deliveries of pollock by AFA-eligible vessels. Ideally, these new reporting requirements would be subsumed under new electronic shoreside logbook software being developed by NMFS that would provide for documentation of vessel-specific deliveries. Co-ops members would be jointly and severally responsible for controlling harvest activity so that pollock allocations are not exceeded.	If coops are formed, pollock must be monitored and managed at the co-op level, triggering the associated monitoring standards described in the adjacent column. Even though inshore co-ops may not be formed in any one year, the infrastructure must be developed in anticipation that co-ops will exist. Thus, the additional recordkeeping and reporting requirements necessary to monitor multiple co-op specific pollock allocations must be developed and implemented by regulation before the opportunity to form co-ops is provided to the inshore sector.

Non-pollock groundfish	Establishment of co-op specific harvest limitations of groundfish would require additional observer coverage and reporting requirements equivalent to the monitoring standards established for the MSCDQ program. These requirements would be as follows based on current regulations governing the MSCDQ program: **Requirement for Co-ops**: Each co-op would be required to submit co-op vessel catch reports for each vessels participating in the coop and fishing for groundfish. These reports would be submitted to NMFS within 7 days after delivery of catch and would document each co-ops harvesting activity relative to specified harvest limitations (See. 679.5(n)(2)). Co-ops members would be jointly and severally responsible for controlling harvest activity so that harvest limitations are not exceeded. **Requirements for shoreside processors**: Any processor receiving groundfish from AFA-eligible catcher vessels would be required to have an observer present at all times while AFA-eligible catcher vessels are offloading catch and to submit a delivery reports to NMFS withing 24 hours. The type of information on a delivery report would be similar to that required under 679.5(n)(1), and generally report the identity of the vessel and species specific landed weight and area of harvest. In addition, shoreside processors must notify the observer of the offloading schedule of each groundfish delivery at least 1 hour prior to offloading to provide the observer an opportunity to monitor the sorting and weighing of the entire delivery. **Requirements for catcher vessels ≥ 60 ft LOA**: Catcher vessels over 60 ft LOA would carry observers 100 percent of the time when fishing for groundfish and would also (A) retain all groundfish species, and (B) provide space on the deck of the vessels for the observer to sort and store catch samples and a place from which to hang the observer sampling scale. **Requirements for catcher vessels < 60 ft LOA:** Catcher vessels less than 60 ft LOA may not be required to carry an observer. However, operators of catcher vessels less than 60 ft LOA must retain all groundfish.	Establishment of nonpollock groundfish harvest limitations for either all AFA-eligible vessels or only for AFA-eligible vessels that choose to participate in a co-op would require new recordkeeping and reporting requirements for any processor who takes delivery of groundfish from these AFA-eligible vessels. At a minimum, processors would be required to maintain and submit separate logbook sheets and WPRs for deliveries of groundfish by AFA-eligible vessels. Ideally, these new reporting requirements would be subsumed under new electronic logbook software being developed by NMFS that would provide for documentation of vessel-specific deliveries.

Prohibited species	**Requirements for shoreside processors:** Delivery reports of prohibited species required, similar to CDQ reports required at 679.5(n) **Requirements for trawl catcher vessels ≥ 60 ft LOA**: (A) Retain all salmon until they are delivered to a processor, and (B) retain all halibut and crab in a bin or other location until it is counted and sampled by an observer. **Requirements for catcher vessels < 60 ft LOA**. (A) Retain all salmon until they are delivered to a processor: (B) All halibut and crab must be discarded at sea. Operators of catcher vessels using trawl gear must report the at-sea discards of halibut or crab on the processor delivery report and co-op catch report.	Observed bycatch rates from AFA eligible vessels would be used to extrapolate bycatch estimates for the AFA-eligible fleet based on new vessel-specific deliver reports of groundfish for that fleet.

9.7 Requirements for the Inshore Sector to Repay Federal Loan Under AFA

Section 207 of the American Fisheries Act lays out the parameters under which the inshore sector must repay the $75 million Federal loan. The actual language from the AFA is included below:

(b) INSHORE FEE SYSTEM.—Notwithstanding the requirements of section 304(d) or 312 of the Magnuson-Stevens Act (16 U.S.C. 1854(d) and 1861a), the Secretary shall establish a fee for the repayment of such loan obligation which—

(1) shall be six-tenths (0.6) of one cent for each pound round-weight of all pollock harvested from the directed fishing allowance under section 206(b)(1); and

(2) shall begin with such pollock harvested on or after January 1, 2000, and continue without interruption until such loan obligation is fully repaid; and

(3) shall be collected in accordance with section 312(d)(2)(C) of the Magnuson-Stevens Act (16 U.S.C. 1861a(d)(2)(C)) and in accordance with such other conditions as the Secretary establishes.

Repayment of the loan will commence in the year 2000, whether or not the inshore sector is operating under cooperatives. However, benefits derived from cooperatives were likely envisioned to help offset the cost of loan payments.

10.0 ALTERNATIVES FOR THE MONITORING AND MANAGEMENT OF CATCHER/PROCESSORS AND MOTHERSHIPS

On February 4, 1998, NMFS published a final rule establishing performance, technical, operational, maintenance and testing requirements for scales used to weigh catch at sea (63 FR 5836). On June 4, 1998, NMFS published a final rule that established the requirements for observer sampling stations and required the use of scales and observer sampling stations on specified vessels participating in CDQ fisheries (63 FR 30381). Further information on the rationale for, and implementation of, the regulations establishing Equipment and operational requirements for catch weight measurement is contained in the preambles to the final rules. A proposed regulatory amendment that would make minor changes to these equipment and operational requirements is in preparation.

The at-sea scale regulations specify that vessels required to weigh total catch must have two types of NMFS-approved scales on board: a total-catch weighing scale, and an observer sampling scale. For a scale to be approved by NMFS, the manufacturer must apply to NMFS and document that the scale meets the performance and technical standards, contained in Appendix A to Part 679. Scales that meet these requirements are placed on the list of NMFS approved scales. NMFS has approved 9 models of observer-sampling scales, and 5 models of total-catch weighing scales.

Each scale must be inspected annually by a NMFS authorized inspector. An observer-sampling scale inspection takes approximately 30 minutes, a total-catch weighing scale takes three to eight hours. Scales must also be tested daily by the vessel crew when in use. The observer-sampling scale is tested daily by weighing cast iron test weights of a known weight. In order to be acceptable to NMFS, the observer-sampling scale must be accurate within 0.5 percent. The total-catch weighing scale is tested daily by passing at least 400 kg of test material (either fish or sand bags) across the scale and then weighing the test material on the observer sampling scale. The total-catch weighing scale must be accurate within 3 percent when compared against the observer platform scale. Scales that do not pass the annual inspection or daily test may not be used to weigh catch at-sea.

Since July 1, 1998, 39 observer platform scales and 23 total catch weighing scales have been inspected and approved. During 1998, approved total-catch weighing scales were used in MS-CDQ fisheries by 6 vessels that fished 60 vessel days.

The AFA requires the 20 listed catcher/processors to weigh total catch from all fisheries on a NMFS-approved scale. Catcher/processors that intended to harvest fish under the CDQ program during 1999 were required to start weighing total catch on January 1, 1999. Listed catcher/processors that do not intend to harvest fish under the CDQ program will be required to weigh total catch beginning January 1, 2000.

When an observer sampling station is required, it must be approved by NMFS and meet specifications for size, construction, location and required equipment. Sampling stations on trawl catcher/processors and motherships must provide a working area at least 1.8 m wide by 2.5 m long near where the observer samples unsorted catch. The station must be equipped with a table, an observer sampling scale, floor grating, adequate lighting and a water supply. Prior to being used and annually thereafter, the sampling stations must be inspected by NMFS staff. If requested to do so, NMFS staff will conduct pre-inspections of sampling stations to help the vessel owners better comply with the regulations. NMFS staff normally require between one and two hours to conduct a sampling station inspection. To date, NMFS staff have conducted 40 sampling station pre-inspections and 37 station inspections. The stations on 36 boats have been approved.

In that the AFA requires the listed catcher/processors to weigh total catch and to carry two observers, the requirements are very similar to those for trawl catcher/processors that participate in CDQ fisheries. However, the AFA does not require that the listed processors provide an observer sampling station, nor are the 3 listed motherships required to weigh total catch or carry two observers.

The number of vessels impacted by this action is summarized in Table 10.1

Table 10.1 Number and type of vessels that may be impacted as a result of this action.

	Vessels without NMFS-approved scales or stations*	Vessels with NMFS-Approved scales or stations*	Total
AFA catcher/processors	8	12	20
AFA motherships	1	2	3
Non AFA trawl catcher/processors	21	9	30

* One of these vessels has an approved scale but does not have an approved sampling station

10.1 Alternatives for Expanded Scale and Sampling Station Requirements

Alternative 1. (Status Quo) Do not require AFA catcher/processors or motherships to weigh all catch, carry two observers or provide an observer sampling station.

Alternative 2A. Require AFA listed catcher/processors to weigh all catch, carry two observers and provide an observer sampling station. Do not expand these requirements to include AFA listed motherships.

Alternative 2B. (Preferred Alternative) Require AFA listed catcher/processors and motherships to weigh all catch, carry two observers and provide an observer sampling station.

Both alternative 2A and 2B would require AFA-listed catcher/processors to weigh total catch. Alternative 2B would require AFA listed motherships to weigh total catch as well. Many of the AFA-listed processors already have NMFS approved scales, in most cases because they plan to participate in CDQ fisheries during 1998.

An approved observer sampling scale costs approximately $7,000 and an approved total-catch weighing scale costs approximately $45,000. Past scale installations have, in many cases, required factory alterations. Most of these have been done in conjunction with the installation of an observer sampling station. If a station were not being installed at the same time, the cost to reconfigure the factory where needed and install a scale would range from 0 to $10,000.

Vessels that are required to weigh total catch depend on the continued operation of the scale. If the scale breaks down and cannot be repaired, or if the scale is unable to pass the daily test, the vessel must stop fishing and return to port. The magnitude of this impact would be a function of the frequency of scale breakdowns that could not be repaired at sea. During pollock A1, there were 11 reported scale problems, 8 of these affected the scales ability to weigh accurately, but only one could not be repaired at sea and was repaired in Dutch Harbor. If this breakdown rate continues, and a repair trip to Dutch Harbor lasts 3 days, the AFA vessels can

expect to lose about 17 days per year. Both manufacturers have been responsive to problems as they develop and seem to be doing an excellent job of preventing problem reoccurrence. As boat operators learn how to operate and maintain the scales, and as manufacturers solve problems, the frequency of scale breakdowns should decrease.

Vessel operators are required to test the total-catch weighing scales daily. This test can be done either with fish or an alternative material supplied by the scale manufacturer. As part of the original PRA submission for the scales program, NMFS estimated that this test would require approximately 45 minutes per day. This estimate appears to be accurate for vessels testing scales with fish. Those boats that have chosen to use sand bags have reduced the test time to as little as 10 minutes.

10.2 Expanded Observer Coverage Requirements

All AFA listed C/Ps are currently required to carry at least one observer when fishing off Alaska. Processors vessels participating in CDQ fisheries and motherships taking deliveries of pollock from the CVOA during portions of the B season must also carry two observers. Alternative 2A would require the 20 listed catcher/processor vessels to carry 2 observers at all times. Based on data from 1998, the 20 listed catcher/processors carried observers a total of 3,395 days. Assuming that these vessels were carrying two observers when participating in CDQ fisheries, two observers were carried during 486 of those days and one observer was carried during the remaining 2,909 days. If 1998 data are reflective of fishing patterns under the AFA, these vessels would be expected to require an additional observer during 2,909 days. At an estimated cost of $250 per observer day, this would cost the AFA catcher/processors $727,250/yr.

The preferred alternative would require the AFA listed motherships to carry 2 observers throughout the fishing year. Based on data from 1998, the 3 listed motherships carried observers a total of 489 days. Assuming that these vessels were carrying two observers throughout the pollock B season and when taking CDQ deliveries, the motherships were carrying two observers during 304 of those days and were only carrying one observer during 185 of those days. If 1998 data are reflective of fishing patterns under the AFA, these vessels would be expected to require an additional observer during 185 days. At an estimated cost of $250 per observer day, this would cost the AFA motherships $46,250/yr.

Impacts of the preferred alternative are summarized in Table 10.2

Table 10.2 Summary of the costs of the preferred alternative for monitoring C/Ps and motherships.

	Cost per boat	AFA C/Ps with scales/stations	AFA C/Ps without scales/stations	AFA Mships
Platform scale purchase	$7,000	0	$56,000	$7,000
Total-catch weighing scale purchase	$45,000	0	$360,000	$45,000
Scale installation	$0 to $10,000	0	$40,000	$5,000
Observer Sampling station installation	$4,000 to $12,000	0	$72,000	$8,000
Lost fishing days due to scale failure	0.75 days lost per 100 days	17 days/yr		1.5 days/yr
Time for daily scale test	0.75 hrs/day	1208 hrs/yr		191 hrs/yr
Time for annual scale inspection	8 hrs/yr	160 hrs/yr		24 hrs/yr
Time for annual station inspection	7 hrs/yr	140 hrs/yr		21 hrs/yr
Cost of second observer	$250/day	$727,250/yr		$46,250/yr

10.3 Cost to NMFS

The State of Alaska, Division of Measurement Standards has a contract with NMFS to conduct scale inspections in Dutch Harbor and Seattle. Scale inspections are also conducted by NMFS staff. To date, 23 total-catch weighing scales have been inspected. To date, inspections have cost approximately $2,000 per inspection. Based on theses costs, the addition of AFA catcher/processors that do not fish CDQ should increase the number of scales inspected by about 9 boats, or $18,000/yr. The cost per inspection should be considerably lower in future years as NMFS gains experience with the program. Observer sampling stations are inspected by existing NMFS staff and the costs associated with inspecting an additional 10 vessels would not be expected to be significant.

11.0 COUNCIL'S PREFERRED ALTERNATIVES

At the June 1999 Council meeting in Kodiak, the Council identified their preferred alternatives for the AFA harvester sideboard provisions. Preferred alternatives for several other AFA related issues, such as the determination of inshore pollock catch histories, and clarification of definitions used in the AFA, were also identified (Section 11.5 contains the actual motion as passed by the Council). This chapter will provide a description of those alternatives as well as additional information on their impacts. In some cases similar information can be found in other chapters of this document. Other required provisions of the Act, such as scale and observer requirements, cooperative structures, and crab processing sideboards were not the result of Council decisions, but were mandated by the AFA itself, or were clarified by Council action in October 1999.

The Council elected not to finalize their preferred alternatives for groundfish processing sideboards. Groundfish processing sideboards will be considered by the Council in April 2000, along with alternatives for BSAI pollock excessive processing sharecaps.

Two general statements were issued by the Council regarding sideboard harvest caps. The first was a statement that the Council requested NMFS to manage all fisheries such that sideboard and PSC caps are not exceeded. Preliminary information on how NMFS intends to manage the caps is provided later in this chapter. The second directive was that all sideboard calculations for groundfish, crab, and scallops be based on the best estimate of landed catch. Landed catch excludes all catch history where fish were discarded at-sea. Landed catch was used for all sideboard cap estimates included in this chapter.

11.1 Catcher/Processor Harvest Sideboards

The Council preferred alternatives for catcher/processor sideboards differs from those in place for 1999. For 1999 the catcher/processor sideboards were based on the total catch of all 29 catcher/processors in the non-pollock target fisheries, and were expressed as a percentage of the aggregate total allowable catch for the years 1995-97. For 2000 and beyond, the sideboards are based on the landed catch of the 29 catcher/processors in all target fisheries. This alternative does not give credit to catcher/processors for catch that was discarded, but they are given credit for the catch of non-pollock species that was retained in pollock target fisheries.

Section 211 of the AFA required the Council to protect non-AFA vessels from adverse impacts resulting from BSAI pollock cooperatives. Several methods were considered to limit the AFA fleet's harvest in other fisheries to meet this mandate. After much debate over several meetings, the Council opted to use landed catch to represent the catcher/processors' catch history when determining sideboards. Obviously, using landed catch will result in smaller sideboard caps than had total catch been used. Using landed catch may also affect the number of directed fisheries that NMFS will open to the catcher/processor fleet. However, this will only occur in cases where the amount of a species that was discarded by the AFA catcher/processors would have provided enough additional history such that NMFS would deem the amount adequate to open a directed fishery for that species.

The Council also felt that giving catch history credit for discarded fish would not set a good precedent. The Magnuson-Stevens Act mandates that the Council work towards reducing discards. This subject was debated as the Council made their final decision. Some members of the Council argued that discards may increase if the AFA vessel's sideboard caps were reduced. They basically argued that the AFA fleet had lower discard rates than the non-AFA fleet which would have increased TAC at their disposal under this alternative. However, other members of the Council argued that discards would decrease. Table 11.1 shows a comparison

of the discard rates of the AFA and non-AFA catcher/processor trawl fleets. The AFA catcher/processors have lower discard rates for most of the species in which they will likely have directed fisheries. AFA catcher/processors generally have higher discard rates for species that will not be open to directed fishing. Because of the fisheries that will be open to directed fishing and NMFS management of AFA sideboards, it is likely that discards will not increase, and may decrease under this sideboard system.

The catcher/processors will still have directed fisheries for species that they were targeting in the past, even though the amount they will be allowed to catch under a cap will be reduced. Table 11.1 shows that the Pacific cod sideboards will be reduced by 28 percent, yellowfin sole 20 percent, rock sole 65 percent, and flat head sole 74 percent, relative to using total catch. The Atka mackerel fisheries in the Aleutian Islands areas will be based on the formula outlined in the AFA, so landed catch will not be used to determine sideboard caps in those fisheries. The higher historic discard rates in the other flatfish and rock sole fisheries may reduce the sideboard caps to a level that would not support a directed fishery. It is also likely that they will not have directed fisheries for other species they harvested, but mostly discarded in the years 1995-97.

Table 11.1: Trawl Catcher/Processor Discard Rates in BS/AI, 1995-97

	Catcher/processors	
Species - Area	AFA	Non-AFA
Atka Mackerel - Central Aleutian Islands	3%	19%
Atka Mackerel - Eastern Aleutian Islands	78%	13%
Atka Mackerel - Western Aleutian Islands	5%	17%
Arrowtooth Flounder - Bering Sea and Aleutian Islands	97%	90%
Other Flatfish - Bering Sea and Aleutian Islands	74%	69%
Flathead Sole - Bering Sea and Aleutian Islands	74%	33%
Greenland Turbot - Aleutian Islands	30%	13%
Greenland Turbot - Bering Sea	54%	18%
Other Species - Bering Sea and Aleutian Islands	90%	99%
Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI	28%	30%
Pacific Ocean Perch - Aleutian Islands	43%	15%
Pacific Ocean Perch - Bering Sea	87%	12%
Pacific Ocean Perch - Central Aleutian Islands	97%	18%
Pacific Ocean Perch - Eastern Aleutian Islands	62%	16%
Pacific Ocean Perch - Western Aleutian Islands	65%	18%
Other Rockfish - Aleutian Islands	82%	55%
Other Rockfish - Bering Sea	90%	58%
Rock Sole - Bering Sea and Aleutian Islands	65%	53%
Sablefish (Trawl Gear) - Aleutian Islands	61%	21%
Sablefish (Trawl Gear) - Bering Sea	10%	9%
Sharpchin/Northern Rockfish - Aleutian Islands	92%	69%
Squid - Bering Sea and Aleutian Islands	92%	70%
Shortraker/Rougheye Rockfish - Aleutian Islands	44%	17%
Other Red Rockfish - Bering Sea	96%	26%
Yellowfin Sole - Bering Sea and Aleutian Islands	20%	22%

Source: NMFS Blend data for 1995-97.

Reductions[3] in net revenues to these vessels caused by changes in sideboard caps cannot be determined with the data currently available. However, given the discard rates of species taken as bycatch, the revenue losses will likely result from reductions in the sideboard caps in the Pacific cod, yellowfin sole, rock sole, and flat head sole harvests. Any revenue losses by this group of vessels would be offset by gains by non-AFA vessels, in an overall context. This assumes that the Non-AFA vessels would retain these "extra" fish at the same rate, or higher, than the AFA fleet would have.

Several other alternatives were considered by the Council to represent the catcher/processor fleets' historic participation in the BSAI groundfish fisheries. These alternatives are described in Chapter 6.

11.1.1 Estimates of Catcher/Processor Sideboards

Estimates of the catcher/processor sideboard amounts are provided in Table 11.2. Information on the total catch of these species, which includes catch that was discarded, can be found in Table 6.2 of Chapter 6, but is also repeated here. Table 11.2 shows that for some species (many of the flatfish species and squid are good examples) the amount of catch that was landed is quite small when compared to the total catch.

Estimates of the value of these fisheries were also provided in Table 11.2. Those estimates, based on 1997 prices, indicate that the caps would be valued at about $13 million ex-vessel. This value underestimates the total value of these fish to catcher/processors because the value they add to the fish through processing is not included. On the other hand, it is unlikely that all of these fish would be processed. Determining what proportion would be processed is difficult, especially given the structural changes in the pollock fishery. Therefore, an attempt to estimate first wholesale value will not be included.

Based on these cap levels, it is likely that NMFS will only open directed fisheries for Atka mackerel, Pacific cod, and yellowfin sole. Perhaps directed fisheries will be opened for flathead sole, rock sole, and other flatfish. It is unlikely that there is an sufficient amount of any other species to open a directed fishery. However, the actual directed fisheries will not be determined until NMFS estimates the year 2000 sideboard amounts. Once that estimate is made, NMFS will calculate bycatch needs for other fisheries, and if an adequate amount of a species is left over, a directed fishery for that remainder can be opened. Fisheries will not be opened if the entire sideboard cap is expected to be harvested as bycatch in other directed fisheries.

[3]Note that these are only "potential" revenue changes, since these fish were not previously retained, when doing so was an option. The decision to "retain" or "discard" in the future, in the absence of this proposed action, would have turned on market and operational decisions which we have more way of assessing. It seems "unlikely" that 100% of the fish voluntarily discarded historically, would not be "retained", if the action so allowed. So the "potential" revenue loss is certainly less that the equivalent value of the (now) foregone bycatch of these species. It does not necessarily follow, however, that the reductions in "retainable" bycatch in the afa sector will translate into equivalent "gains" in retained *catch in the non-afa sector.* This seems to be so because, 1) the afa boats will still bycatch (but may not retain) some of this fish, and 2) the non-afa boats were discarding these species at generally higher rates than the afa operations, before this action.

Table 11.2: Estimates of Catcher/Processor Groundfish Sideboards Resulting from the Council's Preferred Alternative (Landed Catch/TAC).

Species/Area TAC Groupings	Years 1995-97				1999 TAC	Estimated Cap (mt) Based on 1999 TAC	Ex-Vessel Price ($/Lb)	Value ($ Millions)
	Available TAC	Total Catch	Landed Catch	Landed Catch/ TAC				
Atka Mackerel - Central AI*	103,100	23,138	22,543	11.5%	10,360	1,191	$0.05	$0.14
Atka Mackerel - Eastern AI	55,200	803	177	0.3%	7,784	25	$0.05	$0.00
Atka Mackerel - Western AI*	94,557	9,636	8,991	20.0%	12,487	2,497	$0.05	$0.29
Arrowtooth Flounder - BSAI	36,873	2,688	76	0.2%	114,201	237	$0.04	$0.02
Other Flatfish - BSAI	92,428	12,607	3,243	3.5%	130,900	4,593	$0.09	$0.91
Flathead Sole - BSAI	87,975	7,435	1,925	2.2%	65,705	1,438	$0.13	$0.40
Greenland Turbot - AI	6,839	33	23	0.3%	2,525	8	$0.28	$0.00
Greenland Turbot - BS	16,911	265	121	0.7%	5,126	37	$0.28	$0.02
Other Species - BSAI	65,925	5,599	553	0.8%	27,931	234	$0.03	$0.01
P. Cod (C/Ps)-BSAI (97 only)	51,450	17,205	12,424	24.1%	38,475	9,290	$0.21	$4.30
POP - Bering Sea	5,760	91	12	0.2%	1,190	2	$0.07	$0.00
POP - Central AI (96 & 97 only)	6,195	112	3	0.0%	3,561	2	$0.07	$0.00
POP - Eastern AI (96 & 97 only)	6,265	141	53	0.9%	3,173	27	$0.07	$0.00
POP - Western AI (96 & 97 only)	12,440	356	126	1.0%	5,753	58	$0.07	$0.01
Other Rockfish - AI	1,924	97	18	0.9%	583	5	$0.47	$0.01
Other Rockfish - BS	1,026	47	5	0.4%	314	1	$0.47	$0.00
Rock Sole - BSAI	202,107	17,888	6,317	3.1%	102,000	3,188	$0.15	$1.03
Sablefish (Trawl Gear) - AI	1,135	0	0	0.0%	293	0	$1.77	$0.00
Sablefish (Trawl Gear) - BS	1,736	9	8	0.4%	569	3	$1.77	$0.01
Sharpchin/Northern Rockfish-AI	13,254	1,034	83	0.6%	3,913	25	$0.23	$0.01
Squid - BSAI	3,670	877	73	2.0%	1,675	33	$0.04	$0.00
Shortraker/Rougheye Rockfish-AI	2,827	75	42	1.5%	625	9	$0.23	$0.00
Other Red Rockfish - BS	3,034	174	8	0.3%	227	1	$0.23	$0.00
Yellowfin Sole - BSAI	527,000	125,010	100,192	19.0%	176,783	33,610	$0.08	$5.78

* Atka mackerel percentages defined in the AFA are included as opposed to the historic catch ratio
Source: NMFS Blend data 1995-97 for catch and 1997 PACFIN reports for ex-vessel prices (the most recent year currently available.

11.1.2 Management of Catcher/Processor Sideboards

Though the final regulations have not yet been drafted, it is likely that NMFS will manage the caps through directed fishery closures. NMFS will evaluate the cap amounts at the start of the fishing season to determine if adequate amounts of a species are available for a directed fishery. Should NMFS determine that sufficient amounts are not available, then the directed fisheries for those species will closed for the entire year. If a sufficient amount of a species is available to the catcher/processor fleet, a directed fishery for that species would be opened. Once the portion of a cap to be harvested in a directed fishery is reached, the directed fishery for that species will be closed. Directed fishery limits might be considered "hard" caps, in that when reached they close a directed fishery. Species caught as bycatch, and not part of a AFA catcher/processor directed fishery, will likely be managed as "soft" caps, meaning that reaching a sideboard cap for a bycatch species

(such as squid) in a directed fishery (such as pollock) would not close the directed fishery, so long as no other overfishing levels were reached for the species taken as bycatch.

NMFS is considering managing the sideboard fisheries in the above manner to prevent closures of all directed fisheries after reaching one of the small sideboard caps. Squid taken as bycatch in the pollock fishery is a good example, but other species may also shut down the directed groundfish fisheries if reaching a bycatch species cap closes a directed fishery. According to Table 11.2, about 290 mt of squid were taken annually in the pollock fishery between 1995-97. Our estimate of the catcher/processors' squid cap is 33 mt, based on 1999 TACs. Assuming that all of the squid is taken in the pollock fishery and similar squid bycatch rates continue into the future, only about 35 percent of the catcher/processors' pollock allocation would be harvested before they reach their squid cap. However, given the current understanding of how NMFS intends to manage the fishery, reaching the cap of 33 mt. would not close the directed pollock fishery or any other directed fisheries where squid is taken as bycatch by the AFA catcher/processor fleet. Instead NMFS would not open a directed fishery for squid at the beginning of the year, because insufficient amounts of that species would be available. Not opening a directed fishery for squid will have little economic impact on the fleet, because, at present, market conditions have not lead to the development of directed fishery for squid in the BSAI.

11.1.3 Catcher/Processor PSC Sideboard Caps

Total PSC cap for listed vessels will be established based on the percentage of PSC removals in the non-pollock groundfish fisheries during 1995, 96, and 97. This information was presented in Table 6.13, and is how the AFA catcher processor fleet's PSC bycatch amounts were calculated for 1999. According to estimates published by NMFS in the March 11, 1999 Federal Register, the AFA catcher/processors will be capped at 8.4 percent of the halibut PSC available to trawl vessels, 1.2 percent of the herring, 0.7 percent of the red king crab, 15.3 percent of the *C. opilio* crab, 14.0 percent of the zone 1 *C. bairdi* crab, and 5.0 percent of the zone 2 *C. bairdi* crab. These percentages will be multiplied by the 2000 and beyond trawl PSC caps to determine the amount of each PSC species that the AFA catcher/processors will be allowed to harvest in the non-pollock target fisheries. If the overall trawl PSC caps are not reduced substantially in future years, these PSC bycatch amounts should allow the AFA catcher/processors to harvest their directed fishery allocations, since they are based on the historical catch rates.

The Council also provided the following direction on management of the PSC caps:

1. The Council requested that NMFS manage the PSC sideboard caps to allow for directed fishing of non-pollock species such that the total PSC removals do not exceed the PSC caps.

2. The listed vessels' PSC caps will not be apportioned by fishery and will be managed under open access season apportionment closures.

Additional information on the management of the PSC caps can be found in the proposed rule for this amendment package.

11.1.4 Catcher/Processor Sideboard Summary

The Council's preferred alternative does not change the PSC sideboard caps from those in place for the 1999 fishing year. Catcher/processors will continue to be capped at the same percentage of each future year's PSC allotments, as they were in 1999. Given that they were able to successfully conduct their non-pollock fisheries

in 1999, they should have adequate amounts of PSC species in future years, so long as the overall PSC caps are not reduced by a significant amount.

Groundfish sideboard caps are based on landed catch in all target fisheries under the Council's preferred alternative. The 1999 groundfish sideboard caps were based on total catch in the non-pollock target fisheries. Using the 1999 TACs, the reduction in sideboard caps would be 12,555 mt. of other flatfish, 7,580 mt. of yellowfin sole, 4,258 mt. of rock sole, and 829 mt. of Pacific cod. These reductions may result in NMFS not opening directed fisheries for other flatfish and rock sole.

11.2 Catcher Vessel Harvest Sideboards

Catcher vessels that are AFA eligible are subject to harvest limits referred to in this analysis as "sideboards". Sideboard limits have been constructed based on the historic catch of AFA eligible catcher vessels in the BSAI groundfish fisheries (excluding pollock which was allocated under the AFA), GOA groundfish, BSAI crab species, and the scallop fisheries which are managed under the Council's Fishery Management Plans.

11.2.1 Crab Sideboards

Crab Sideboards shall apply to all AFA vessels regardless of whether they join a cooperative or not. The Council considered exempting AFA eligible catcher vessels that did not join a cooperative from the crab sideboard caps, but ultimately decided that they should apply to all AFA eligible catcher vessels. This will ensure that vessels benefitting from the AFA will be restricted by sideboards. However the catcher vessels that have smaller pollock catch histories, and therefore may be less inclined to join a cooperative, will be most adversely impacted by this decision. That being said, there is no way to determine which vessels would have joined a cooperative if they had not been bound by the sideboards. Several factors, including internal cooperative negotiations on pollock harvest amounts and the compensation for pollock delivered to catcher/processors would impact that decision.

AFA sideboard provisions also prohibit the sale, lease, transfer or stacking of crab LLP licenses or endorsements by AFA-eligible catcher vessels. The Council intended this provision to limit the use of crab licenses earned on AFA catcher vessels, and provide additional protection for the non-AFA crab fleet. Without this restriction the AFA vessels would have had the opportunity to sell their license package and obtain a groundfish only license. The crab portion of their old license, if sold to a non-AFA vessel, would then have been allowed to fish crab outside of the sideboard restrictions. Allowing these types of transfers could have potentially increased effort in the crab fisheries contrary to the intent of the AFA.

11.2.1.1 Bristol Bay Red King Crab (BBRKC)

AFA catcher vessels that hold a BBRKC endorsement shall be capped at their five-year (91-97, excluding 94-95) weighted average share of that fishery. The sideboard cap will be calculated by summing the AFA catcher vessel's total catch during the five qualifying years and dividing that amount by the total catch of BBRKC during those years. Based on ADF&G fishticket data, the total amount of BBRKC harvested by the AFA vessels during the five qualifying years was about 4.8 million pounds. The total catch of all vessels during those years was about 37.7 million pounds. The 41 qualified AFA catcher vessels would be capped at approximately 12.8 percent of each future year's pre-season BBRKC GHL, based on these catch rates.

The GHL for the 1998 BBRKC fishery was 16.4 million pounds. If this GHL level was maintained in the future, the AFA fleet would be capped at about 2.1 million pounds. At the $2.60 per pound reported by

ADF&G (from ADF&G commercial fisheries web page, August 27, 1999) for the 1998 fishing season, that equates to about $5.5 million.

ADF&G intends to manage the AFA vessels based on the aggregate cap equally apportioned to each vessel. Specifically, they intend to set a trip limit for each vessel equal to the AFA sideboard cap divided by the number of AFA vessels registered to participate in the BBRKC fishery that year. Based on data presented earlier, the trip limit would be about 51,000 pounds or about $135,000 per vessel. A trip limit of that amount is more than the average vessel harvests in the years 1996 (42,000 pounds and $109,000) or 1997 (33,000 pounds and $86,000). Equal trip limits will ease the in-season management burden on ADF&G, and will allow each vessel to know prior to fishing how much crab they are allowed to harvest. Specific measures dealing with overages and other management issues are still being developed, and cannot be reported at this time.

11.2.1.2 *C. opilio* Crab

AFA eligible catcher vessels which are also LLP qualified for a Tanner crab endorsement may participate in the BSAI *C. opilio* crab fishery if they harvested opilio crab in more than 3 of the 10 years (88-97). If a vessel did fish for opilio crab in at least four years they are eligible to participate in that fishery without further restrictions on the amount of opilio crab they can harvest in a year. Preliminary estimates indicate that five AFA catcher vessels fished at least four years in the opilio fishery, and are therefore allowed to continue participating in that fishery under the AFA sideboard restrictions. Appendix III to this document contains a separate analysis titled "Economic Reliance on Crab by AFA Section 208 Crossover Vessels: Implications for Sideboards," which was prepared under contract to Dr. Scott Matulich of Washington State University. That report details the activities of vessels in the three major crab fisheries (opilio, bairdi, and Bristol Bay red king crab) over 10 years (1988-97) with particular emphasis on the "crossover" vessels, i.e., those which are AFA qualified and also crab LLP qualified. The Council reviewed that information and considered the participation patterns therein in structuring sideboards for all crab fisheries.

11.2.1.3 *C. bairdi* Crab

Sideboard restrictions on the *C. bairdi* crab fishery excludes AFA qualified vessels that receive an LLP Tanner crab endorsement from participating in the directed bairdi fishery, unless they had catch history in the bairdi fishery in 1995 or 1996. If eligible, these vessels will be allowed to participate in the fishery only after the bairdi rebuilding goal is reached. Preliminary data indicates that 21 vessels would qualify to participate in the directed bairdi fishery based on their 1995 and 1996 history. These vessels will be capped at their aggregate historic catch levels based on the years 1995-96. Initial estimates indicate that the AFA catcher vessels would be limited to about 6.5 percent of the pre-season GHL once the fishery is rebuilt. The time frame for rebuilding this stock is difficult to predict. However the rebuilding plan outlined in Amendment 11 to the BSAI crab FMP indicates that a reasonable rebuilding period to meet the minimum stock size threshold may be in the range of the years 2005 to 2010 (NPFMC, 1999[4]). This time frame is after the current version of the AFA is scheduled to expire, meaning it is likely that there will be no fishing for bairdi by any vessels prior to the expiration of the AFA on December 31, 2004.

[4]North Pacific Fishery Management Council (NPFMC). 1999. A Rebuilding Plan for the Bering Sea C. *bairdi* Stock. Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for proposed Amendment 11 to the Fishery Management Plan for the King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands and a regulatory amendment to the Bering Sea/Aleutian Islands Groundfish Fishery Management Plan. North Pacific Fishery Management Council, Anchorage, AK.

AFA catcher vessels which hold an LLP Tanner crab endorsement may retain bycatch of bairdi, if retaining bairdi bycatch is allowed in the BBRKC fishery. Allowing the BBRKC vessels to retain bycatch amounts of bairdi has occurred in past years, when the fisheries were opened simultaneously. Such a provision will help reduce the amounts of bairdi crab that are discarded.

11.2.1.4 St. Matthew Blue King Crab

AFA vessels which hold a LLP endorsement for the St. Matthews king crab fishery, and had a landing in that fishery in 1995, 96 or 97, may participate in that fishery under the AFA sideboard restrictions. Only one vessel participated in St. Matthew blue king crab fishery in any of the three qualifying years. Because only one vessel is qualified, the catch history of that vessel cannot be reported under current confidentiality requirements.

11.2.1.5 Pribilof Red and Blue King Crab

AFA catcher vessels which hold an LLP endorsement for the Pribilof king crab fishery, and had a landing in that fishery in 1995, 96 or 97, may participate in that fishery under the AFA sideboard restrictions. Initial information indicates that four vessels will qualify to participate in this fishery under AFA sideboards. These vessels will be allowed to harvest about 1.2 percent of the combined pre-season GHLs, according to preliminary information. This would result in the four eligible vessels in the AFA fleet being capped at 15,600 pounds ($32,700), based on the 1998 GHL and ex-vessel prices. On average the vessels participating in the Pribilof king crab fisheries averaged 17,200 pounds in 1996 and 23,900 pounds in 1997. If the 15,600 pound cap were equally divided it would result in each vessels taking 3,900 pounds ($8,150), or about one-fifth what the average vessel harvested in the 1996 and 1997 fisheries. This is a loss of about $42,000 for AFA catcher vessels, however, that revenue will be redistributed to the Non-AFA crab vessels.

11.2.1.6 Aleutian Islands Red and Brown King Crab

An LLP and AFA qualified catcher vessel which had a landing in the last two years the Aleutian Islands red king crab and brown crab fisheries were open may participate in those fisheries. According to preliminary data no AFA vessels met this criteria, and therefore, no AFA vessels will be allowed to participate in these fisheries under the sideboard restrictions.

11.2.2 Scallop Sideboards

Measures restricting AFA catcher vessels, which participate in a cooperative, to their aggregate traditional harvest in the scallop fishery were developed by the Council. The groundfish and crab sideboards applied to all vessels regardless of whether they participated in a cooperative. It was assumed that scallop sideboards applied only to vessels that did join a cooperative because participation in a cooperative was explicitly defined by the Council.

Participation in a cooperative is defined as any use of a vessel's catch history by a cooperative, whether by direct harvest, lease, sale, or stacking of quota. The preferred alternative would limit the one AFA catcher vessel that also participated in the scallop fishery to the 7.6 percent of the 1997 fishery it harvested. That percentage will be multiplied by the upper end of the state-wide guideline harvest level to determine the actual amount of scallops it will be allowed to harvest under a cap. A projected 860,000 pound GHL would result in the vessel being capped at 65,600 pounds according to information provided in chapter 7 of this document. At an ex-vessel value of $5.50 per pound (1998 average from ADF&G web site), this equates to a cap of about $360,000 for the scallop vessel.

11.2.3 Bering Sea and Aleutian Islands Catcher Vessel Sideboards

Separate groundfish sideboard structures were developed for the BSAI and GOA. This section of the document will focus on the Council's preferred alternatives for the BSAI. Discussions of the GOA sideboard restrictions will follow in the next section.

11.2.3.1 BSAI Groundfish Sideboard Caps

BSAI sideboards shall be based on the AFA catcher vessel's catch history from 1995-97 (except Pacific cod which will be 1997 only). Sideboards will include non-pollock catch history in both the pollock and non-pollock target fisheries. The harvest will then be expressed as a ratio of the AFA vessels' catch to the total amount of TAC available those years. The resulting percentage will be multiplied by the TAC's set in future years to determine the actual amount of each sideboard species that can be harvested under the caps.

The Council directed NMFS to determine the bycatch needs for the pollock and non-pollock fisheries and allow for directed fishing of non-pollock target species such that the total catch of those species should not exceed the sideboard caps. A discussion of how NMFS intends to manage the caps was provided in the catcher/processor section of this chapter. Their proposed plan for managing the sideboard caps reflects the intent of the Council's preferred alternative.

Catcher vessel sideboard caps shall apply to all AFA eligible vessels eligible under sections 208(a)-(c) of the Act regardless of participation in a cooperative. Any vessel determined by NMFS to be eligible to participate in a cooperative will be bound by the sideboard caps outlined by the Council, if implemented by the Secretary of Commerce. The Council considered applying these caps only to vessels which participate in a cooperative. However, the Council felt that based on the direction given in section 211(c)(1)(A) of the Act, which states that the Council shall recommend measures to "prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery...", they should apply the sideboards to all eligible catcher vessels to afford protection to the non-AFA eligible vessels. A discussion of this issue in chapter 7 concludes this decision will likely have the greatest impact on catcher vessels that had smaller pollock catches and were more diversified into other fisheries. To mitigate some of the impacts on these vessels the Council provided an exemption to the Pacific cod sideboard cap for vessels that had less than 1,700 mt. of annual pollock history. Sideboard exemptions will be discussed in greater detail later in this section and in the Regulatory Flexibility Act section of the document.

Sideboard caps shall be applied at the AFA catcher vessel sector level (inshore delivery vessels, mothership delivery vessels, and catcher vessels that deliver to catcher/processors) in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each cooperative, and facilitate the formation of an inter-cooperative agreement to monitor the subdivision of the caps at the cooperative level. NMFS shall also require each cooperative agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.

Members of industry realized that NMFS is not in a position to monitor sideboard caps at the cooperative level in the year 2000, but requested that information on the cooperative level sideboards be published so they could monitor and enforce caps at that level themselves. The inter-cooperative agreement may enable the inshore cooperatives to better rationalize their participation in harvesting sideboard species for which they will have directed fisheries, such as Pacific cod.

Sideboard caps will apply throughout the year, except for two specific exemptions. The first exemption lifts the Pacific cod sideboard cap for vessels participating in the mothership sector on March 1 of each year. The second exemption applies to catcher vessels with less than 1,700 mt. of annual average landed pollock catch history. These vessels shall be exempt from the catcher vessel trawl Pacific cod sideboard cap throughout the entire year in the BSAI.

Tables 11.3 through 11.5b represent estimates of the catcher vessel sideboards in terms of historic landed catch from 1995-97, the percentage of landed catch relative to TAC, an estimate of future sideboards amounts based on the 1999 ITACs, and an estimate of the ex-vessel value of those amounts, respectively. These tables do not include catch of Pacific cod by the vessels exempted from the Pacific cod cap. So, the entire Pacific cod catch history of vessels landing less than 1,700 mt. pollock annually and the catch of catcher vessels delivering to motherships after March 1, have been excluded.

Ex-vessel value estimates reported in Table 11.5b indicate that if the catcher vessels harvested, retained, and sold all of the sideboard caps they were projected to be issued in Table 11.5a, they would generate $17.7 million per year. This estimate assumes that the catcher vessels would not have any discards and they could market all of their catch. These assumptions are unlikely to occur. Therefore, the ex-vessel value estimates likely overstate the amount of revenue that will be generated from the sideboard species.

Table 11.3: Landed Catch of All Eligible AFA Catcher Vessels in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	All Fisheries				
	CV Inshore (90 CVs)	CV to IN/MS (11 CVs)	CV to MS (10 CVs)	CV to CP (7 CVs)	All Vessels (118 CVs)
Atka Mackerel - Central AI	15	2	-	-	17
Atka Mackerel - Eastern AI	154	10	1	6	171
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BSAI	1,361	302	221	267	2,151
Other Flatfish - BSAI	4,344	481	47	283	5,155
Flathead Sole - BSAI	3,088	490	346	388	4,312
Greenland Turbot - Aleutian Islands	4	-	-	10	14
Greenland Turbot - Bering Sea	609	23	9	44	685
Other Species - BSAI	1,209	254	144	260	1,867
Pacific Cod (Fixed Gear) - BSAI	50	13	-	195	258
* Pacific Cod (Trawl CVs)-BSAI (97 only)	34,895	1,146	951	4,899	41,891
Pacific Ocean Perch - Bering Sea	537	24	16	9	586
* POP - Central AI (96-97 only)	7	-	-	-	7
* POP - Eastern AI (96-97 only)	27	-	-	3	30
*POP - Western AI (96-97 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	1	1	-	4	6
Other Rockfish - Bering Sea	30	2	1	6	39
Rock Sole - BSAI	3,174	879	387	734	5,174
Sablefish (Trawl Gear) - Aleutian Islands	64	1	-	4	69
Sablefish (Trawl Gear) - Bering Sea	1	-	-	-	1
Sharpchin/Northern Rockfish - AI	1	12	-	6	19
Squid - Bering Sea and Aleutian Islands	1,339	53	20	14	1,426
Shortraker/Rougheye Rockfish - AI	3	-	-	-	3
Other Red Rockfish - Bering Sea	57	13	4	11	85
Yellowfin Sole - BSAI	31,295	4,283	994	935	37,507

Source: Alaska Department of Fish and Game fish ticket data for inshore deliveries; National Marine Fisheries Service observer data for at-sea deliveries.

* Denotes TAC groups that do not extend throughout entire time period.

Note: The Pacific cod catch history from vessels with less than 1,700 mt. of annual average landed pollock catch are excluded from this table, because they are exempt from the Pacific cod sideboard cap.

Table 11.4 Percent of TAC that was Landed by All Eligible AFA Catcher Vessels in the Bering Sea and Aleutian Islands (1995-97)

	All Fisheries				
Species by TAC Grouping	CV Inshore (90 CVs)	CV to IN/MS (11 CVs)	CV to MS (10 Cvs)	CV to CP (7 CVs)	Total Catch (118 CVs)
Atka Mackerel - Central AI	0.01%	-	-	-	0.01%
Atka Mackerel - Eastern AI	0.28%	0.02%	-	0.01%	0.31%
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BSAI	3.69%	0.82%	0.60%	0.72%	5.83%
Other Flatfish - BSAI	4.70%	0.46%	0.11%	0.31%	5.58%
Flathead Sole - BSAI	3.51%	0.56%	0.39%	0.44%	4.90%
Greenland Turbot - Aleutian Islands	0.06%	-	-	0.15%	0.21%
Greenland Turbot - Bering Sea	3.60%	0.14%	0.05%	0.26%	4.05%
Other Species - BSAI	1.83%	0.39%	0.22%	0.39%	2.83%
Pacific Cod (Fixed Gear) - BSAI	0.01%	-	-	0.05%	0.06%
* P.Cod (Trawl CVs)-BSAI (97 only)	53.32%	1.75%	1.45%	7.49%	64.01%
Pacific Ocean Perch - Bering Sea	9.32%	0.42%	0.28%	0.16%	10.18%
* POP - Central AI (96-97 only)	0.11%	-	-	-	0.11%
*POP - Eastern AI (96-97 only)	0.43%	-	-	0.05%	0.48%
*POP - Western AI (96-97 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	0.05%	0.05%	-	0.21%	0.31%
Other Rockfish - Bering Sea	2.92%	0.19%	0.10%	0.58%	3.79%
Rock Sole - BSAI	1.57%	0.43%	0.19%	0.36%	2.55%
Sablefish (Trawl Gear) - AI	5.64%	0.09%	-	0.35%	6.08%
Sablefish (Trawl Gear) - Bering Sea	0.06%	-	-	-	0.06%
Sharpchin/Northern Rockfish - AI	0.01%	0.09%	-	0.05%	0.15%
Squid - BSAI	36.49%	1.44%	0.54%	0.38%	38.85%
Shortraker/Rougheye Rockfish - AI	0.11%	-	-	-	0.11%
Other Red Rockfish - Bering Sea	1.88%	0.43%	0.13%	0.36%	2.80%
Yellowfin Sole - BSAI	5.94%	0.81%	0.19%	0.18%	7.12%

Sources: Alaska Department of Fish and Game fish ticket data for inshore deliveries; National Marine Fisheries Service observer data for deliveries at-sea.

* Denotes TAC groups that do not extend throughout entire time period.

Table 11.5a: Catcher Vessel Sideboard Estimates in the Bering Sea and Aleutian Islands Based on 1999 ITACs Published in the March 11, 1999 Federal Register.

	All Fisheries				
Species by TAC Grouping	CV Inshore (90 CVs)	CV to IN/MS (11 CVs)	CV to MS (10 CVs)	CV to CP (7 CVs)	All Fisheries (118 CVs)
Atka Mackerel - Central AI	2	-	-	-	2
Atka Mackerel - Eastern AI	44	3	-	1	48
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BSAI	4,214	936	685	822	6,658
Other Flatfish - BSAI	6,152	602	144	406	7,304
Flathead Sole - BSAI	2,306	368	256	289	3,220
Greenland Turbot - AI	2	-	-	4	6
Greenland Turbot - Bering Sea	185	7	3	13	208
Other Species - BSAI	511	109	61	109	790
Pacific Cod (Fixed Gear) - BSAI	8	-	-	42	50
*P. Cod (Trawl CVs)-BSAI (97 only)	20,515	673	558	2,882	24,628
Pacific Ocean Perch - Bering Sea	111	5	3	2	121
* POP - Central AI (96-97 only)	4	-	-	-	4
* POP - Eastern AI (96-97 only)	13	-	-	1	14
* POP - Western AI (96-97 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	0	0	-	1	2
Other Rockfish - Bering Sea	9	1	-	2	12
Rock Sole - BSAI	1,601	439	194	367	2,601
Sablefish (Trawl Gear) - AI	32	1	-	2	35
Sablefish (Trawl Gear) - Bering Sea	0	-	-	-	0
Sharpchin/Northern Rockfish - AI	0	3	-	2	5
Squid - BSAI	611	24	9	6	651
Shortraker/Rougheye Rockfish - AI	1	-	-	-	1
Other Red Rockfish - Bering Sea	4	1	0	1	6
Yellowfin Sole - BSAI	10,501	1,432	336	318	12,587

Source: Alaska Department of Fish and Game fish ticket data for inshore deliveries; National Marine Fisheries Service observer data for deliveries at-sea.

* Denotes TAC groups that do not extend throughout entire 1995-97 time period.

Table 11.5b: Catcher Vessel Sideboard Ex-vessel Value ($ million) Estimates in the Bering Sea and Aleutian Islands Based on 1999 ITACs Published in the March 11, 1999 Federal Register, and 1997 PACFIN Ex-vessel Prices.

	All Fisheries				
Species by TAC Grouping	CV Inshore (90 CVs)	CV to IN/MS (11 CVs)	CV to MS (10 CVs)	CV to CP (7 CVs)	All Fisheries (118 CVs)
Atka Mackerel - Central AI	$0.00	-	-	-	$0.00
Atka Mackerel - Eastern AI	$0.01	$0.00	-	$0.00	$0.01
Atka Mackerel - Western AI	-	-	-	-	-
Arrowtooth Flounder - BSAI	$0.33	$0.07	$0.05	$0.07	$0.53
Other Flatfish - BSAI	$1.22	$0.12	$0.03	$0.08	$1.45
Flathead Sole - BSAI	$0.64	$0.10	$0.71	$0.08	$0.89
Greenland Turbot - AI	$0.00	-	-	$0.00	$0.00
Greenland Turbot - Bering Sea	$0.11	$0.00	$0.00	$0.01	$0.13
Other Species - BSAI	$0.01	$0.00	$0.00	$0.00	$0.02
Pacific Cod (Fixed Gear) - BSAI	$0.00	-	-	$0.01	$0.02
*P. Cod (Trawl CVs)-BSAI (97 only)	$9.50	$0.31	$0.26	$1.33	$11.40
Pacific Ocean Perch - Bering Sea	$0.02	$0.00	$0.00	$0.00	$0.02
* POP - Central AI (96-97 only)	$0.00	-	-	-	$0.00
* POP - Eastern AI (96-97 only)	$0.00	-	-	$0.00	$0.00
* POP - Western AI (96-97 only)	-	-	-	-	-
Other Rockfish - Aleutian Islands	$0.00	$0.00	-	$0.00	$0.00
Other Rockfish - Bering Sea	$0.01	$0.00	-	$0.00	$0.01
Rock Sole - BSAI	$0.52	$0.14	$0.06	$0.12	$0.84
Sablefish (Trawl Gear) - AI	$0.16	$0.01	-	$0.01	$0.18
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-
Sharpchin/Northern Rockfish - AI	$0.00	$0.00	-	$0.00	$0.00
Squid - BSAI	$0.05	$0.00	$0.00	$0.00	$0.05
Shortraker/Rougheye Rockfish - AI	$0.00	-	-	-	$0.00
Other Red Rockfish - Bering Sea	$0.00	$0.00	$0.00	$0.00	$0.00
Yellowfin Sole - BSAI	$1.81	$0.25	$0.06	$0.05	$2.16
Total	$14.39	$1.01	$0.54	$1.77	$17.71

Source: Alaska Department of Fish and Game fish ticket data for inshore deliveries; National Marine Fisheries Service observer data for deliveries at-sea.

* Denotes TAC groups that do not extend throughout entire 1995-97 time period.

11.2.3.2. BSAI PSC Sideboard Caps

BSAI PSC sideboard caps shall be based on the ratio of landed catch in each non-pollock target fishery to the PSC cap for that target, and shall represent an aggregate cap which is not subdivided among catcher vessel sectors. Based on this formula, preliminary estimates indicate that catcher vessels bound by sideboard caps will be allowed to harvest up to 34 percent of the halibut and crab PSC species allocated to the Pacific cod fishery, 7 percent of those allocations to the yellowfin sole fishery, 4 percent of those allocations to the rock sole/other flatfish/flathead sole fisheries, and 1 percent of those allocations to the Atka mackerel/other groundfish fisheries (after pollock has been excluded). Catcher vessels that were exempted from Pacific cod sideboard caps will not be bound by PSC sideboard caps. They will only be limited by the overall trawl PSC apportionments in the Pacific cod fishery.

As with groundfish sideboards, PSC sideboards are caps, meaning that the AFA catcher vessel fleet is not guaranteed any specific amount of PSC bycatch. Instead they are limited to a fraction of the overall trawl allocation. If an overall trawl PSC cap is reached for any target fishery (or group of target fisheries), the directed fishery will close for all trawl vessels, regardless of whether the AFA vessels have attained their aggregate PSC sideboard cap.

PSC sideboard caps will be implemented only for halibut and crab species. No PSC caps will be set for herring or the salmon species, since bycatch of those species occurs predominantly in the pollock fishery. Instead, AFA catcher vessels will be monitored as part of the overall trawl fleet under the herring and salmon PSC caps.

11.2.4 Gulf of Alaska Sideboard Caps

Like the BSAI sideboard caps, the GOA caps will be based on aggregate landed groundfish catch of AFA catcher vessels between 1995-97, and will be expressed as a percentage of the TAC that was available those years. These percentages will then be multiplied by the TAC set for each species, after the TACs are set in December prior to the start of the next fishing season, to determine the actual harvest amounts that will be available to AFA catcher vessels restricted by sideboard caps.

NMFS was requested to determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing such that the total catch of those species should not exceed the sideboard caps, meaning that NMFS will first determine bycatch needs for species that have a sufficient cap to allow for a directed fishery, and the remainder of the cap would be available as a directed fishery allowance. The result of this direction is to indicate the Council's intent that the caps are not intended to be only used as directed fishing caps, but they are also to cover bycatch needs in other directed fisheries.

The sideboard caps shall apply to all AFA vessels participating in the GOA fisheries, regardless of whether the vessels joins a cooperative. Sideboard caps shall be applied throughout the year except that vessels with less than 1,700 mt. of annual average pollock landed catch history shall be exempt from pollock and cod sideboards and from those GOA groundfish fisheries in which they participated in 1995, 1996, or 1997. This exemption differs from the BSAI exemption in that it also covers the pollock fishery and any other directed fisheries they participated in during the 1995-97 time period. If a vessel participated in the directed shallow water flatfish fishery in any year 1995-97 and they averaged less than 1,700 mt. of pollock landings in the BSAI, they will be allowed to participate in the GOA shallow water flatfish fishery outside of the sideboard caps. Because this vessel would not be bound by the shallow water flatfish cap, its 1995-97 catch history in that fishery would not accrue towards the cap.

Sideboard caps will be applied at the AFA-eligible catcher vessel sector level in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each cooperative, and encourage the formation of an inter-cooperative agreement to monitor the sub-division of the caps at the cooperative level. NMFS shall require each cooperative agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.

11.2.4.1 Gulf of Alaska Groundfish Sideboard Caps

Groundfish sideboard caps in the GOA are based on the amount of groundfish landed by AFA eligible catcher vessels in all target fisheries and is expressed as a ratio relative to the TAC that was available those years. The pollock portion of the sideboards will be apportioned seasonally, based on the percentage of the overall pollock TAC allocated to each quarter. When a vessel is excluded from a cap through an exemption, their catch of species covered under the exemption is not included in the cap calculation, nor will its catch accrue toward the cap.

Note that the number of vessels listed in the column heading is less in the GOA than it was in the BSAI. This is due to not all of the AFA vessels being qualified under LLP in the GOA. Another consideration is that not all vessels qualify in all areas of the GOA under LLP. Recall that licenses will be issued for the Western GOA, Central GOA (including West Yakutat), and Southeast Outside areas.

The estimates of catcher vessel sideboard caps in the GOA presented in Table 11.8a (Table 11.8b reports value estimates), provide insights into which species have adequate caps to support a directed fishery. It is expected that the directed fisheries should include pollock, Pacific cod, and shallow water flatfish. Necessary amounts of Pacific Ocean Perch, various rockfish species, sablefish, and deep water flatfish may be available in some areas, but NMFS will need to make this determination prior to the start of fishing each year.

Pollock sideboard caps are to be subdivided on a seasonal basis. The season dates published in the March 11, 1999 Federal Register notice indicate for 1999 the seasonal allocations will be 30 percent in the A season (opens January 20), 20 percent in the B season (opens June 1), and 25 percent in both the C (opens September 1) and D (opens five days after the C season closes) seasons.

Table 11.6: Landed Catch of All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97), by AFA CV Sector

Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	Total Catch (102 Vessels)
Atka Mackerel - C. Gulf (1995-96)	7	2	0	1	10
Atka Mackerel - GOA (1997)	214				214
Atka Mackerel - W. Gulf (1995-96)	10	-	-	6	16
Arrowtooth Flounder - C. Gulf	3,068	532	0	-	3,600
Arrowtooth Flounder - E. Gulf	19	22		2	43
Arrowtooth Flounder - W. Gulf	45	-	-	-	45
Deep Water Flatfish - C. Gulf	1,594	531		25	2,150
Deep Water Flatfish - E. Gulf	47	6	-	14	67
Flathead Sole - C. Gulf	525	77	0	0	602
Flathead Sole - E. Gulf	4	1	-	5	10
Flathead Sole - W. Gulf	51	-	10	1	62
Northern Rockfish - C. Gulf	645	116		3	764
Northern Rockfish - E. Gulf	5	-	-	-	5
Northern Rockfish - W. Gulf	2	-	-	-	2
Other Species - GOA	686	53	1	13	753
^Pacific Cod (Inshore) - C. Gulf	11,349	2,032	1,044		14,425
Pacific Cod (Offshore) - C. Gulf	-	37	314	386	737
^Pacific Cod (Inshore) - E. Gulf	138	-	-	6	144
^Pacific Cod (Inshore) - W. Gulf	6,385	1,329	979	333	9,026
Pacific Cod (Offshore) - W. Gulf	-	-	102	527	628
Pelagic Shelf Rockfish - C. Gulf	332	55	0	5	392
Pelagic Shelf Rockfish - E. Gulf	-	1	-	20	21
Pelagic Shelf Rockfish - W. Gulf	1	-	-	-	1
^Pollock - Chirikof	12,920	420	-	146	13,486
^Pollock - E. Gulf	3,174	1,123	-	162	4,459
^Pollock - Kodiak	13,490	3,130	1,128	125	17,873
^Pollock - Shumagin	43,343	2,573	443	44	46,399
Pacific Ocean Perch - C. Gulf	1,286	503	-	-	1,789
Pacific Ocean Perch - E. Gulf	4	1	-	146	151
Pacific Ocan Perch - W. Gulf	13	-	-	-	13
Rex Sole - C. Gulf	502	70	-	44	616
Rex Sole - E. Gulf	34	8	-	8	50
Rex Sole - W. Gulf	11	-	-	-	11
Slope Rockfish - C. Gulf	11	2	-	-	13
Sablefish (Trawl Gear) - C. Gulf	529	84	-	14	627
Sablefish (Trawl Gear) - W. Gulf	4	-	-	-	4

Table 11.6: Continued Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
Sablefish (Trawl Gear) - W. Yakutat	3	-	-	10	13
Shallow Water Flatfish - C. Gulf	2,791	1,063	3	3	3,860
Shallow Water Flatfish - E. Gulf	6	8	-	29	43
Shallow Water Flatfish - W. Gulf	295	9	4	33	341
Shortraker / Rougheye - C. Gulf	161	6	-	2	169
Shortraker / Rougheye - E. Gulf	1	1	-	10	12
Shortraker / Rougheye - W. Gulf	1	-	-	-	1
Thornyhead - GOA	141	24	-	13	178

Source: ADF&G fish ticket data; National Marine Fisheries Service observer data

^ P. cod and pollock catch by vessels with <1,700 mt of annual average landed pollock catch was excluded.

Target catch in directed fisheries by vessels with <1,700mt of annual avg. landed pollock catch was excluded.

Table 11.7: Percent of TAC Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97), by AFA Catcher Vessel Sector

Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
*Atka Mackerel - C. Gulf (1995-96)	0.38%	0.10%	-	0.03%	0.51%
*Atka Mackerel - GOA (1997)	21.40%	-	-	-	21.40%
*Atka Mackerel - W. Gulf (1995-96)	0.22%	-	-	0.13%	0.35%
Arrowtooth Flounder - C. Gulf	4.09%	0.71%	-	-	4.80%
Arrowtooth Flounder - E. Gulf	0.13%	0.15%	-	0.01%	0.29%
Arrowtooth Flounder - W. Gulf	0.30%	-	-	-	0.30%
Deep Water Flatfish - C. Gulf	8.53%	2.84%	-	0.13%	11.50%
Deep Water Flatfish - E. Gulf	0.50%	0.06%	-	0.15%	0.71%
Flathead Sole - C. Gulf	3.50%	0.51%	-	-	4.01%
Flathead Sole - E. Gulf	0.05%	0.01%	-	0.07%	0.13%
Flathead Sole - W. Gulf	0.85%	-	0.17%	0.02%	1.04%
Northern Rockfish - C. Gulf	4.82%	0.87%	-	0.02%	5.71%
Northern Rockfish - E. Gulf	10.00%	-	-	-	10.00%
Northern Rockfish - W. Gulf	0.09%	-	-	-	0.09%
Other Species - GOA	1.75%	0.13%	-	0.03%	1.91%
Pacific Cod (Inshore) - C. Gulf	9.30%	1.67%	0.86%	-	11.83%
Pacific Cod (Offshore) - C. Gulf	-	0.36%	3.07%	3.78%	7.21%
Pacific Cod (Inshore) - E. Gulf	2.00%	-	-	0.09%	2.09%
Pacific Cod (Inshore) - W. Gulf	11.23%	2.34%	1.72%	0.59%	15.88%
Pacific Cod (Offshore) - W. Gulf	-	-	1.61%	8.34%	9.95%
Pelagic Shelf Rockfish - C. Gulf	3.40%	0.57%	-	0.05%	4.02%
Pelagic Shelf Rockfish - C. Gulf	0.77%	-	-	-	0.77%
Pelagic Shelf Rockfish - E. Gulf	-	0.03%	-	0.63%	0.66%
Pelagic Shelf Rockfish - W. Gulf	0.04%	-	-	-	0.04%
Pollock - Chirikof District	21.75%	0.71%	-	0.25%	22.71%
Pollock - E. Gulf	27.01%	9.56%	-	1.38%	37.95%
Pollock - Kodiak	24.76%	5.74%	2.07%	0.23%	32.80%
Pollock - Shumagin District	58.21%	3.46%	0.59%	0.06%	62.32%
Pacific Ocean Perch - C. Gulf	11.29%	4.41%	-	-	15.70%
Pacific Ocean Perch - E. Gulf	0.06%	0.02%	-	2.20%	2.28%
Pacific Ocan Perch - W. Gulf	0.35%	-	-	-	0.35%
Rex Sole - C. Gulf	3.04%	0.43%	-	0.27%	3.74%
Rex Sole - E. Gulf	0.55%	0.13%	-	0.13%	0.81%
Rex Sole - W. Gulf	0.39%	-	-	-	0.39%
Slope Rockfish - C. Gulf	0.50%	0.09%	-	-	0.59%
Sablefish (Trawl Gear) - C. Gulf	12.07%	1.92%	-	0.32%	14.31%

Table 11.7: Continued Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
Sablefish (Trawl Gear) - Southeast	-	-	-	0.13%	0.13%
Sablefish (Trawl Gear) - W. Gulf	0.30%	-	-	-	0.30%
Sablefish (Trawl Gear) - W. Yakutat	0.71%	-	-	2.36%	3.07%
Shallow Water Flatfish - C. Gulf	7.18%	2.74%	-	-	9.92%
Shallow Water Flatfish - E. Gulf	0.17%	0.23%	-	0.82%	1.22%
Shallow Water Flatfish - W. Gulf	2.19%	0.07%	0.03%	0.24%	2.53%
Shortraker / Rougheye - C. Gulf	4.75%	0.18%	-	0.06%	4.99%
Shortraker / Rougheye - E. Gulf	0.07%	0.07%	-	0.66%	0.80%
Shortraker / Rougheye - W. Gulf	0.20%	-	-	-	0.20%
Thornyhead - Gulf of Alaska	2.91%	0.50%	-	0.27%	3.68%

Source: ADF&G fish ticket data; National Marine Fisheries Service observer data

P. cod and pollock catch by vessels with <1,700 mt of annual average landed pollock catch was excluded.

Target catch in directed fisheries by vessels with <1,700mt of annual avg. landed pollock catch was excluded.

Table 11.8a: Estimtates of Catcher Vessel Sideboards (mt) Based on 1999 Gulf of Alaska TACs

Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
*Atka Mackerel - GOA (1997)	128				128
Arrowtooth Flounder - C. Gulf	1,023	178			1,200
Arrowtooth Flounder - E. Gulf	7	8		1	15
Arrowtooth Flounder - W. Gulf	15				15
Deep Water Flatfish - C. Gulf	234	78		4	315
Deep Water Flatfish - E. Gulf	15	2		5	22
Flathead Sole - C. Gulf	175	26			201
Flathead Sole - E. Gulf	1	0		1	3
Flathead Sole - W. Gulf	17		3	0	21
Northern Rockfish - C. Gulf	200	36		1	237
Northern Rockfish - E. Gulf					
Northern Rockfish - W. Gulf	1				1
Other Species - GOA	256	19		4	279
Pacific Cod (Inshore) - C. Gulf	2,875	516	266		3,657
Pacific Cod (Offshore) - C. Gulf		12	105	130	248
Pacific Cod (Inshore) - E. Gulf	18			1	19
Pacific Cod (Inshore) - W. Gulf	1,911	398	293	100	2,702
Pacific Cod (Offshore) - W. Gulf			30	158	188
Pelagic Shelf Rockfish - C. Gulf	141	19		2	161
Pelagic Shelf Rockfish - E. Gulf		0		6	6
Pelagic Shelf Rockfish - W. Gulf	0				0
Pollock - Chirikof District	8,448	276		97	8,821
Pollock - E. Gulf	2,280	807		116	3,203
Pollock - Kodiak	7,557	1,752	632	70	10,011
Pollock - Shumagin District	13,458	800	136	14	14,408
Pacific Ocean Perch - C. Gulf	763	298			1,061
Pacific Ocean Perch - E. Gulf	2	1		88	91
Pacific Ocan Perch - W. Gulf	6				6
Rex Sole - C. Gulf	167	24		15	205
Rex Sole - E. Gulf	14	3		3	20
Rex Sole - W. Gulf	5				5
Slope Rockfish - C. Gulf	3	1			4
Sablefish (Trawl Gear) - C. Gulf	135	21		4	160
Sablefish (Trawl Gear) - W. Gulf	1				1
Sablefish (Trawl Gear) - W. Yakutat	2			6	8
Shallow Water Flatfish - C. Gulf	930	355			1,285
Shallow Water Flatfish - E. Gulf	2	3		11	16
Shallow Water Flatfish - W. Gulf	99	3	1	11	114
Shortraker / Rougheye - C. Gulf	46	2		1	48

Table 11.8a: Continued Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
Shortraker / Rougheye - E. Gulf	0	0		3	4
Shortraker / Rougheye - W. Gulf	0				0
Thornyhead - GOA	142	24		13	180

Source: ADF&G fish ticket data; National Marine Fisheries Service observer data

P. cod and pollock catch by vessels with <1,700 mt of average landed BSAI pollock was excluded.

Target catch in directed fisheries by vessels with <1,700mt of average landed BSAI pollock was excluded.

Table 11.8b: Value Estimtates of Catcher Vessel Sideboards ($ Million) -- Based on 1999 Gulf of Alaska TACs and 1997 PACFIN Ex-vessel Prices

Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
*Atka Mackerel - GOA (1997)	$0.01	$0.00	$0.00	$0.00	$0.01
Arrowtooth Flounder - C. Gulf	$0.08	$0.01	$0.00	$0.00	$0.10
Arrowtooth Flounder - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Arrowtooth Flounder - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Deep Water Flatfish - C. Gulf	$0.08	$0.03	$0.00	$0.00	$0.10
Deep Water Flatfish - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.06
Flathead Sole - C. Gulf	$0.05	$0.01	$0.00	$0.00	$0.00
Flathead Sole - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.01
Flathead Sole - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.02
Northern Rockfish - C. Gulf	$0.02	$0.00	$0.00	$0.00	$0.00
Northern Rockfish - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Northern Rockfish - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.02
Other Species - GOA	$0.02	$0.00	$0.00	$0.00	$1.17
Pacific Cod (Inshore) - C. Gulf	$0.92	$0.16	$0.09	$0.00	$0.08
Pacific Cod (Offshore) - C. Gulf	$0.00	$0.00	$0.03	$0.04	$0.01
Pacific Cod (Inshore) - E. Gulf	$0.01	$0.00	$0.00	$0.00	$0.86
Pacific Cod (Inshore) - W. Gulf	$0.61	$0.13	$0.09	$0.03	$0.06
Pacific Cod (Offshore) - W. Gulf	$0.00	$0.00	$0.01	$0.05	$0.05
Pelagic Shelf Rockfish - C. Gulf	$0.04	$0.01	$0.00	$0.00	$0.00
Pelagic Shelf Rockfish - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Pelagic Shelf Rockfish - W. Gulf	$0.00	$0.00	$0.00	$0.00	$1.89
Pollock - Chirikof District	$1.81	$0.06	$0.00	$0.02	$0.68
Pollock - E. Gulf	$0.49	$0.17	$0.00	$0.02	$2.14
Pollock - Kodiak	$1.62	$0.37	$0.14	$0.01	$3.08
Pollock - Shumagin District	$2.88	$0.17	$0.03	$0.00	$0.17
Pacific Ocean Perch - C. Gulf	$0.12	$0.05	$0.00	$0.00	$0.01
Pacific Ocean Perch - E. Gulf	$0.00	$0.00	$0.00	$0.01	$0.00
Pacific Ocan Perch - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.10
Rex Sole - C. Gulf	$0.08	$0.01	$0.00	$0.01	$0.01
Rex Sole - E. Gulf	$0.01	$0.00	$0.00	$0.00	$0.00
Rex Sole - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Slope Rockfish - C. Gulf	$0.00	$0.00	$0.00	$0.00	$0.63
Sablefish (Trawl Gear) - C. Gulf	$0.53	$0.08	$0.00	$0.02	$0.00
Sablefish (Trawl Gear) - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.03
Sablefish (Trawl Gear) - W. Yakutat	$0.01	$0.00	$0.00	$0.02	$0.62
Shallow Water Flatfish - C. Gulf	$0.45	$0.17	$0.00	$0.00	$0.01
Shallow Water Flatfish - E. Gulf	$0.00	$0.00	$0.00	$0.01	$0.06
Shallow Water Flatfish - W. Gulf	$0.05	$0.00	$0.00	$0.01	$0.01
Shortraker / Rougheye - C. Gulf	$0.01	$0.00	$0.00	$0.00	$0.00

Table 11.8b: Continued Species by TAC Grouping	Inshore (80 Vessels)	IN/MS (9 Vessels)	MS (7 Vessels)	CP (6 Vessels)	All Vessels (102 Vessels)
Shortraker / Rougheye - E. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Shortraker / Rougheye - W. Gulf	$0.00	$0.00	$0.00	$0.00	$0.00
Thornyhead - GOA	$0.18	$0.03	$0.00	$0.02	$0.23
Total	$10.08	$1.48	$0.39	$0.28	$12.23
Source: ADF&G fish ticket data; National Marine Fisheries Service observer data, 1997 PACFIN Price data					
P. cod and pollock catch by vessels with <1,700 mt of average landed BSAI pollock was excluded.					
Target catch in directed fisheries by vessels with <1,700mt of average landed BSAI pollock was excluded.					

11.2.4.2 GOA PSC Sideboards Caps

PSC sideboard caps for halibut in the GOA will be set equal to the percentage of groundfish landed, relative to TAC, aggregated by the deep[5] and shallow[6]-water PSC complexes. To calculate the halibut sideboard caps, first the overall trawl halibut allowances will be seasonally apportioned. Then the percentage of groundfish landed by the AFA fleet relative to the TAC, for the deep and shallow-water complexes seperately, will be multiplied by the seasonal apportionment of halibut to determine the tons of halibut they will be constrained by during that season.

A preliminary estimate for the deep-water complex indicates that AFA catcher vessels will be capped at 7 percent of the seasonal halibut sideboards (Table 11.9). The shallow-water cap would be set at 34 percent of the seasonal halibut apportionments, if pollock is included in the calculation. Because pollock is not an AFA species in the Gulf, including those landings in the calculation may be appropriate. Had pollock been excluded, the shallow-water halibut cap would be approximately half (16 percent) of the original estimate. Reducing the halibut cap by half would likely leave little halibut available for the directed fisheries other than pollock in the shallow-water PSC complex. According to information presented in Table 11.8b, pollock accounts for about half of the overall sideboard value, $6.07 million. The remaining species account for the other $6.16 million.

Attainment by the entire fleet of any PSC cap will close directed fishing to all trawl vessels, even if the AFA vessels have not attained their aggregate PSC cap. This is consistent with the concept that sideboards are caps and not allocations to the AFA fleet.

[5]Deep-water species complex is comprised of sablefish, all rockfish targets, deep-water flatfish, rex sole, and arrowtooth flounder.

[6]Shallow-water species complex is comprised of pollock, Pacific cod, shallow-water flatfish, flathead sole, Atka mackerel, and "other species".

Table 11.9: Estimates of halibut PSC caps for AFA vessels in the GOA by season, based on 1999 apportionments

Complex	Jan 20 - Mar 31	Apr 1 - Jul 3	Jul 4 - Sep 30	Oct 1 - Dec 31	Total
Overall Trawl Apportionment					
Deep	100	300	400	400	1,000*
Shallow	500	100	200		1,000*
Total	600	400	600	400	2,000
Estimated AFA Sideboard Caps					
Deep	7	21	28	82*	70*
Shallow	170	34	68		340*
Total	177	55	96	82	410*

* Assumes that the 400 mt of halibut in the 4th quarter is equally divided between the deep and shallow-water complexes.

Note: The AFA vessels were capped at 7 percent of the deep-water complex trawl apportionment and 34 percent of the shallow-water complex trawl apportionment.

11.2.5 Summary of Catcher Vessel Sideboards

The sideboard caps designed by the Council should effectively limit any adverse impacts caused by cooperatives on non-AFA vessels, as mandated by the Act. This was the overarching purpose of developing sideboard restrictions for the catcher/processors and catcher vessels in the AFA fleet. In general the non-AFA vessels were concerned that allowing the AFA pollock fleet to change their harvest strategies in the BSAI pollock fishery would allow them to concentrate more effort in other fisheries. This additional effort would be to the detriment of the other vessels that had traditionally relied on those fisheries.

Using landed catch as a proxy for catch history will reduce the amount of every species available to the AFA fleets under the sideboard caps, relative to using total catch. Estimating the impacts of using retained catch versus total catch requires assumptions regarding future prices, discard rates, and harvests within the sideboard caps. Given the uncertainty associated with making these assumptions, the reliability of the estimates must be considered by the reader and should be treated as directional trends and not point estimates. However, it is very likely that using retained catch will reduce gross revenues for the AFA catcher vessels, since not all of the fish will be sold.

A summary of the changes was provided earlier in this chapter. Species discarded at the highest rates will be most impacted in terms of overall sideboard amounts. Yet many of the species with high discard rates were not taken in directed fisheries by the AFA fleet, or at least the directed fisheries were minimal. Therefore it is doubtful NMFS would have opened directed fisheries for those species even had total catch been used to determine the sideboards, since they would need to be set aside for bycatch in other directed fisheries.

Species harvested in directed fisheries generally had the lower discard rates. This makes intuitive sense. If you are trying to catch a species you are less likely to throw it back. Still there will be reductions in the amounts of species taken in directed fisheries that AFA vessels may harvest. Reductions in directed fisheries amounts of fish a particular sector can harvest may lead to reduced revenues, if prices are not affected, by allowing the

other vessels to harvest the AFA fleet's catch history that was discarded at-sea. This will likely result in a redistribution of revenue among members of the AFA and Non-AFA fleets.

It is difficult to determine of the overall benefits accruing to the AFA fleet from having pollock cooperatives will out-weigh any net revenue losses resulting from the sideboard restrictions being imposed. However, it is known that these vessels have primarily fished the pollock and Pacific cod fisheries in the past and they will continue to have access to the BSAI pollock fishery and over 60 percent of the BSAI Pacific cod catcher vessel trawl allocation. They also will be allowed to harvest about 10 percent of the GOA Pacific cod (slightly higher or lower depending on the area) and 22 to 62 percent of the GOA pollock (again depending on the area). Those catcher vessels that had limited amounts of catch history in pollock were exempted from Pacific cod sideboard restrictions in the BSAI, and Pacific cod, pollock, and other GOA directed fisheries they participated. AFA vessels that historically fished opilio crab (fished at least four years from 1988-97) were also exempted from that cap. They were allowed to continue fishing for opilio with no catch limit restrictions.

Calculating "net benefits to the Nation" resulting from these decisions is not possible. Net benefit calculations require data that are currently not available to the analysts. Additional information on costs and price/quantity relationships would be needed. However, it is reasonable to assume that the positive benefits resulting from the formation of cooperatives in the pollock fishery, where buyers and sellers share market power, and may exploit economic efficiencies not available in an "open-access" management setting, are greater than any losses generated by sideboard restrictions. It is also true that gaines/losses in this case are primarily distributional in nature, and that "net" effects of sideboards will likely tend to be close to neutral overall (all other factors being equal).

11.3 Non-Sideboard Decisions

The Council also selected preferred alternatives for several non-sideboard issues. Included in this suite of decisions are compensation measures for determining pollock catch history for inshore catcher vessels, conformance measures with Inshore-Offshore 3 amendment package, and clarification of the single geographic location definition for inshore processors.

11.3.1 Compensation for Inshore Catcher Vessels in the Pollock Fishery

Two compensation measures were approved by the Council. The first would allow catcher vessels that qualify for the inshore sector to count BSAI pollock catch delivered to catcher/processors, as if it were delivered inshore, when determining the percentage of the inshore quota they are allowed to take into a cooperative. To qualify to bring this catch history inshore, the vessel must have delivered at least 499 mt. of pollock to catcher/processors from 1995-97. If that criteria is met, the catcher vessel can add that pollock catch to the pollock delivered inshore that year. Preliminary estimates indicate that the catcher vessels that do not meet this landing requirement, i.e. receiving no compensation, would have their pollock allocation reduced by about five percent.

The second compensation measure allows inshore catcher vessels to use there best two years of pollock catch history, from 1995-97, to determine their percentage of the inshore quota. The best two years would be determined after any compensation from deliveries made to catcher/processors in a year was added into that years inshore delivery total. Summing a catcher vessel's best two years generates the numerator for determining a vessel's percentage of the inshore quota. The denominator is calculated by summing the best two years of catch history for all inshore catcher vessels, whether they are AFA qualified or not. Once this calculation is done, any portion of the inshore catch history not assigned to the AFA vessels would go into the

"open access" portion of the inshore pollock fishery. Preliminary estimates indicate that about 0.4 percent of the inshore allocation would default to the "open access" pool using this method. The Figure 10.1 in chapter 10 shows the distribution of "winners" and "losers" by using the best two of three year formula.

11.3.2 AFA and Inshore-Offshore 3 Conformance Measures

Several amendments were passed to make the AFA and Inshore-Offshore 3 programs consistent. In general, these amendments are minor decisions in that they are required or they are technical in nature.

The BSAI pollock allocation percentages where changed to those mandated by the Act. AFA defined those allocations to be 50 percent to the inshore sector, 40 percent to the catcher/processor sector, and 10 percent to the mothership sector, after accounting for bycatch needs in other directed fisheries and the 10 percent CDQ allocation. Other activities were primarily to achieve consistency in definitions contained in the AFA and those in the Magnuson-Stevens Act or existing regulation.

The original Inshore-Offshore directed fishing definitions applied equally in both the BSAI and the GOA. The AFA definitions, however, specifically apply only to Inshore-Offshore fish harvested in the BSAI. Therefore the Council voted to apply the same directed fishing harvest definitions to pollock in the BSAI and GOA, as was used in the original Inshore-Offshore program. The substantive effect of this alternative would apply only to pollock harvests; not Pacific cod, because Pacific cod is an Inshore-Offshore species only in the GOA. Pollock is an Inshore-Offshore species in both areas. Hence, the Inshore-Offshore definitions would apply to pollock regardless of from which area it was harvested.

The "shoreside processor" definition should apply to the processing of "groundfish," as that term is defined in the Magnuson-Stevens Act, and groundfish implementing regulations. This decision should resolve a technical inconsistency between the I-O definitions used by the AFA for the BSAI and those used by the Federal groundfish regulations for the GOA. This decision also would facilitate single I-O definitions that would be consistent in both areas.

The AFA definition of "shoreside processor" is slightly different from the one used in the Federal groundfish regulations. This results in different meanings of the term being applied in the BSAI and in the GOA. The differences are that the AFA definition refers to "fish" while existing groundfish regulations refer to "groundfish" in two places. The Magnuson-Stevens Fishery Conservation and Management Act (at section 3) defines "fish" as including all forms of marine animal and plant life other than marine mammals and birds. "Groundfish," on the other hand is defined in the regulations as including only those fish for which harvest limits are annually specified pursuant to 50 CFR 679.20(a). Hence, a processor that processes only salmon and crab harvested in the BSAI, for example, would be a "shoreside processor" under the AFA but not under the regulations at 50 CFR part 679. The effect of the Council choosing their preferred alternative should be to prevent the provisions of the AFA from applying to salmon and crab harvested in the BSAI, for example. The AFA section 208(f) provisions would be unaffected because pollock is both a "fish" under the Magnuson-Stevens Act and a "groundfish" under the Federal regulations. Consistent application of the term "shoreside processor" should enhance consistent application of the Inshore-Offshore provisions.

The Council also voted to restrict inshore floating processors to operating in a single geographic location in State waters of the BSAI during a fishing year in which they process pollock from the directed BSAI pollock fishery. This is consistent with historic Inshore-Offshore requirements that limited inshore floating processors to a single geographic location in the BSAI. It will also prevent the two AFA floating processors from gaining

an economic advantage over shorebased processors that were restricted to process pollock at the same plants that they used to process pollock during 1996-97.

The Council defined "shoreside processor", for purposes of implementing the AFA, to mean the physical plant of a shoreside processor, and limit a shoreside processor that qualifies under AFA section 208(f) to receive pollock harvested in the BSAI only at the same physical location at which that shoreside processor's plant processed pollock from the directed fishery during the qualifying years of 1996 and 1997. This will prevent shoreside processors from moving pollock processing activities to plants that did not process pollock in 1996-97.

Lastly, the Council approved extending the sunset date of the current pollock and Pacific cod allocations in the GOA FMP past the current sunset of December 31, 2001 to December 31, 2004. This latter date conforms with the sunset date for Bering Sea/Aleutian Islands pollock allocations mandated by the American Fisheries Act of 1998 (Appendix V). Inshore/Offshore (I/O) allocations of the BSAI and GOA pollock TAC and GOA Pacific cod TAC were originally established under Amendments 18/23 (I/O1) to the BSAI and GOA FMPs, respectively, for 1993-95. The allocations were extended by the Council in Amendments 38/40 (I/O2) to the respective FMPs for 1996-98. In June 1998, the Council recommended another extension of the GOA allocations under Amendment 51 (I/O3). All three amendment packages contained "sunset" provisions, requiring the Council to reexamine the allocations in three years, or see them expire. The Council has linked the sunset dates for BSAI and GOA inshore/offshore allocations since 1992 under all three Inshore/Offshore amendments (GOA Amendments 23, 40, and 51).

The EA/RIR/IRFAs for GOA Amendments 23, 40, and 51 are included here by reference. The Council's preferred alternative to extend the GOA inshore/offshore allocations through December 2004 is within the scope of the EA/RIR for Amendments 51/51. This action is also analyzed in the Public Review Draft of the EA/RIR/IRFA for Amendments 62/62 (NPFMC 1999) (now withdrawn). Upon advice by NMFS, the Council's preferred action for extending the GOA FMP sunset date for pollock and cod allocations is incorporated into this EA/RIR/IRFA because of the interrelatedness of these issues.

Current and potential preemption of resources by one industry sector over another was a focal issue for the Council with regard to setting the original inshore and offshore allocations of pollock and Pacific cod in the GOA and pollock in the BSAI. Though not necessarily a problem at that time in the BSAI, it was apparent that the capacity of the offshore catcher/processor fleet posed a real preemption threat to the inshore processing industry, which relied heavily on the pollock resource. During a series of meetings beginning in 1989, the Council and industry developed analyses of various alternative solutions to the preemption problem and set allocations of pollock and Pacific cod in the GOA and pollock in the BSAI in three separate inshore/offshore amendment packages described above. The inshore-offshore allocation issue became an integral part of the overall effort towards addressing overcapitalization in North Pacific groundfish fisheries beginning in 1992.

Two other management actions (BSAI pollock allocations and vessel replacement restrictions) in the now withdrawn draft EA/RIR/IRFA for Amendment 62/62 have also been incorporated into the current EA/RIR/IRFA for Amendment 61/61 (Amendment 62/62 is renamed and included in Appendix V) and are addressed in the rulemaking associated with this amendment package. The Council approved changing the current inshore/offshore directed pollock allocations in the Bering Sea/Aleutian Islands FMP to conform with those allocations mandated by the AFA. At the same meeting, upon advice by NMFS that the proposed Council action for vessel replacement restrictions may result in a conflict between License Limitation Program and American Fisheries Act requirements, the Council took no action on changing the FMP language on this issue.

NMFS is addressing vessel replacement requirements to conform with the AFA in the rulemaking associated with this amendment package.

11.4 Other AFA Requirements

To accurately monitor the removals of pollock and non-pollock species by members of cooperatives, NMFS will be implementing the scale and observer requirements mandated for catcher/processors by the AFA. These requirements will be implemented via regulation based on direction from Congress, since the Council took no formal action. Two observers will be required to be onboard a catcher/processor at all times while groundfish is being harvested, processed, or received from another vessel in any fishery under the authority of the Council. CDQ trained observers will likely be required to work aboard AFA catcher/processors. Currently it is unknown if adequate numbers of observers with this specialized training are available. NMFS certified scales were required for weighing fish onboard AFA catcher/processors that harvest CDQ pollock beginning on January 1, 1999. The remaining AFA catcher processors will be required to use NMFS certified scales starting on January 1, 2000.

NMFS also intends to implement the inshore pollock cooperatives for the year 2000 according to the structure prescribed in the AFA, which ties harvest vessels to deliver to specific processing plants. This issue is still being reviewed by the Council. Further discussion of pollock cooperative structure alternatives is contained in Chapter 12, and in Appendix IV.

Another issue for which a Council decision is pending is that of processor sideboards. For year 2000, NMFS intends to implement crab processing sideboards as directed by the AFA. Chapter 8 contains a detailed description of that mandate, as well as alternatives for crab and groundfish processing sideboards, which may be approved by the Council at a latter date.

The Council also provided direction on the contents of cooperative agreements and when they are to be submitted. The direction given by the Council is as follows:

1) Cooperative agreements may be one to six years in duration, but must be review annually by the Council if they are more than one year in duration. The Council's intent was that this was considered to be a post- season performance review.

2) Cooperative agreements, regardless of duration, must be submitted to the Council by December 1, of the year prior to the start of fishing.

3) Prohibit cooperative agreements from requiring cooperative vessels to deliver species other than BSAI pollock to their AFA processor.

4) Cooperative agreements shall require the disclosure of catch and bycatch statistics.

11.5 Final Motion as Passed by the Council

Previous sections described the Council's Preferred alternatives. The actual motion as passed is included here for reference.

Council Actions on American Fisheries Act Issues

General : (1) NMFS will manage all fisheries such that sideboards and PSC caps are not exceeded.
(2) all sideboard calculations will be based on best estimates of landed catch.

Catcher Processor Sideboards

Groundfish:

1. Non-pollock groundfish caps (other than Atka mackerel in the central and western Aleutians) for listed vessels will be established on the basis of the percent of landed groundfish catch relative to TAC (of the original 29 vessels) in the pollock and non-pollock fisheries in 1995, 96, and 97 (for Pacific cod, 1997 only; for POP in the Aleutians, 1996 and 1997).
2. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.

PSC Caps:

1. Total PSC cap for listed vessels will be established on the basis of percentage of PSC removals in the non-pollock groundfish fisheries in 1995, 96, and 97.
2. NMFS will allow for directed fishing of non-pollock species such that the total PSC removals do not exceed the PSC cap.
3. The listed vessels' PSC caps will not be apportioned and will be managed under open access season apportionment closures.

Catcher processor sideboards for both groundfish and PSC caps are a package and disapproval of any component would be disapproval of the whole package and returned to the Council for further action.

Catcher Vessel Sideboards

BSAI Groundfish Sideboards

1. Shall be based on vessel catch between 1995-97.
2. Shall be based on non-pollock catch in pollock and non-pollock targets, as a ratio of the AFA vessels' catch to TAC.
3. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.
4. Shall apply to all AFA eligible vessels regardless of participation in a co-op.
5. Shall apply at the AFA CV sector level in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each co-op, and facilitate the formation of an interco-op agreement to monitor the subdivision of the caps at

the co-op level. NMFS shall require each co-op agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.

6. Shall be applied throughout the year, except:
   a. Mothership sector qualified AFA vessels' (21 vessels) CV trawl P. cod sideboards shall be lifted March 1;
   b. Vessels with less than 1700 mt of annual average landed pollock catch history shall be exempt from the catcher vessel trawl P. cod sideboard cap.

BSAI PSC Sideboard Caps

1. Shall be based on the ratio of catch in each non-pollock target to the PSC cap for that target, and shall represent an aggregate cap (as with the AFA CP sector).
2. Attainment by the entire fleet of any PSC cap in any target fishery will close directed fishing to all trawl vessels, even if the AFA vessels have not attained their aggregate PSC cap.
3. PSC species limited to crab and halibut.

GOA Groundfish Sideboards

1. Shall be based on vessel landed groundfish catch between 1995-97.
2. Shall be based on non-pollock landed groundfish catch in non-pollock targets as a ratio of the AFA vessels' catch to TAC.
3. Shall be based on the landed pollock catch in the pollock target as a ratio of the AFA vessels' catch to TAC, and shall be apportioned seasonally.
4. NMFS will determine the bycatch needs for pollock and non-pollock fisheries and allow for directed fishing for non-pollock target species such that the total catch of those species should not exceed the caps.
5. Shall apply to all AFA vessels.
6. Shall apply at the AFA-eligible catcher vessel sector level in 2000. However, NMFS shall publish the proportion of the cap represented by the aggregate catch history of the vessels in each co-op, and encourage the formation of an inter-co-op agreement to monitor the sub-division of the caps at the co-op level. NMFS shall require each co-op agreement to contain provisions that would limit its participants to their collective 1995-97 harvest in other fisheries.
7. Shall be applied throughout the year except vessels with less than 1700 mt of annual average pollock landed catch history shall be exempt from pollock and cod sideboards and from those Gulf groundfish fisheries in which they participated in 1995, 1996, or 1997.

GOA PSC Sideboards Caps

1. Shall be based on the ratio of catch in each non-pollock target to the PSC cap for that target, and shall represent an aggregate cap, sub-divided into deep and shallow water flats.
2. Attainment by the entire fleet of any PSC cap in any target fishery will close directed fishing to all trawl vessels, even if the AFA vessels have not attained their aggregate PSC cap.
3. Shall be apportioned seasonally.

Scallop Sideboards

1. Participation in a co-op is defined as any use of a vessel's catch history by a co-op, whether by direct harvest, lease, sale, or stacking of quota.
2. Measures that would restrict pollock co-op vessels to their aggregate traditional harvest in the scallop fishery in 1997 based on a percentage of the upper end of the state-wide guideline harvest level. The cap would be this percentage applied to the upper end of the state-wide guideline harvest level established each year.

Crab Sideboards

A. Crab Sideboards shall apply to all AFA vessels.

B. Bristol Bay Red King Crab (BBRKC)

1. These AFA vessels that hold a BBRKC endorsement shall be capped at their 5-year (91-97, excluding 94-95) weighted average share. These vessels shall be managed in the aggregate.
2. This share of future catch shall apply to the pre-season BBRKC GHL.

C. Opilio — AFA LLP Alternative 9 Tanner crab endorsed vessels may participate in the opilio fishery if they harvested opilio in more than 3 of 10 years (88-97).

D. Bairdi

1. AFA qualified vessels that receive an LLP endorsement are excluded from participating in the directed bairdi fishery, except as follows: If and when the bairdi rebuilding goal is reached, the only AFA vessels allowed to participate would be those with catch history in 1995 or 96. These vessels would be capped at their aggregate historic catch for 1995-96.

2. If there is a BBRKC fishery where bairdi bycatch is allowed, the AFA Tanner crab endorsed vessels may retain bycatch bairdi.

E. AFA LLP Alternative 9 vessels which hold a LLP endorsement for either the St. Matthews or Pribilof king crab, and had a landing in that fishery in 1995, 96 or 97, may participate in that fishery. For Adak red king crab and brown crab fisheries a qualified vessel which had a landing in the last two years the fishery was open may participate in those fisheries.

F. Prohibit the sale, lease, transfer or stacking of crab LLP licenses or endorsements by AFA-eligible catcher vessels.

Additionally, a committee will be formed to workout implementation issues relating to crab sideboards. This committee will likely meet during July and is scheduled to have a report available for the joint Council/BOF meeting to be held in August.

Non-Sideboard decisions

Compensation in Shoreside Sector Co-ops

1. Provide compensation to vessels with offshore history greater than 499 tons (as per Table 10.5).
2. Utilize the best 2 of 3 years to determine the share of the inshore pollock allocation each vessel brings to a co-op.

AFA Conformance Measures (Amendments 62/62)

Action 1, Alternative 2 Change the current inshore/offshore directed pollock allocations in the BSAI FMP to conform with those allocations mandated by the American Fisheries Act of 1998.

Action 2, Alternative 2 Extend the sunset date of the current pollock and Pacific cod allocations in the GOA FMP to conform with the date mandated for the Bering Sea/Aleutian Islands area in the American Fisheries Act of 1998.

Action 3, Alternative 1 No action. Do not change vessel replacement restrictions in the BSAI FMP.

Additionally:

1. Conforming the definitions of directed pollock harvest in the GOA and BSAI so that they are the same.
2. Substituting the term "groundfish" for "fish" in the AFA definition of "shoreside processor."
3. Applying the inshore/offshore restrictions only to directed fishing for pollock in the BSAI and GOA, and directed fishing for P. cod in the GOA. However, for the purpose of GOA catch accounting, all processors will be categorized "inshore" or "offshore."

Clarify that "shoreside processor" for purposes of Section 208(f) of the AFA means only the physical facility or vessel which processed pollock in the qualifying years 1996 and 1997, and not the entire corporate entity which owns or controls that facility or vessel.

Single Geographic Location

Clarify that AFA eligible inshore processors may only receive BSAI pollock at the same physical location at which that inshore processor received BSAI pollock during the qualifying years 1996 and 1997.

AFA Processor Sideboards

(1) It is the Council's intent to develop and implement processor sideboards as required by AFA. The Council will establish an industry committee to work with state and federal managers to resolve implementation issues. This will be a broad based committee involving both AFA and non-AFA processors, AFA and non-AFA fishermen, as well as other members of industry. The committee will make their report available to the Council and public no later than September 15, 1999.

(2) The Council requests that staff review the current AFA analysis for processor sideboards, paying particular attention to crab processing sideboards, and to supplement the analysis, if necessary, to

assure adequate analysis for crab processor sideboards to consider at October meeting; and to ask NMFS to provide the Council opportunity to comment on the draft regulations for crab processor sideboards (which will go forward as prescribed in the AFA) at the October meeting.

Excessive Share Limits

The Council notices industry that they intend to move forward with an analysis for excessive shares and may not recognize processing history after the date of passage of the AFA.

Cooperative Agreements and Council Review

1. Cooperative agreements may be one to six years in duration, but must be review annually by the Council if they are more than one year in duration. The Council's intent was that this was considered to be a post- season performance review.

2. Cooperative agreements, regardless of duration, must be submitted to the Council by December 1, of the year prior to the start of fishing.

3. Prohibit cooperative agreements from requiring cooperative vessels to deliver species other than BSAI pollock to their AFA processor.

4. Cooperative agreements shall require the disclosure of catch and bycatch statistics.

12.0 CONSISTENCY WITH OTHER APPLICABLE LAW

12.1 Regulatory Impact Review - Summary of Analysis in Chapters 4 through 11

The National Marine Fisheries Service (NMFS) requires the preparation of a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new FMP or significantly alter an existing plan or regulations. The RIR is intended to provide a review of the changes in net and distributional benefits to society associated with proposed regulatory action, as well as a review of the problems and policy objectives prompting the action. The purpose is to ensure that the regulatory agency considers all available (reasonable) alternatives so that public welfare can be enhanced in the most efficient and cost-effective way. The RIR addresses many of the items in the regulatory philosophy and principle of Executive Order 12866. E.O. 12866 requires that the Office of Management and Budget (OMB) review proposed regulatory programs that are considered to be significant. A 'significant' regulatory action is one that is likely to:

1. Have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof, or

4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A statement of the problem and need for action relative to the proposed actions is contained in Chapter 1, which describes the American Fisheries Act and its associated mandates. The objectives of the proposed actions are to implement the provisions of the AFA related to the BSAI pollock fisheries, while protecting other fishing fleets that are not AFA members in the other groundfish, scallop, and crab fisheries under the Council's jurisdiction. The affected fisheries are described in Chapter 2 and the description of the fleet, and impacts of the proposed alternatives were detailed in Chapters 4 through 11. Chapter 11 is a description of the Council's preferred alternatives.

12.1.1 Qualitative Summary of Impacts

Estimating the magnitude of change in net National benefits was not attempted in this amendment package, because data necessary to make that calculation were not available. Cost information, including fixed and variable operating cost statistics, is a crucial element of an effective net benefit analysis. Cost information for the BSAI and GOA groundfish and crab harvesting and processing sectors are currently not available to the analysts. Therefore, it will not be possible to complete a quantitative cost/benefit analysis of the various AFA sideboard alternatives, nor derive comparative net benefit conclusions about the several competing alternatives.

The total economic value of the fishery may increase as a result of the provisions of the AFA which allow pollock to be harvested under cooperatives. However, in general actions proposed within this amendment package are designed to limit the catch of AFA vessels in other groundfish, scallop, and crab fisheries in order to protect the vessels that participated in those fisheries from unwarranted, costly, and undesirable effects

attributable to competitive efficiencies made possible by, for example, cooperative provisions of AFA. Overall the catch of non-pollock species by AFA vessels may be somewhat reduced by these amendments, because the groundfish sideboards are based on landed catch history and the crab sideboards are more restrictive than the current LLP program in most cases. Yet given the open access nature of these fisheries and the capacity that exists in other fleets, any harvest forgone by the AFA fleet will almost certainly be harvested by members of the non-AFA fleets. Differences among the alternatives for effecting sideboards do have the potential for distributional gains and losses; primarily these are trade-offs between the AFA and non-AFA vessels. While relative operating costs and other factors would affect the "net" results of such trade-offs, the basic intent of the sideboards is to maintain the status quo, in terms of the distribution of harvest between AFA and non-AFA vessels, and therefore inter-sectoral "net" impacts would be expected to tend towards neutral.

Sideboard restrictions imposed by the Council's proposed action will likely cause some re-distributional impacts among the fleets, but the changes in net benefits to the US economy would not be expected to change by $100 million annually. However, based upon several of the other criteria articulated in the Executive Order, it appears likely that the proposed sideboard actions could constitute a 'significant' action, as this term is defined, under E.O. 12866.

That is, while none of the proposed sideboards result in economic changes which approach the $100 million annual impact threshold (separately or in combination), several do directly affect in a material way "a sector of the economy", "productivity", and "competition" (each identified as a criterion of concern in the E.O.).

None is expected to (to the best of our knowledge) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; nor (based on the foregoing analysis contained in Chapters 4 through 11) materially alter the budgetary impacts of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof. The AFA-sideboards do, however, potentially raises novel legal and policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

After careful review, the suite of proposed AFA-sideboard actions has been determined to be significant, as this term is defined in the Executive Order.

Notwithstanding this finding (and, while it is not possible to quantitatively measure the "net benefit to the Nation" attributable to this suite of actions), the information and analysis which are available (including the qualitative assessment of costs and benefits cited above) suggest that the National welfare is enhanced (i.e., benefits exceed costs) by adoption of these actions, which include proposed actions allowing the pollock fleets to form cooperatives. This is further substantiated by adherence to the requirements and directives provided in the AFA, as recently pass by the U.S. Congress and signed by the President.

12.2 Initial Regulatory Flexibility Analysis (IRFA)

12.2.1 Introduction

As described in Chapter 1, the AFA mandated the development of sideboard measures to protect other fisheries from potential incursions which could result from the pollock allocations and fishery cooperatives in the pollock fisheries. Many of the participants in these non-AFA fisheries, as well as participants in the AFA fisheries to be regulated by the sideboard measures, are small, independently owned businesses. In certain cases the AFA was explicit with regard to the nature of those sideboards, while in other cases considerable latitude was given to the Council. While the general purpose of the sideboard measures is to maintain the status quo distribution

of harvest activities in the various fisheries, the Council developed a considerable range of alternatives to effect that intent. As described in detail in Chapters 6 and 7, the different alternatives and options will have differing impacts to the participants in the fisheries. One purpose of this IRFA is to describe the differential impacts to small entities resulting from the Council's final decisions on harvester sideboards from June 1999 (processor sideboards are the subject of the analyses in Chapter 8, but the Council has postponed a decision on processor sideboards).

In addition to sideboard measures the AFA prescribes certain measures related to the BSAI pollock fisheries, including the list of vessels eligible to participate in those fisheries. While vessel eligibility is one of the items explicitly outside the Council's purview under the AFA, there are nevertheless implementing regulations pursuant to this action which will affect certain small entities in the fisheries. These are discussed as part of this IRFA.

Finally, the AFA specifies the structure under which inshore pollock cooperatives will be formed. This structure is the subject of considerable debate and is subject to possible change by the Council. In February 1999 the Council requested development of an analysis of "the economic and policy issues associated with the formation of processor/catcher vessel (and mothership/catcher vessel) cooperatives under the AFA, including the alternatives outlined in the independent catcher vessel proposal with a preliminary report to the Council in June of 1999 and a final report in October 1999". During staff discussions it became apparent that this issue was intertwined with both implementation issues related to co-op structure and with mandatory considerations under the Regulatory Flexibility Act (RFA). A contract has been initiated with economists from the University of Washington and Oregon State University to explore these issues. That information, along with a review of legal issues associated with co-op formation, will be reviewed by the Council in late 1999 and could result in actions which change the co-op structure from that described in the AFA. This Chapter contains an initial analysis of these issues related to co-op structure, and the more detailed contract analysis is attached as Appendix IV. Barring further action by the Council, the co-ops will be implemented as prescribed by the AFA.

12.2.2 Statement of Problem

Several years following "Americanization" of the commercial Bering Sea Pollock fishery in US EEZ waters, a problem of over capitalization materialized in the form of excessive fishing capacity. This was associated with expansion of domestic fishing effort, due in part, to an open access fishery management policy. The ensuing "race for fish" fostered economic inefficiencies in both this fishing sector specifically and the nation generally in terms of optimal operational practices and resource utilization, respectively.

To address the problems and allocation conflicts in this fishery, Congress passed the American Fisheries Act in October 1998, which included specific allocations of pollock harvesting and processing by industry sectors, and limitations on the participants in these sectors, as well as the authority to form fishery cooperatives. The potential operational advantages associated with these measures could impact other, non-pollock harvesters and processors. The Act mandates the Council to enact measures to protect those harvesters and processors by placing limits (sideboards) on the activities of the AFA-eligible harvesters and processors. These sideboard measures are the focus of this amendment package.

12.2.3 Objective Statement of Proposed Action and its Legal Basis

With regard to commercial fishing vessels operating in the directed pollock fishery in the BSAI, the American Fisheries Act of 1998 establishes the legal basis for achieving the objective of reducing excessive fishing capacity and management regulatory conditions that could contribute to the creation of an environment capable

of fostering operational inefficiencies in this fishery (Division C, Title II of P.L. 105-277), including co-op formation and development of sideboard measures. Mitigation of potential adverse impacts to non-AFA fishermen and processors is mandated by the Act.

12.2.4 Description of each Action (non-mutually exclusive alternatives)

The following actions implemented under authority of the AFA attempt to meet the objectives described above.

(1) reduce harvest capacity through a vessel buyout program (AFA, Section 207),
(2) revise allocation of sector specific directed fishing allowances (AFA, Section 206),
(3) restrict legal eligibility to specific vessels and processors that may participate in the BSAI commercial pollock fishery (AFA, Section 208 - eligibles, Section 209 - ineligible vessels), and
(4) develop provisions for the establishment of fishery cooperatives (AFA, Section 210) among participants in specific harvest allocation sectors (AFA Section 206), that are eligible to operate in the BSAI commercial pollock fishery through cooperative association in the follow cooperative groupings:
    a. Offshore catcher processor cooperative,
    b. Offshore catcher processor - catcher vessel cooperative,
    c. Mothership - catcher vessel cooperative, and
    d. Shoreside processor - catcher vessel cooperatives.
(5) Establish sideboard measures which restrict the activities of AFA-eligible vessels in non-pollock fisheries.

The primary focus of this amendment package is item 5 above (sideboard restrictions on AFA-eligible entities), and to a more limited extent, item 4 (co-op structure). The full list of alternatives and options is contained in Chapter 1.

12.2.5 Reasoning for, and focus of, an IRFA

To ensure a broad consideration of impacts and alternatives, this IRFA has been prepared pursuant to 5 USC 603, without first making the threshold determination of whether or not this proposed action would have a significant economic impact on small entities. NMFS interprets the intent of the RFA to address negative economic impacts, not beneficial impacts, on small entities and thus such a focus exists in these analyses that are explicitly design to address RFA compliance.

In determining the scope, or 'universe', of the entities to be considered in an IRFA, NMFS generally includes only those entities, both large and small, that can reasonably be expected to be directly or indirectly affected by the proposed action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this analysis.

12.2.6 Requirement to Prepare an IRFA

The RFA first enacted in 1980 was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a federal regulation. Major goals of the

RFA are: (1) to increase agency awareness and understanding of the impact of their regulations on small business, (2) to require that agencies communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and to provide regulatory relief to small entities. The RFA emphasizes predicting impacts on small entities as a group distinct from other entities and on the consideration of alternatives that may minimize the impacts while still achieving the stated objective of the action.

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

The central focus of the IRFA should be on the qualitative economic impacts of a regulation on small entities and on the alternatives that might minimize the impacts and still accomplish the statutory objectives. The level of detail and sophistication of the analysis should reflect the significance of the impact on small entities. Under 5 U.S.C., Section 603(b) of the RFA, each IRFA is required to address:

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

  1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
  2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
  3. The use of performance rather than design standards;
  4. An exemption from coverage of the rule, or any part thereof, for such small entities.

12.2.7 What is a Small Entity?

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

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominate in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor...A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the US including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of $ 3 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the $3 million criterion for fish harvesting operations. Finally a wholesale business servicing the fishing industry is a small businesses if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

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

Affiliation may be based on stock ownership when (1) A person is an affiliate of a concern if the person owns or controls, or has the power to control 50% or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, or (2) If two or more persons each owns, controls or has the power to control less than 50% of the voting stock of a concern, with minority

holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

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

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

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

12.2.8 Description of Fleet, Fishery, & Industry Directly and Reasonably Indirectly Impacted by Proposed Action

12.2.8.1 Inshore Processors

Four of the 8 inshore processors operating in the BSAI pollock fishery are either wholly owned subsidiaries or close affiliates of Japanese multi-national corporations. Due to their affiliation with large foreign entities with more than 500 employees worldwide, none of these processors is a small entity. Of the remaining 4 inshore processors, 3 are owned by U.S. companies that employ more than 500 persons in all their affiliated operations, and therefore cannot be considered small entities. The remaining inshore processor has been identified as closely affiliated with its 5 delivering catcher-boats and the gross annual receipts of the affiliated entities, taken together (the processor and its 5 affiliated catcher-boats), exceed the $3 million criterion for fish harvesting operations. Therefore, none of the inshore processors in the BSAI pollock fishery appear to meet the RFA criteria for small entities.

12.2.8.2 Pollock Catcher Boats

The AFA identifies 120 catcher boats which are eligible to harvest BSAI pollock (7 in the offshore delivery sector, 92 in the inshore sector, 7 in the mothership sector, and 14 which are eligible in both the inshore and mothership sectors). This corresponds closely to the 119 catcher boats active in the BSAI pollock target fisheries which were identified in the inshore/offshore3 analysis. Ownership information from that analysis indicated that, of the 91 catcher boats that operated exclusively or partly in the inshore sector, the available ownership data identify 26 vessels owned, in whole or in part, by inshore processors. These 26 vessels may be considered to be affiliated with their respective inshore processor owners and cannot therefore be considered small entities because none of the inshore processors in the BSAI pollock fishery, themselves, are small entities for RFA purposes. An additional 5 catcher boats have been identified as closely affiliated with an inshore floating processor. These 5 catcher boats, taken together with their affiliated processor, exceed the $3 million criterion for fish harvesting operations and are therefore not believed to be small entities.

Furthermore, an additional 20 catcher boats have ownership affiliations with other catcher boats or catcher processors. The gross annual receipts of each of these groups of affiliated catcher boats is believed to exceed

the $3 million criterion for small entities, when all their fisheries earnings are taken as a whole. The remaining 40 catcher boats operating exclusively or partly in the inshore sector are believed to qualify as "small entities". As earlier suggested, the number of catcher vessels which will be permitted to participate in future inshore pollock target fisheries in the Bering Sea management area is smaller than the totals identified above owing to provisions of the AFA. As noted in the RIR, in the initial 1999 A-1 and A-2 pollock fisheries in the Bering Sea, it is estimated that approximately 53 catcher vessels participated in the harvest of the inshore allocation. In subsequent 1999 Bering Sea pollock openings, additional catcher vessels may choose to enter the fishery, since as many as 106 appear to be "eligible" under AFA criteria for inshore sector delivery. These numbers correspond relatively well with estimates provided to the Council by the Independent Catcher Vessel Association at the January Council meeting and summarized in Table 12.1.

Twenty eight catcher boats operated in the offshore sector exclusively, while 22 operated in both sectors for a total of 50 offshore catcher boats. (As noted, this multi-sector operational pattern is precluded in the future for the seven boats affiliated with the C/P fleet, by provisions of the AFA.) Of the combined at-sea catcher boat sector, 13 have ownership affiliations with large inshore or offshore processors and, therefore, do not meet the $3 million criterion for small entities. An additional 13 catcher boats have ownership affiliations with other vessels or operations that, taken together with their affiliated entities, are believed to exceed the $3 million gross receipts criterion for small entities. The remaining 24 catcher boats operating exclusively or partly in the offshore sector are believed to qualify as "small entities" (and are among the same 120 total vessels described earlier). The number of catcher vessels which will be permitted to participate in future Bering Sea pollock target fisheries is restricted to a slightly smaller total by provisions of the AFA.

12.2.8.3 Affected Small Entities

Establishment of inshore fishery cooperatives among predetermined groups of catcher vessels and a corresponding shoreside processor will establish distinct sets of entities, large and small, and their potential for inter-related economic affects resulting from such affiliation. An attempt to summarize these relationships and numerically identify the number of affected small entities is provide below in Table 12.1.

Table 12.1 Estimated number of entities impacted by establishing shoreside processor-catcher vessel cooperatives under AFA.

Cooperative Delivery Processor	Large Entity Coop	Large Entity's Catcher Vessels	Small Entity Independent Catcher Vessels (Pre Co-op)	Neighboring Small Government Jurisdictions Economically Impacted Entity)	Neighboring Small Government Jurisdiction (NOT Economically Impacted)	Small Non-profit Org.
Peter Pan	1	0[b], 2[c]	3	King Cove		-
Trident	2[d]	4[b], 7[c]	28	Sand Point	Akutan*	-
Alyeska	1[e]	2[b], 4[c]	1	Unalaska		-
Unisea	1	1[b], 0[c]	12	"		-
Westward	1[e]	3[b], 2[c]	3	"		-
Tyson	1[a]	0[b], 6[c]	0	N/A		-
Northern Victor	1[a]	4[b], 2[c]	1	N/A		-
TOTAL Large Entity **Small Entity**	8 **0**	14, 23 **0 0**	 **48**	 0 **3**	 	 ? ?

Source: Includes information provided by the Independent Catcher Vessels Association, January, 1999.

[a] Floating processor with no direct neighboring community impact.

[b] Catcher vessels linked to corresponding shoreside processor via partial ownership.

[c] Catcher vessels majority owned by corresponding shoreside processor

[d] There are two processing facilities associated with one parent corporation (Trident) and could be interpreted as one "shoreside processor" assuming "person" as defined in the Magnuson-Stevens Act.

[e] These companies are subsidiaries of one larger corporation and therefore could be considered as one single "shoreside processor".

* CDQ community claiming no direct economic impact associated with neighboring shoreside plant.

Companies.

Approximately fifty-one (51) small entities, including forty-eight (48) independent catcher vessels delivering to shoreside processor and three (3) neighboring communities, are expected to be directly impacted by the establishment of AFA cooperatives within the inshore component of the BSAI directed pollock fishery. The significance of these impacts on small independent catcher vessel businesses will depend primarily on the contractual relationship between such vessel and their delivery processor as moderated by their collective cooperative agreement and cooperative by-laws. If conventional cooperative motives exist between processor and catcher vessel business members as to a foster mutually beneficial economic relationship, this cooperative action would not be expected to significantly impact a substantial number of these small entities. Indeed, the action would be a net gain for cooperative members and their neighboring communities. Conversely, if the processor associated with the cooperative choose to exploit its position as the sole- purchaser of pollock from cooperative co-members that operate as catcher vessels then it would be highly probable that a substantial number of small entities would be significantly impacted by this action implementing such fishery cooperatives

as authorized under AFA. This could be partially offset by the transfer allowance established under AFA Section 210(b)(6) for up to 10 percent of pollock harvested under such cooperative to be processed by another eligible shoreside processor as defined under Section 208(f) of the AFA. Until empirical data become available, likely after cooperatives have been in operation for two or more years, these questions cannot be definitively addressed.

Communities and groups.

Three neighboring small government jurisdictions (communities) that would be expected to have beneficial economic impacts associated with establishment of AFA inshore fishery cooperatives are Dutch Harbor, Sand Point, and King Cove. Impacts on these communities would be linked with benefits that would result from such AFA cooperatives by the establishment of a stable long-term supply of pollock to their neighboring shore-based processing plant. Such economic stability is expected to translate positively to these three neighboring communities (noting that the Regulatory Flexibility Act is designed to mitigate *adverse* impacts in any case). Insufficient data exists to substantiate any quantitative discussion on the impact AFA fishery cooperatives would have on small non-profit organizations that may be present in these neighboring communities. For these reasons, fishery cooperatives are not expected to create adverse economic impacts on a substantial number of small entities categorized as small government jurisdictions or small non-profit organizations.

The community of Akutan is not identified as a small community that would be impacted by this AFA fishery cooperatives. This determination is based on materials provided in 1995 to the North Pacific Fishery Management Council, NMFS, and the State of Alaska by the Aleutian Pribilof Island Community Development Association on behalf of Akutan. The Council, State of Alaska, and NMFS, agreed these materials sufficiently documented no significant impacts were accrued by the community of Akutan from the presence of the neighboring Trident Seafood processing facility. This claim of no significant economic linkage between the Trident facility and the community of Akutan directly resulted in a 1996 regulatory change that included Akutan as an eligible participant in the CDQ program.

12.2.9 Discussion of the Potential Negative Effects of AFA Inshore Cooperatives on Independent Catcher Vessel Owners

In the absence of sufficient corrective measures, potential will exist for adverse economic impacts to be incurred by independent catcher vessels participating in an AFA inshore cooperative. As currently designed under AFA, an inshore cooperative is established with only one shoreside processor operating as the primary pollock buyer. This shoreside processor may or may not be a member of the inshore co-op. The shoreside processor is an independent business concern and is not collectively owned by co-op member catcher vessels. Therefore, it is not assumed that profit-sharing would exist between the processor and catcher vessels in a given co-op. Inshore cooperatives, which require catcher vessels to deliver to a single shoreside processor, can create an economic environment that reduces price competition for pollock harvested by co-op members. The risk of this kind of biased pricing activity within a cooperative association is reduced if co-op members are successful in legally defending the clause that such an association is "operating for the mutual benefit of the members" as required under Section 1 of the June 24, 1934 Act (15 U.S.C. 521). This is important because without a competitive ex-vessel market for pollock landed by catcher vessel members, an economic incentive is created for the processor to increase its own profits at the expense of catcher vessel co-op members. Specifically, the processor could increase profits by lowering its operating cost through offering catcher vessel co-op members a price lower than the going market price otherwise determined by conditions of supply and demand in the pollock ex-vessel market. The downward shift in prices is similar to what would occur if ex-vessel market demand were reduced. Offsetting this incentive for processors to exploit their co-op catcher vessels may be

the potential need to renegotiate co-op terms annually and provisions of the Council's sideboards which allow catcher vessels to move between processor co-ops, from year-to-year, if they so desire.

Potential exist for significant negative impact on small independent catcher vessels if larger vessel choose not to fish in co-op and compete in the open-access directed pollock fishery. This would occur if the larger catcher vessel held a low catch history and the cost of co-op membership (e.g. high price of leasing sufficient pollock allocation from other co-op members) is greater than the perceived expense associated with harvesting an equivalent amount in the open access fishery. If those catcher vessel operators who choose not to participate in their designated cooperative happen to possess harvest capacities that are significantly larger than other catcher vessel that have substantial catch histories, but, for one reason or another, choose not to enter int a co-op, then in an open access setting, on an initial trip by trip basis, the larger vessels could out compete the smaller independent catcher vessels. This could further penalize the independent catcher vessel owners that choose not to join their designated AFA cooperative. Therefore, even with the option to fish in the open access fishery as an alternative to joining a co-op that is bound to a low-price processor, the open access option has significant economic risk due to their potential inability to compete with the larger catcher vessels on a trip by trip basis, as a result of a difference in harvest capacities. If should also be noted that many of the largest catcher vessels in this fishery are wholly-owned by the very inshore processors which will be negotiating co-op agreements with the small independent vessel operators. This would negatively impact the competitive position of the smaller independent CV, because there would exist a lower quantity of pollock available in the open access fishery. The effect of reduced pollock harvest opportunity in the open access fishery would be a result from the existence of other catcher cooperatives having memberships of catcher vessels that retain legally defensible catch allocations created under the AFA action and thus correspondingly reduced the open access "pool" of available pollock. Thee is no *a priori* means of quantitatively predicting if this outcome will emerge, much less how significant it might be, if it does. However, it may require that the Council monitor this potentially over *time*, to assure that unanticipated adverse impacts on small entities do not result.

12.2.10 Potential Actions to Minimize Negative Impacts of Existing AFA Inshore Co-op Structure

In the context of an RFA analysis, a fish harvesting concern is a small entity if it has annual receipts not in excess of $3 million or it is not dominant in its field (defined in 13 CFR part 121, Standard Industrial Code categorizations). Previous sections of this chapter addressed the issue of defining a small entity specifically. An individual catcher vessel operating in the open access directed pollock fishery would typically meet this criteria. Generally, speaking, a fishery cooperative also is a small entity if it meets this same criteria. However, in the case of AFA cooperatives, both criteria would be exceeded and therefore an AFA cooperative would not be considered a small business concern (and all co-op participants *could* lose their 'small entity' status for RFA purposes).

For AFA participants, membership in a cooperative could modify their previous small entity categorization into what becomes a large entity (the co-op) due to their collective organized affiliation, as defined by the Small Business Administration. An AFA fishery cooperative, and its collective membership, is expected to have gross annual revenues in excess of $3 million and will be dominant in its field.

Therefore, once becoming a co-op member, a catcher vessel may no longer hold the "small business entity" status in the context of an Initial Regulatory Flexibility Analysis. However, the AFA allows catcher vessels to enter and exit a cooperative. As a result, the type of cooperative they leave and/or enter will impacts their economic viability. It is in this context that various types of fishery cooperatives are reviewed for their ability to minimize the negative impacts on small entities associated with this AFA action associated with inshore catcher vessels and processors (again assuming they retain their status as small entities).

12.2.10.1 Inshore Processor as Co-op Member

If the AFA inshore co-op membership is required to included not only the designated catcher vessels but the AFA identified individual inshore processor as well; then the possibility of biased pricing practices between processor and catcher vessels may still exist in the short-term but could be significantly reduced or eliminated in the long-term. It is possible that this would require such inshore cooperatives to have an exemption from US anti-trust laws similar to those established for the off-shore co-ops as articulated in Section 210(d) of the AFA. Legal clarification is required to determine the extent to which NPFMC authority would exist, if at all, to revise the AFA as granted under Section 213(c) to allow for such revision.

Under this situation, assuming its possibility, it would still remain possible for the co-op member processor to only (or primarily) take into consideration the economic interests of those co-op member catcher vessels in which it (i.e. processor) has full or partial ownership. The co-op processor member could adjust ex-vessel price and re-apportion the consolidated catch allocations among such boats in a manner that would achieve cost efficiency among their own vessels but to the potential economic detriment of the other co-op member catcher vessels. However, if the processor is a member of the CV co-op, such biased behavior practiced within the association (co-op) would be in violation of the mutual beneficial clause in the Act of June 25, 1934 authorizing the association's legal existence. For example, if not mutually agreed upon by co-op members, defining mutual benefit in the context of actual versus potential ex-vessel price would likely be a product of a time-consuming legal challenge between co-op member catcher vessels and the processor. However, in the long-term at least, potential for such internal equity violations could be reduced if the shoreside processor were a member of the catcher vessel cooperative and subject to co-op membership authority and subsequent decisions. If inshore processors are not co-op members but only contract with catcher vessel cooperatives that are required under the AFA to sell their designated catch allocation(s) to a corresponding specific processor, then the potential for biased pricing exists.

12.2.10.2 Establishment of Independent Catcher Vessel Cooperatives in the Inshore Sector

Members of the Independent Catcher Vessel Association (ICVA) operate boats in the BSAI directed pollock fishery. ICVA representatives perceive their members will incur negative economic impacts as a result of constraints imposed under the AFA. The AFA requires catcher vessels only to sell their pollock landings to the onshore processor associated with their fishery cooperative membership as defined under the AFA. ICVA has expressed concern about the negative economic impact on inshore catcher vessels that could result from such potential constraints on the competitive ex-vessel price of pollock landed and sold within the current AFA inshore cooperative design.

At its February 1999 meeting in Anchorage, the Council heard public testimony from independent catcher vessel owners recommending Council consideration of specific measures to reduce negative economic impacts of this action on their sector of small entities. Specifically the measure calls for Council action to change AFA language to allow independent catcher vessels to develop cooperatives among themselves. This modification would also eliminate the restriction on independent catcher vessel owners to sell their catch to a specific shoreside processor. The objective of such action is to allow independent catcher vessel owners the opportunity to work collectively as members of a fishery cooperative to maximize the economic returns for the individual allowable catch of pollock established under the AFA. The objective could be realized with the proposed establishment of greater flexibility among catcher vessels to land and sell their pollock to a shoreside processor offering the highest available ex-vessel market price.

The economic implications of this action on independent catcher vessels would be positive. It would also allow them to both retain the exclusive harvesting privileged associated with their co-op's collective pollock allocation as well as provide for their ability to accept the highest ex-vessel price for such pollock landings as offered by an eligible shoreside processor. Conversely, this option could result in unstable supply of pollock to shoreside processors that, during certain time periods, are unable to match ex-vessel price offers made by other shoreside processors. This could occur when various value-added products with different profit margins (e.g. surimi versus fillets) are being produced for different markets by different shoreside processor and thus enabling their offering a significant price differential to independent catcher vessels. Access to this price differential (selling to different plants at different times) would benefit independent catcher vessel but could impose direct negative economic impacts on shoreside processors and indirect negative impacts on small entities dependent on such processors. Based on SBA definition of small entities, shoreside processors are not considered likely candidates for consideration under the RFA with regard to negative impacts of this mitigating measure. However, an undetermined number of shore-based small entities would be indirectly impacted by negative economic consequences of this action. Therefore, consideration of establishing independent catcher vessel cooperatives as a measure mitigating against negative impacts of the current AFA legislation, to some degree becomes a trade-off between reducing direct affect incurred by such catcher vessels while increasing the potential for indirect affects incurred by shore-based small entities; shoreside processors notwithstanding.

Potentially significant economic and institutional efficiencies could be further achieved if inshore catcher vessel operators were allowed to establish cooperatives comprised of memberships which they choose themselves. This is in contrast to the existing inshore AFA co-op structure requiring co-op membership strictly as a function of historical landings to a given processor. Establishment of more efficient long-term cooperative relationships would exist among members if they are based on commonly shared objectives as well as on economic efficiencies of scale create by business affiliation decisions. Sales to a specific processor is a less than optimal index of commonality in operational objectives among a sub-set of inshore catcher vessels. Freedom to establish group membership through independent choice is an important design characteristic for establishing fishery cooperatives with permanence in a free-market system. The long-term viability of co-ops has traditionally proven most successful when they are naturally organized among members who share commitment and loyalty based on their inherent commonalities such as business focus, institutional structure, operational philosophy, geographic relationship, or cultural orientation. Such factors should be given due consideration when managers seek to foster the development of inshore pollock fishery cooperatives that will realize long-term benefits to both the fishery participants specifically, and to the nation in general.

The current AFA co-op structure does not allow a catcher vessel to change its cooperative affiliation from year to year and retain its harvest allocation concurrently. To change co-op membership (and ex-vessel buyer affiliation), the catcher vessel must fish in the open-access fishery for one year (AFA Section 210(b)(5)). For this open-access year, the AFA does not allow the vessel to retain its harvest privilege of pollock "quota share". It must compete for its share of pollock in the race scenario of the open-access fishery. Should the vessel owner choose to join an AFA co-op the following year and sell to the co-op's designated shoreside processor, the harvest privilege for the catcher vessel would be reauthorized. This open-access transition year requirement creates economic and resource inefficiencies associated with the catcher vessel's harvest allocation amount. It is probable that this same amount of pollock would be harvested over a shorter time period in the open-access fishery than if harvested under a co-op arrangement. As a result, open-access pollock harvests would generally yield lower recovery rates and create conditions for less than optimal market prices due to the surge in supply. Furthermore, per unit operating costs would likely be higher for the open-access operation than what could be expected under a more flexible inshore cooperative structure. Generally speaking, the transition year constraint imposed by the AFA on inshore catcher vessel owners who seek to shift their vessel's membership between

AFA co-ops, will create the potential for more, rather than less, inefficiencies in the inshore component of the BSAI directed pollock fishery.

The preceding discussion regarding alternative co-op structure is an initial attempt to define the parameters of this issue and provide some preliminary impact analysis. A separate and more thorough analysis of the issue of co-op structure (and potential alternative structures) is provided in Appendix IV.

12.2.11 Evaluation of Sideboard measures as Approved by the Council

12.2.11.1 Objectives of the Sideboards

The AFA mandates establishment of sideboard provisions to protect non-BSAI-pollock harvesters and processors from the potential impacts resulting from the AFA allocations of BSAI pollock and the ability to create pollock fishery co-ops. In certain cases the AFA was very explicit regarding the nature of the sideboard provisions, but in general left a great deal of latitude to the Council in defining the specifics of these measures. As such the list of alternatives and options analyzed in Chapters 6, 7, and 8 represent a combination of Congressional intent and Council creativity in carrying out Congress' intent. The basic purpose of the proposed measures is to maintain the 'status quo' - i.e., to maintain essentially the current distribution of groundfish and crab catch (and processing) among competing user groups. More specifically, the intent of the measures is to prevent AFA pollock participants from increasing their share of the harvest and processing of non-pollock species under Council jurisdiction.

12.2.11.2 Number and Description of Small Entities Affected

The number of entities affected by the sideboard provisions is not one and the same as the number of entities affected by the co-op structure analyzed in previous sections of this chapter. While section 12.2.8 described affected entities, an additional discussion is provided here to specifically address the entities which would be directly and indirectly impacted by the sideboard restrictions in non-pollock fisheries.

Directly affected vessels, plants, and companies

The entities directly affected by the sideboard limits are a very well defined group as defined by the AFA. Harvesters and processors eligible for the BSAI pollock fisheries, and which may form pollock cooperatives, are either named specifically in the AFA or qualify by meeting specific criteria in the AFA. The Act specifies by name 20 catcher processors (offshore sector), owned by nine different companies, that are eligible to continue participating in the pollock fisheries. The Act further specifies three motherships which are eligible to process the mothership allocation under the Act, and lists 19 catcher vessels which are eligible to fish and deliver that sector's allocation (2 others not specified are eligible through landings history).

For the inshore sector, the Act does not list the eligible plants and catcher vessels by name; rather, it stipulates the landing/processing history necessary for eligibility. For catcher vessels that is >250 mt delivered onshore in 1996, or 1997, or 1998 through September 1, or >40 mt for vessels under 60'. We estimate there are 113 catcher vessels eligible in the mothership and inshore categories (92 for inshore delivery, 7 for mothership delivery, and 14 which qualify for both), and an additional 7 vessels which deliver to the offshore sector. A shoreside processor must have processed >2,000 metric tons in both 1996 and 1997 to be eligible, except that processors who did less than 2,000 mt in both 1996 and 1997 would also be eligible, but restricted from processing more than 2,000 mt in any future year under the Act. We estimate that eight plants, owned by 7 companies fall under these definitions.

Based on information from section 12.2.8, as well as from information contained in Amendments 51/51 (the inshore/offshore 3 analysis) it appears that the only directly affected entities which would be classified as 'small entities' would be a subset of the 113 catcher vessels described above. Essentially this would be the approximately 50 catcher vessels that are predominately independently owned, as described earlier. The remaining entities, including catcher/processors, motherships, shore plants, and catcher vessels owned by larger companies would exceed the criteria for defining small entities.

Indirectly impacted entities

Depending on the specific sideboard alternatives chosen, a number of small, coastal communities in Alaska could be impacted by the proposed actions - section 12.2.8 identified 3 specific communities. Sideboard limitations may indirectly impact coastal communities in which vessels are homeported, or to which they deliver fish for processing, and could be either positive or negative depending on the specific alternatives chosen. Up to 60 communities appear to meet the definition of small entity for purpose of the IRFA.

Indirectly impacted entities are a consideration relative to the proposed action(s), since it is these vessels that the sideboard measures are intended to protect. These are vessels which participate in fisheries other than BSAI pollock and would be expected to benefit from the proposed sideboard measures, to the extent the sideboard measures are restrictive to the approximately 50 AFA vessels classified as small entities. Or, to the extent less restrictive sideboard measures approved, these vessels would be 'negatively impacted', relative to more restrictive sideboard measures. Essentially, sideboard measures were intended to protect the non-AFA vessels, many of which are small entities - the nature of those sideboard measures represents a tradeoff between AFA and non-AFA vessels. Taking BSAI and GOA groundfish and crab fisheries into account, there are as many as 1,300 additional catcher vessels which would likely qualify as small entities and which would be indirectly impacted (protected to varying degrees) by the proposed measures. This includes both fixed gear and trawl fishing vessels, ranging from 30' to over 100' in length, many of which are independently owned and operated.

12.2.11.3 Impacts of Approved Sideboard Measures

While the sideboards are generally designed to preserve the status quo distribution of harvest in the fisheries, the Council considered and analyzed a wide range of alternatives and options to effect such sideboards. These are listed in Chapter 1, detailed and analyzed in Chapters 4 through 8, and are sununarized in Chapter 11 which describes the Council's final Preferred Alternative. The scope and nature of the proposed sideboard measures is intended to maintain status quo catch and processing distributions of groundfish and crab between AFA and non-AFA operations. The small entities directly affected (limited) by the proposed actions would likely be better off without sideboard restrictions in non-pollock fisheries, but the Act does not allow for that alternative (indeed the sideboards are legislated and 'mitigation' of the effects of these sideboards would counter the very intent of the Act). On average, these entities should be no worse off with the sideboard limits, assuming that they are structured to allow catch up to the amounts previously enjoyed. Among the proposed sideboard alternatives and options there are certainly some that are more restrictive than others, and some of those could be expected to create significant impacts relative to other options which could be chosen. For example, the use of landed catch only (as opposed to total catch) will generally reduce the amount of the sideboard limit for each species, although for catcher vessels (the only small entities involved) this reduction is not as significant as for the catcher/processor sector. Reductions in the level of the sideboard limit for AFA vessels will be offset, as small entities in the non-AFA sector will realize that amount of gain in the amount of harvest available to them.

As another example, in the case of sideboards to limit catcher vessels activity in crab fisheries there are options which range from limiting those vessels to their past catch history, to denying them access to certain crab fisheries altogether. In this case, the differences among the options are very significant, and in fact could impact some catcher vessels disproportionately. For catcher vessels which are AFA-qualified, but rely to a great extent on fisheries other than BSAI pollock, restricting the overall catcher vessel sector to an aggregate historical limit will disproportionately burden those operators, who would now have to compete with other vessels for a relatively smaller quota apportionment. In the case of AFA vessels which have significant reliance on crab fisheries, losing their ability to fish crab at all would be expected to have a significant, negative impact, based on current definitions of significance related to gross revenue losses (and a substantial number of these vessels would be classified as small entities).

More restrictive sideboard measures will generally create greater impacts to the directly affected entities (AFA vessels), which would be offset by greater benefits to the indirectly affected entities (the non-AFA vessels being protected). The proposed measures themselves are designed to protect one group of small entities from the impacts of a separate Congressional action - the Act itself. Within the suite of alternative sideboard measures there are a range of potential impacts to the directly affected small entities. In its deliberations, the Council recognized that certain choices from among those alternatives would serve to reduce impacts to those small entities relative to other options available.

12.2.11.4 Measures to Mitigate Impacts of Sideboard Measures

Examples of decision areas which could result in significant impacts were summarized above. The Council's final Preferred Alternative generally serves to maintain the status quo and keep in place the current catch distributions between AFA and non-AFA vessels. For catcher vessels in the groundfish fisheries the Council's Preferred Alternative generally uses their aggregate proportion of catch from 1995 through 1997 as the basis for their allowable catch in future years, under the AFA. In order to mitigate unintended impacts to certain participants in these fisheries, the Council included an exemption to the basic sideboard limit - that is, AFA vessels with less than 1,700 mt of BSAI pollock catch are not included in the sideboard limit, and will be allowed to continue unrestricted in the other fisheries in which they are engaged. The group of vessels most impacted by this exemption are those which historically focused their efforts in the cod fisheries, but did enough pollock to qualify under the AFA. Without the exemption these vessels would have been disproportionately and negatively impacted by the sideboard limits. As structured they will be able to enjoy the benefits of the pollock fishery co-ops as well as continue their unrestricted involvement in other fisheries.

In general the Council enacted similar restrictions for the crab fisheries, with some important differences which further restrict the AFA vessels' participation, but which also include some mitigating measures for small entities in that sector. For Bristol Bay Red King Crab (BBRKC), the Council's Preferred Alternative restricts the AFA eligible vessels to an aggregate amount based on historical participation, much as with groundfish. However, the Council included a wider range of years to define that participation (1991 through 1997 as opposed to only 1995 through 1997) which included years of larger harvest by those vessels, and which therefore increased the level of their sideboard limit (from about 9% up to nearly 13% of the available quota).

As with the example given in groundfish, there were some AFA vessels which actually had the majority of their income from fisheries other than pollock - specifically there were three AFA vessels identified in the analyses which had significant and long-term participation in the opilio crab fisheries. Subjecting these vessels to an aggregate sideboard limit (shared with the other AFA vessels) would have resulted in disproportionate and negative impacts to those vessels - essentially they would lose their ability to continue their historical fishing practices. To mitigate this issue, the Council chose a compromise which generally restricted AFA vessels'

participation in opilio, but allowed those with a high dependence to continue. Specifically the Council Preferred Alternative only allows AFA vessels to fish opilio if they fished opilio in at least four years between 1988 and 1997; however, if they do qualify they may fish unrestricted along with other crab vessels. The result of that action is that 5 of the 39 potential 'crossover' vessels (mostly small entities) will be allowed to continue in the opilio fishery.

12.2.12 Vessels excluded from the pollock fisheries

Through analysis of the eligibility requirements, combined with testimony to the Council from affected individuals, it has become apparent that at least two (possibly three) vessels with history in the BSAI pollock fisheries have been excluded from future participation in that fishery by the eligibility requirements contained in the AFA. While these vessels have historical participation, they did not participate in the recent (1996/1997) period required by the Act. While these vessels do not comprise a 'substantial number' of small entities (relative to the total which qualify under the more general license limitation or to the total number of AFA-eligible vessels), the exclusion could be expected to have a significant, negative impact on their operations, to the extent that pollock fishing in the BSAI historically contributed a large portion of their total fisheries income.

12.2.12.1 Measures to Mitigate Impacts of this Exclusion

The list of eligible vessels is one of the two sections of the AFA that the Council cannot alter. The exclusion of the vessels mentioned above, while of concern to the Council, is not an issue for which the Council can evaluate or consider mitigating alternatives. Only Congress, through amendment to the AFA, could effect such a change. Therefore, the exclusion is not being analyzed as part of the Council's decision; rather it is being mentioned as part of an overall package, comprised of both Council actions and Congressional mandates, which will be implemented through a regulatory package being promulgated by NMFS. A potentially compensating factor is that they will not be subject to sideboard restrictions in other fisheries, and can therefore attempt to make up lost revenues by increasing participation in other fisheries. Other mitigating alternatives are beyond the purview of the Council.

12.2.13 Recordkeeping and reporting requirements (RRR)

Additional recordkeeping and reporting requirements would be expected as a result of the creation of several inshore cooperatives that each independently utilize its own unique quantity of pollock catch as an aggregate of the individual allocation of its member catcher vessels. The new recordkeeping and reporting requirements would be required to be submitted to NMFS by the fishery cooperative management, not by each individual catcher vessel operating as a cooperative member. Therefore, this additional recordkeeping and reporting requirement would not adversely impact small entities. Inshore AFA cooperatives would not qualifiy as small entities as defined by the Small Business Administration.

The proposed sideboard measures are not expected to require additional recordkeeping or reporting for the small entities identified; rather, the burden of accounting for the sideboard limits will fall to NMFS. Participation in pollock co-ops may necessitate additional paperwork burdens for these entities within the structure of the co-op agreements in terms of catch and bycatch allocations and accounting for those allocations; however, such participation would be voluntary and is outside the scope of the sideboard provisions. Processor sideboard provisions, depending on the level at which they are implemented, could entail additional recordkeeping and reporting for those processors, but they are not defined as small entities for purposes of the IRFA, nor have decisions been made yet with regard to processor sideboards.

(See Appendix VI - Supporting Statement for Collection of Information)

12.2.14 Relevant Federal Rules

This action is authorized by the AFA in conjunction with the Magnuson-Stevens Fisheries Conservation and Management Act as amended in 1996.

12.2.15 Summary and Conclusions

12.2.15.1 Co-op structure

Independent catcher vessel operators participating in the inshore component of the BSAI directed pollock fishery will be affected, both positively and negatively, by the establishment of AFA fishery cooperatives. However, as currently designed, independent catcher vessels could be expected overall to be worse off under the AFA cooperative structure than compared with their experience under the open-access fishery of recent years. The primary benefit to catcher vessel participation as an AFA inshore co-op member is that the vessel owner receives some assurance for the option of catching a specific amount of pollock equal to the vessel's catch history as determined by NMFS. The primary disadvantage is that this allocation may not be optimized for its economic value given the absence of a competitive ex-vessel market with more than one potential buyer. Furthermore, the potential catch would likely be reduced for independent catcher vessels that do not join an AFA cooperative.

No catch allocation is granted to catcher vessels whose owners choose not to participate in an AFA co-op. Therefore, they must operate in the open access fishery that will, in all probability, be composed of a smaller "pool" of allowable catch. This reduction in allowable catch in the open access pollock fishery will occur in the amount equal to the reserved catch allocations granted by NMFS to catcher vessel operations that do choose to join an AFA co-op. As a result, non-cooperative catcher vessels with smaller catch capacities may be disadvantaged in the open-access fishery. This condition could be exacerbated in the event that catcher vessels with small catch histories, but with large per-trip harvest capacity, choose not to join a co-op and intentionally target pollock in the open-access harvest "pool". Given the predicably shorter open-access fishery resulting from a reduced available catch, the smaller the per-trip harvest capacity of an inshore independent catcher vessel, the less successful its operation would be in the open access fishery created under the AFA.

Given their expected annual gross revenues of less than $3 million, many operators in the fishery impacted by the proposed action are small entities. For many of the catcher vessels operating in the inshore component of the directed pollock fishery, it may be assumed that these entities are independently owned and operated. In addition, there are numerous catcher vessels in this fishery that, to some degree or another, are a blend of being partially-owned or fully-owned by shore-side processors. However, the ownership characteristics of catcher vessels operating in the fishery has not been thoroughly analyzed to determine what degree, if any, they are affiliated with a larger parent company. Furthermore, because NMFS cannot quantify the exact number of small entities that may be indirectly affected by this action, or quantify the magnitude of those effects, NMFS cannot make a finding of non-significance under the RFA, with regard to issues of inshore co-op structures.

12.2.15.2 Sideboard measures

Sideboard limits are established to limit the amount of non-BSAI pollock which can be harvested by AFA-eligible vessels. Generally these limits freeze in place the current distribution of catch between AFA and non-AFA vessels. More restrictive sideboard options considered would negatively impact the small entities involved in the AFA fleet, relative to other options, though it is uncertain whether such differences would be significant. More lenient sideboard options would generally benefit the AFA fleet, though it would be at some expense to

the remaining (non-AFA) fleet, many of whom are also small entities. In essence, the degree of sideboard limits represents a trade-off in impacts to two sectors of small entities, as is the case with most allocation-based management actions.

While the differences in sideboard options likely are not significant, particularly given the mitigating measures included, they do affect a substantial number of small entities. In combination with the co-op structure issues described in this section, it is impossible to make a finding of non-significance with regard to the collective actions in this amendment package

12.3 Section 303(a)(9) -Fisheries Impact Statement

This section of the Magnuson-Stevens Act requires that any management measure submitted by the Council take into account potential impacts on the participants in the fisheries, as well as participants in adjacent fisheries. Chapters 6, 7, 8, and 11 detailed the expected impacts of the alternatives on the participants (AFA eligible vessels and conversely, the non-AFA vessels). The AFA established the pollock limited harvesting and processing entities, the allocations among the sectors, and the provisions for development of cooperatives. The AFA also established provisions for the development of sideboards, which are in fact designed to address impacts to other fisheries participants, and the focus of this amendment package is on these very sideboards; i.e., the whole scope of the proposed measures is to mitigate impacts on other fisheries which may arise as a result of the Act itself. The very nature of the sideboards is to preserve the status quo, thereby minimizing the impacts of the Act and fishery cooperatives on the non-AFA fleets. The development of these sideboard measures, based on the analyses in the preceding chapters, is not expected to have significant impacts on other fisheries, other than to protect their share of various fisheries resources. Basing the sideboard provisions on landed catch will increase the protection afforded to other fleets. Management of these caps should allow the AFA fleet to still conduct directed fisheries for species which they targeted during the years 1995-97, though perhaps at somewhat reduced levels.

12.4 Section 303(b)(6) - Limited Entry Considerations

The AFA prescribed a limited entry program for the BSAI pollock harvest and processing sectors by naming the specific catcher processors, catcher vessels, motherships, and shoreside processors which are eligible. Nothing in this proposed amendment package addresses or attempts to revise that prescribed set of players. The sideboard measures are intended to limit harvest and processing by the AFA-eligible participants in non-pollock fisheries, and with the exception of alternatives in the crab sideboards, do not propose to further limit entry in these fisheries. The notable exception is contained within certain alternatives which would prohibit AFA vessels from continuing to fish in certain crab fisheries, where they are otherwise qualified under the Council's license limitation program (LLP).

In October of 1998 the Council revised its crab LLP by imposing additional recent participation requirements (had to have fished in 1996, 1997, or 1998 in addition to the original requirements). This action reduced the overall crab fleet from 365 to approximately 297 vessels. Of the remaining 297 vessels approximately 40 of those are also AFA-eligible and are limited, for certain species/area endorsements, from future participation in the crab fisheries. In some crab fisheries they are also limited to their historic portion of the crab GHL. The Bristol Bay red king crab fishery and opilio fisheries are good examples. In the BBRKC fishery, AFA vessels must be LLP qualified to fish. They will then be capped at their average landings history for the five years the fishery was open from 1991-97. The opilio fishery was treated differently. A vessel must have had landings in the opilio fishery in at least four years from 1988-97 to be allowed to participate in this fishery under the AFA sideboards. This action reduced the number of vessels eligible to participate in the fishery by

about 35 when compared to the LLP program. In bairdi, no fishing will be allowed unless and until the biomass is rebuilt.

A separate analysis was prepared which will be incorporated as part of the overall AFA amendment package. That analysis, prepared by Dr. Scott Matulich of Washington State University under contract to the Council, examined the issue of relative dependence on the crab fisheries of all participants, including the AFA vessels which could be most directly impacted. That analysis is included as Appendix III to this document.

12.5 National Standards

The following National Standards contained within the Magnuson-Stevens Act are addressed, where relevant to the actions taken by the Council under this amendment package. Most of these standards would not be affected by the proposed sideboard provisions - while fundamental in-season management changes are implied by some of the alternatives, they do not change the overall management structure relative to the National Standards.

National Standard 1 - Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery. The Council's preferred alternative would not impact National Standard 1.

National Standard 2 - Conservation and management measures shall be based upon the best scientific information available. Information contained in this amendment package was derived from the best sources of information available to Council and NMFS Staff.

National Standard 3 - To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination. Nothing within this amendment package will impact how NMFS and ADF&G manage fish stocks in relation to National Standard 3.

National Standard 4 - Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be (A) fair and equitable to all such fishermen, (B) reasonably calculated to promote conservation, and (C) carried out in such a manner that no particular, individual, corporation, or other entity acquires an excessive share of such privileges.

Specific limited entry and allocative measures were prescribed by the AFA, but those are not the focus of this amendment package. Allocation of pollock and associated groundfish among the co-ops will be required by NMFS, but that is also fairly prescribed by the Act. Within the possible sideboard measures there are alternatives which will impact the distribution of the groundfish sideboard allowances among sector or co-ops, although such sideboards are generally prescribed by the Act. The Act also contains provisions to limit shares of harvest and processing, though again those measures are not included in this amendment package. One aspect of the sideboard which could further limit entry are options which would preclude AFA catcher vessels from further participation in certain BSAI crab fisheries. This exclusion is based on AFA, LLP, and participation history in the crab fisheries, not on any criteria of state residency.

National Standard 5 - Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose. The Council's preferred alternatives provided protections for non-AFA fishing fleets as mandated

by the AFA. Within that system, efficient operations (both AFA and non-AFA) should continue to compete for the non-AFA species.

National Standard 6 - Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The passage of the AFA precludes most of the fishing fleet from future participation in the BSAI pollock fisheries. Conversely, the sideboard provisions developed by the Council are designed to limit the AFA vessels and processors in terms of what they can do in the non-pollock fisheries. The combined effect of these actions will be to lock in place the relative catch distributions by sector and species. Relative to the status quo fisheries, this will decrease the flexibility to enter and exit fisheries and decrease the ability to respond to variations and contingencies among fisheries, such as quota changes, price changes, and market fluctuations.

National Standard 7 - Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

Primary costs associated with the proposed measures (other than opportunity costs discussed above) will fall on the NMFS as additional implementation, monitoring, and enforcement requirements are created. Depending on the level at which sideboard limits are applied, these additional costs to the agency could be significant. Chapter 9 addresses these issues in some detail.

National Standard 8 - Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse impacts on such communities.

While none of the proposed actions directly involve community level issues, some of the sideboard provisions could indirectly affect coastal communities to the extent that the vessels directly affected are homeported or deliver catch to those communities for processing. No attempt has been made to quantify those impacts as they are generally expected to be along the lines of status quo - i.e., the provisions are designed to maintain the current distributions of catch by species among the various fisheries participants.

National Standard 9 - Conservation and management measures shall, to the extent practicable, (A) minimize bycatch, and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

Sideboard caps were calculated based on landed catch history of the AFA fleet. The Council selected this option because they did not wish to give catch history credit for discarded fish. The extent to which the discard rates of the fleets vary by species was provided in Chapter 11.

The Council may reduce the bycatch caps overall through the amendment process. One of the issues discussed in this analysis is the necessary bycatch associated with current fisheries, now that bottom trawling is banned for pollock. However, any savings in that area is likely to be small, since the pollock fisheries have historically accounted for a small portion of the crab and halibut bycatch.

National Standard 10 - Conservation and management measures shall, to the extent practicable, promote the safety of life at sea.

The preferred alternatives selected by the Council should not have any negative impacts on the safety of life at sea.

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APPENDIX I

TITLE II—FISHERIES

Subtitle I—Fishery Endorsements

SEC. 201. SHORT TITLE.

This title may be cited as the "'American Fisheries Act."

SEC. 202. STANDARD FOR FISHERY ENDORSEMENTS.

(a) STANDARD.—Section 12102(c) of title 46, United States Code, is amended to read as follows—

''(c)(1) A vessel owned by a corporation, partnership, association, trust, joint venture, limited liability company, limited liability partnership, or any other entity is not eligible for a fishery endorsement under section 12108 of this title unless at least 75 per centum of the interest in such entity, at each tier of ownership of such entity and in the aggregate, is owned and controlled by citizens of the United States.

''(2) The Secretary shall apply section 2(c) of the Shipping Act, 1916 (46 App. U.S.C. 802(c)) in determining under this subsection whether at least 75 per centum of the interest in a corporation, partnership, association, trust, joint venture, limited liability company, limited liability partnership, or any other entity is owned and controlled by citizens of the United States. For the purposes of this subsection and of applying the restrictions on controlling interest in section 2(c) of such Act, the terms 'control' or 'controlled'—

''(A) shall include—

''(i) the right to direct the business of the entity which owns the vessel;

''(ii) the right to limit the actions of or re-place the chief executive officer, a majority of the board of directors, any general partner, or any person serving in a management capacity of the entity which owns the vessel; or

''(iii) the right to direct the transfer, operation or manning of a vessel with a fishery endorsement; and

''(B) shall not include the right to simply participate in the activities under subparagraph (A), or the use by a mortgagee under paragraph (4) of loan covenants approved by the Secretary.

''(3) A fishery endorsement for a vessel that is chartered or leased to an individual who is not a citizen of the United States or to an entity that is not eligible to own a vessel with a fishery endorsement and used as a fishing vessel shall be invalid immediately upon such use.

"(4)(A) An individual or entity that is otherwise eligible to own a vessel with a fishery endorsement shall be ineligible by reason of an instrument or evidence of indebtedness, secured by a mortgage of the vessel to a trustee eligible to own a vessel with a fishery endorsement that is issued, assigned, transferred or held in trust for a person not eligible to own a vessel with a fishery endorsement, unless the Secretary determines that the issuance, assignment, transfer, or trust arrangement does not result in an impermissible transfer of control of the vessel and that the trustee—

"(i) is organized as a corporation, and is doing business, under the laws of the United States or of a State;

"(ii) is authorized under those laws to exercise corporate trust powers;

"(iii) is subject to supervision or examination by an official of the United States Government or a State;

"(iv) has a combined capital and surplus (as stated in its most recent published report of condition) of at least $3,000,000; and

"(v) meets any other requirements prescribed by the Secretary.

"(B) A vessel with a fishery endorsement may be operated by a trusuee only with the approval of the Secretary.

"(C) A right under a mortgage of a vessel with a fishery endorsement may be issued, assigned, or transferred to a person not eligible to be a mortgagee of that vessel under section 31322(a)(4) of this title only with the approval of the Secretary.

"(D) The issuance, assignment, or transfer of an instrument or evidence of indebtedness contrary to this paragraph is voidable by the Secretary.

"(5) The requirements of this subsection shall not apply to a vessel when it is engaged in fisheries in the exclusive economic zone under the authority of the Western Pacific Fishery Management Council established under section 302(a)(1)(H) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852(a)(1)(H)) or to a purse seine vessel when it is engaged in tuna fishing in the Pacific Ocean outside the exclusive economic zone of the United States or pursuant to the South Pacific Regional Fisheries Treaty, provided that the owner of the vessel continues to comply with the eligibility requirements for a fishery endorsement under the federal law that was in effect on October 1, 1998. A fishery endorsement issued by the Secretary pursuant to this paragraph shall be valid for engaging only in fisheries in the exclusive economic zone under the authority of such Council, in such tuna fishing in the Pacific Ocean, or pursuant to such Treaty.

''(6) A vessel greater than 165 feet in registered length, of more than 750 gross registered tons, or that has an engine or engines capable of producing a total of more than 3,000 shaft horsepower is not eligible for a fishery endorsement under section 12108 of this title unless—

''(A)(i) a certificate of documentation was issued for the vessel and endorsed with a fishery endorsement that was effective on September 25, 1997;

"(ii) the vessel is not placed under foreign registry after the date of the enactment of the American Fisheries Act; and

''(iii) in the event of the invalidation of the fishery endorsement after the date of the enactment of the American Fisheries Act, application is made for a new fishery endorsement within fifteen (15) business days of such invalidation; or

''(B) the owner of such vessel demonstrates to the Secretary that the regional fishery management council of jurisdiction established under section 302(a)(1) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852(a)(1)) has recommended after the date of the enactment of the American Fisheries Act, and the Secretary of Commerce has approved, conservation and management measures in accordance with such Act to allow such vessel to be used in fisheries under such council's authority.''

(b) PREFERRED MORTGAGE.—Section 31322(a) of title 46, United States Code is amended—

(1) by striking ''and'' at the end of paragraph (2);

(2) by striking the period at the end of para-graph (3)(B) and inserting in lieu thereof a semicolon and ''and''; and

(3) by inserting at the end the following new paragraph:

''(4) with respect to a vessel with a fishery endorsement that is 100 feet or greater in registered length, has as the mortgagee—

''(A) a person eligible to own a vessel with a fishery endorsement under section 12102(c) of this title;

''(B) a state or federally chartered financial institution that satisfies the controlling interest criteria of section 2(b) of the Shipping Act, 1916 (46 U.S.C. 802(b)); or

''(C) a person that complies with the provisions of section 12102(c)(4) of this title.''

SEC. 203. ENFORCEMENT OF STANDARD.

(a) EFFECTIVE DATE.—The amendments made by section 202 shall take effect on October 1, 2001.

(b) REGULATIONS.—Final regulations to implement this subtitle shall be published in the Federal Register by April 1, 2000. Letter rulings and other interim interpretations about the effect of this subtitle

and amendments made by this subtitle on specific vessels may not be issued prior to the publication of such final regulations. The regulations to implement this subtitle shall prohibit impermissible transfers of ownership or control, specify any transactions which require prior approval of an implementing agency, identify transactions which do not require prior agency approval, and to the extent practicable, minimize disruptions to the commercial fishing industry, to the traditional financing arrangements of such industry, and to the opportunity to form fishery cooperatives.

(c) VESSELS MEASURING 100 FEET AND GREATER.—

(1) The Administrator of the Maritime Administration shall administer section 12102(c) of title 46, United States Code, as amended by this subtitle, with respect to vessels 100 feet or greater in registered length. The owner of each such vessel shall file a statement of citizenship setting forth all relevant facts regarding vessel ownership and control with the Administrator of the Maritime Administration on an annual basis to demonstrate compliance with such section. Regulations to implement this subsection shall conform to the extent practicable with the regulations establishing the form of citizenship affidavit set forth in part 355 of title 46, Code of Federal Regulations, as in effect on September 25, 1997, except that the form of the statement under this paragraph shall be written in a manner to allow the owner of each such vessel to satisfy any annual renewal requirements for a certificate of documentation for such vessel and to comply with this subsection and section 12102(c) of title 46, United States Code, as amended by this Act, and shall not be required to be notarized.

(2) After October 1, 2001, transfers of ownership and control of vessels subject to section 12102(c) of title 46, United States Code, as amended by this Act, which are 100 feet or greater in registered length, shall be rigorously scrutinized for violations of such section, with particular attention given to leases, charters, mortgages, financing, and similar arrangements, to the control of persons not eligible to own a vessel with a fishery endorsement under section 12102(c) of title 46, United States Code, as amended by this Act, over the management, sales, financing, or other operations of an entity, and to contracts involving the purchase over extended periods of time of all, or substantially all, of the living marine resources harvested by a fishing vessel.

(d) VESSELS MEASURING LESS THAN 100 FEET.—The Secretary of Transportation shall establish such requirements as are reasonable and necessary to demonstrate compliance with section 12102(c) of title 46, United States Code, as amended by this Act, with respect to vessels measuring less than 100 feet in registered length, and shall seek to minimize the administrative burden on individuals who own and operate such vessels.

(e) ENDORSEMENTS REVOKED.—The Secretary of Transportation shall revoke the fishery endorsement of any vessel subject to section 12102(c) of title 46, United States Code, as amended by this Act, whose owner does not comply with such section.

(f) PENALTY.—Section 12122 of title 46, United States Code, is amended by inserting at the end the following new subsection:

"(c) In addition to penalties under subsections (a) and (b), the owner of a documented vessel for which a fishery endorsement has been issued is liable to the United States Government for a civil penalty of up to $100,000 for each day in which such vessel has engaged in fishing (as such term is defined in section 3 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802)) within the exclusive economic zone of the United States, if the owner or the representative or agent of the owner knowingly falsified or concealed a material fact, or knowingly made a false statement or representation with respect to the eligibility of the vessel under section 12102(c) of this title in applying for or applying to renew such fishery endorsement."

(g) CERTAIN VESSELS.—The vessels EXCELLENCE (United States official number 967502), GOLDEN ALASKA (United States official number 651041), OCEAN PHOENIX (United States official number 296779), NORTHERN TRAVELER (United States official number 635986), and NORTHERN VOYAGER (United States official number 637398) (or a replacement vessel for the NORTHERN VOYAGER that complies with paragraphs (2), (5), and (6) of section 208(g) of this Act) shall be exempt from section 12102(c), as amended by this Act, until such time after October 1, 2001 as more than 50 percent
of the interest owned and controlled in the vessel changes, provided that the vessel maintains eligibility for a fishery endorsement under the federal law that was in effect the day before the date of the enactment of this Act, and unless, in the case of the NORTHERN TRAVELER or the NORTHERN VOYAGER (or such replacement), the vessel is used in any fishery under the authority of a regional fishery management council other than the New England Fishery Management Council or Mid-Atlantic Fishery Management Council established, respectively, under sub-paragraphs (A) and (B) of section 302(a)(1) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852(a)(1)(A) and (B)), or in the case of the EXCELLENCE, GOLDEN ALASKA, or OCEAN PHOENIX, the vessel is used to harvest any fish.

SEC. 204. REPEAL OF OWNERSHIP SAVINGS CLAUSE.

(a) REPEAL.—Section 7(b) of the Commercial Fishing Industry Vessel Anti-Reflagging Act of 1987 (Public Law 100–239; 46 U.S.C. 12102 note) is hereby repealed.

(b) EFFECTIVE DATE.—Subsection (a) shall take effect on October 1, 2001.

Subtitle II—Bering Sea Pollock Fishery

SEC. 205. DEFINITIONS.

As used in this subtitle—

(1) the term ''Bering Sea and Aleutian Islands Management Area'' has the same meaning as the meaning given for such term in part 679.2 of title 50, Code of Federal Regulations, as in effect on October 1, 1998;

(2) the term ''catcher/processor'' means a vessel that is used for harvesting fish and processing that fish;

(3) the term ''catcher vessel'' means a vessel that is used for harvesting fish and that does not process pollock onboard;

(4) the term ''directed pollock fishery'' means the fishery for the directed fishing allowances allocated under paragraphs (1), (2), and (3) of section 206(b);

(5) the term ''harvest'' means to commercially engage in the catching, taking, or harvesting of fish or any activity that can reasonably be expected to result in the catching, taking, or harvesting of fish;

(6) the term ''inshore component'' means the following categories that process groundfish harvested in the Bering Sea and Aleutian Islands Management Area:

(A) shoreside processors, including those eligible under section 208(f); and

(B) vessels less than 125 feet in length overall that process less than 126 metric tons per week in round-weight equivalents of an aggregate amount of pollock and Pacific cod;

(7) the term ''Magnuson-Stevens Act'' means the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.);

(8) the term ''mothership'' means a vessel that receives and processes fish from other vessels in the exclusive economic zone of the United States and is not used for, or equipped to be used for, harvesting fish;

(9) the term ''North Pacific Council'' means the North Pacific Fishery Management Council established under section 302(a)(1)(G) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)(1)(G));

(10) the term ''offshore component'' means all vessels not included in the definition of ''inshore component'' that process groundfish harvested in the Bering Sea and Aleutian Islands Management Area;

(11) the term ''Secretary'' means the Secretary of Commerce; and

(12) the term ''shoreside processor'' means any person or vessel that receives unprocessed fish, except catcher/processors, motherships, buying stations, restaurants, or persons receiving fish for personal consumption or bait.

SEC. 206. ALLOCATIONS.

(a) POLLOCK COMMUNITY DEVELOPMENT QUOTA.— Effective January 1, 1999, 10 percent of the total allowable catch of pollock in the Bering Sea and Aleutian Islands Management Area shall be allocated as a directed fishing allowance to the western Alaska community development quota program established under section 305(i) of the Magnuson-Stevens Act (16 U.S.C. 1855(i)).

(b) INSHORE/OFFSHORE.—Effective January 1, 1999, the remainder of the pollock total allowable catch in the Bering Sea and Aleutian Islands Management Area, after the subtraction of the allocation under subsection (a) and the subtraction of allowances for the incidental catch of pollock by vessels harvesting other groundfish species (including under the western Alaska community development quota program) shall be allocated as directed fishing allowances as follows—

(1) 50 percent to catcher vessels harvesting pollock for processing by the inshore component;

(2) 40 percent to catcher/processors and catcher vessels harvesting pollock for processing by catcher/processors in the offshore component; and

(3) 10 percent to catcher vessels harvesting pollock for processing by motherships in the offshore component.

SEC. 207. BUYOUT.

(a) FEDERAL LOAN.—Under the authority of sections 1111 and 1112 of title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f and 1279g) and notwithstanding the requirements of section 312 of the Magnuson-Stevens Act (16 U.S.C. 1861a), the Secretary shall, subject to the availability of appropriations for the cost of the direct loan, provide up to $75,000,000 through a direct loan obligation for the payments required under subsection (d).

(b) INSHORE FEE SYSTEM.—Notwithstanding the requirements of section 304(d) or 312 of the Magnuson-Stevens Act (16 U.S.C. 1854(d) and 1861a), the Secretary shall establish a fee for the repayment of such loan obligation which—

(1) shall be six-tenths (0.6) of one cent for each pound round-weight of all pollock harvested from the directed fishing allowance under section 206(b)(1); and

(2) shall begin with such pollock harvested on or after January 1, 2000, and continue without interruption until such loan obligation is fully repaid; and

(3) shall be collected in accordance with section 312(d)(2)(C) of the Magnuson-Stevens Act (16 U.S.C. 1861a(d)(2)(C)) and in accordance with such other conditions as the Secretary establishes.

(c) FEDERAL APPROPRIATION.—Under the authority of section 312(c)(1)(B) of the Magnuson-Stevens Act (16 U.S.C. 1861a(c)(1)(B)), there are authorized to be appropriated $20,000,000 for the payments required under sub-section (d).

(d) PAYMENTS.—Subject to the availability of appropriations for the cost of the direct loan under subsection (a) and funds under subsection (c), the Secretary shall pay by not later than December 31, 1998—

(1) up to $90,000,000 to the owner or owners of the catcher/processors listed in paragraphs (1) through (9) of section 209, in such manner as the owner or owners, with the concurrence of the Secretary, agree, except that—

(A) the portion of such payment with respect to the catcher/processor listed in paragraph (1) of section 209 shall be made only after the owner submits a written certification acceptable to the Secretary that neither the owner nor a purchaser from the owner intends to use such catcher/processor outside of the exclusive economic zone of the United States to harvest any stock of fish (as such term is defined in section 3 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802)) that occurs within the exclusive economic zone of the United States; and

(B) the portion of such payment with respect to the catcher/processors listed in paragraphs (2) through (9) of section 209 shall be made only after the owner or owners of such catcher/processors submit a written certification acceptable to the Secretary that such catcher/processors will be scrapped by December 31, 2000 and will not, before that date, be used to harvest or process any fish; and

(2)(A) if a contract has been filed under section 210(a) by the catcher/processors listed in section 208(e), $5,000,000 to the owner or owners of the catcher/processors listed in paragraphs (10) through (14) of such section in such manner as the owner or owners, with the concurrence of the Secretary, agree; or

(B) if such a contract has not been filed by such date, $5,000,000 to the owners of the catcher vessels eligible under section 208(b) and the catcher/processors eligible under paragraphs (1) through (20) of section 208(e), divided based on the amount of the harvest of pollock in the directed pollock fishery by each such vessel in 1997 in such manner as the Secretary deems appropriate, except that any such payments shall be reduced by any obligation to the federal government that has not been satisfied by such owner or owners of any such vessels.

(e) PENALTY.—If the catcher/processor under paragraph (1) of section 209 is used outside of the exclusive economic zone of the United States to harvest any stock of fish that occurs within the exclusive

economic zone of the United States while the owner who received the payment under subsection (d)(1)(A) has an ownership interest in such vessel, or if the catcher/processors listed in paragraphs (2) through (9) of section 209 are determined by the Secretary not to have been scrapped by December 31,2000 or to have been used in a manner inconsistent with subsection (d)(1)(B), the Secretary may suspend any or all of the federal permits which allow any vessels owned in whole or in part by the owner or owners who received payments

under subsection (d)(1) to harvest or process fish within the exclusive economic zone of the United States until such time as the obligations of such owner or owners under subsection (d)(1) have been fulfilled to the satisfaction of the Secretary.

(f) PROGRAM DEFINED; MATURITY.—For the purposes of section 1111 of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f), the fishing capacity reduction program in this subtitle shall be within the meaning of the term ''program'' as defined and used in such section. Notwithstanding section 1111(b)(4) of such Act (46 U.S.C. App. 1279f(b)(4)), the debt obligation under subsection (a) of this section may have a maturity not to exceed 30 years.

(g) FISHERY CAPACITY REDUCTION REGULATIONS.— The Secretary of Commerce shall by not later than October 15, 1998 publish proposed regulations to implement sub-sections (b), (c), (d), and (e) of section 312 of the Magnuson-Stevens Act (16 U.S.C. 1861a) and sections 1111 and 1112 of title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f and 1279g).

SEC. 208. ELIGIBLE VESSELS AND PROCESSORS.

(a) CATCHER VESSELS ONSHORE.—Effective January 1, 2000, only catcher vessels which are—

(1) determined by the Secretary—

(A) to have delivered at least 250 metric tons of pollock; or

(B) to be less than 60 feet in length overall and to have delivered at least 40 metric tons of pollock, for processing by the inshore component in the directed pollock fishery in any one of the years 1996 or 1997, or between January 1, 1998 and September 1, 1998;

(2) eligible to harvest pollock in the directed pollock fishery under the license limitation program recommended by the North Pacific Council and approved by the Secretary; and

(3) not listed in subsection (b), shall be eligible to harvest the directed fishing allowance under section 206(b)(1) pursuant to a federal fishing permit.

(b) CATCHER VESSELS TO CATCHER/PROCESSORS.—Effective January 1, 1999, only the following catcher vessels shall be eligible to harvest the directed fishing allowance under section 206(b)(2) pursuant to a federal fishing permit:

(1) AMERICAN CHALLENGER (United States official number 615085);

(2) FORUM STAR (United States official number 925863);

(3) MUIR MILACH (United States official number 611524);

(4) NEAHKAHNIE (United States official number 599534);

(5) OCEAN HARVESTER (United States official number 549892);

(6) SEA STORM (United States official number 628959);

(7) TRACY ANNE (United States official number 904859); and

(8) any catcher vessel—

(A) determined by the Secretary to have delivered at least 250 metric tons and at least 75 percent of the pollock it harvested in the directed pollock fishery in 1997 to catcher/processors for processing by the offshore component; and

(B) eligible to harvest pollock in the directed pollock fishery under the license limitation program recommended by the North Pacific Council and approved by the Secretary.

(c) CATCHER VESSELS TO MOTHERSHIPS.—Effective January 1, 2000, only the following catcher vessels shall be eligible to harvest the directed fishing allowance under section 206(b)(3) pursuant to a federal fishing permit:

(1) ALEUTIAN CHALLENGER (United States official number 603820);

(2) ALYESKA (United States official number 560237);

(3) AMBER DAWN (United States official number 529425);

(4) AMERICAN BEAUTY (United States official number 613847);

(5) CALIFORNIA HORIZON (United States official number 590758);

(6) MAR-GUN (United States official number 525608);

(7) MARGARET LYN (United States official number 615563);

(8) MARK I (United States official number 509552);

(9) MISTY DAWN (United States official number 926647);

(10) NORDIC FURY (United States official number 542651);

(11) OCEAN LEADER (United States official number 561518);

(12) OCEANIC (United States official number 602279);

(13) PACIFIC ALLIANCE (United States official number 612084);

(14) PACIFIC CHALLENGER (United States official number 518937);

(15) PACIFIC FURY (United States official number 561934);

(16) PAPADO II (United States official number 536161);

(17) TRAVELER (United States official number 929356);

(18) VESTERAALEN (United States official number 611642);

(19) WESTERN DAWN (United States official number 524423); and

(20) any vessel—

(A) determined by the Secretary to have delivered at least 250 metric tons of pollock for processing by motherships in the offshore component of the directed pollock fishery in any one of the years 1996 or 1997, or between January 1, 1998 and September 1, 1998;

(B) eligible to harvest pollock in the directed pollock fishery under the license limitation program recommended by the North Pacific Council and approved by the Secretary; and

(C) not listed in subsection (b).

(d) MOTHERSHIPS.—Effective January 1, 2000, only the following motherships shall be eligible to process the directed fishing allowance under section 206(b)(3) pursuant to a federal fishing permit:

(1) EXCELLENCE (United States official number 967502);

(2) GOLDEN ALASKA (United States official number 651041); and

(3) OCEAN PHOENIX (United States official number 296779).

(e) CATCHER/PROCESSORS.—Effective January 1, 1999, only the following catcher/processors shall be eligible to harvest the directed fishing allowance under section 206(b)(2) pursuant to a federal fishing permit:

(1) AMERICAN DYNASTY (United States official number 951307);

(2) KATIE ANN (United States official number 518441);

(3) AMERICAN TRIUMPH (United States official number 646737);

(4) NORTHERN EAGLE (United States official number 506694);

(5) NORTHERN HAWK (United States official number 643771);

(6) NORTHERN JAEGER (United States official number 521069);

(7) OCEAN ROVER (United States official number 552100);

(8) ALASKA OCEAN (United States official number 637856);

(9) ENDURANCE (United States official number 592206);

(10) AMERICAN ENTERPRISE (United States official number 594803);

(11) ISLAND ENTERPRISE (United States official number 610290);

(12) KODIAK ENTERPRISE (United States official number 579450);

(13) SEATTLE ENTERPRISE (United States official number 904767);

(14) US ENTERPRISE (United States official number 921112);

(15) ARCTIC STORM (United States official number 903511);

(16) ARCTIC FJORD (United States official number 940866);

(17) NORTHERN GLACIER (United States official number 663457);

(18) PACIFIC GLACIER (United States official number 933627);

(19) HIGHLAND LIGHT (United States official number 577044);

(20) STARBOUND (United States official number 944658); and

(21) any catcher/processor not listed in this sub-section and determined by the Secretary to have harvested more than 2,000 metric tons of the pollock in the 1997 directed pollock fishery and determined to be eligible to harvest pollock in the directed pollock fishery under the license limitation program recommended by the North Pacific Council and approved by the Secretary, except that catcher/processors eligible under this paragraph shall be prohibited from harvesting in the aggregate a total of more than one-half (0.5) of a percent of the pollock apportioned for the directed pollock fishery under section 206(b)(2).

Notwithstanding section 213(a), failure to satisfy the requirements of section 4(a) of the Commercial Fishing Industry Vessel Anti-Reflagging Act of 1987 (Public Law 100–239; 46 U.S.C. 12108 note) shall not make a catcher/processor listed under this subsection ineligible for a fishery endorsement.

(f) SHORESIDE PROCESSORS.—

(1) Effective January 1, 2000 and except as provided in paragraph (2), the catcher vessels eligible under subsection (a) may deliver pollock harvested from the directed fishing allowance under section 206(b)(1) only to—

(A) shoreside processors (including vessels in a single geographic location in Alaska State waters) determined by the Secretary to have processed more than 2,000 metric tons round-weight of pollock in the inshore component of the directed pollock fishery during each of 1996 and 1997; and

(B) shoreside processors determined by the Secretary to have processed pollock in the inshore component of the directed pollock fishery in 1996 or 1997, but to have processed less than 2,000 metric tons round-weight of such pollock in each year, except that effective January 1, 2000, each such shoreside processor may not process more than 2,000 metric tons round-weight from such directed fishing allowance in any year.

(2) Upon recommendation by the North Pacific Council, the Secretary may approve measures to allow catcher vessels eligible under subsection (a) to deliver pollock harvested from the directed fishing allowance under section 206(b)(1) to shoreside processors not eligible under paragraph (1) if the total allowable catch for pollock in the Bering Sea and Aleutian Islands Management Area increases by more than 10 percent above the total allowable catch in such fishery in 1997, or in the event of the actual total loss or constructive total loss of a shoreside processor eligible under paragraph (1)(A).

(g) REPLACEMENT VESSELS.—In the event of the actual total loss or constructive total loss of a vessel eligible under subsections (a), (b), (c), (d), or (e), the owner of such vessel may replace such vessel with a vessel which shall be eligible in the same manner under that subsection as the eligible vessel, provided that—

(1) such loss was caused by an act of God, an act of war, a collision, an act or omission of a party other than the owner or agent of the vessel, or any other event not caused by the willful misconduct of the owner or agent;

(2) the replacement vessel was built in the United States and if ever rebuilt, was rebuilt in the United States;

(3) the fishery endorsement for the replacement vessel is issued within 36 months of the end of the last year in which the eligible vessel harvested or processed pollock in the directed pollock fishery;

(4) if the eligible vessel is greater than 165 feet in registered length, of more than 750 gross registered tons, or has engines capable of producing more than 3,000 shaft horsepower, the replacement vessel is of the same or lesser registered length, gross registered tons, and shaft horsepower;

(5) if the eligible vessel is less than 165 feet in registered length, of fewer than 750 gross registered tons, and has engines incapable of producing less than 3,000 shaft horsepower, the replacement vessel is less than each of such thresholds and does not exceed by more than 10 percent the registered length, gross registered tons or shaft horsepower of the eligible vessel; and

(6) the replacement vessel otherwise qualifies under federal law for a fishery endorsement, including under section 12102(c) of title 46, United States Code, as amended by this Act.

(h) ELIGIBILITY DURING IMPLEMENTATION.—In the event the Secretary is unable to make a final determination about the eligibility of a vessel under subsection (b)(8) or subsection (e)(21) before January 1, 1999, or a vessel or shoreside processor under subsection (a), subsection (c)(21), or subsection (f) before January 1, 2000, such vessel or shoreside processor, upon the filing of an application for eligibility, shall be eligible to participate in the directed pollock fishery pending final determination by the Secretary with respect to such vessel or shoreside processor.

(i) ELIGIBILITY NOT A RIGHT.—Eligibility under this section shall not be construed—

(1) to confer any right of compensation, monetary or otherwise, to the owner of any catcher vessel, catcher/processor, mothership, or shoreside processor if such eligibility is revoked or limited in anyway, including through the revocation or limitation of a fishery endorsement or any federal permit or license;

(2) to create any right, title, or interest in or to any fish in any fishery; or

(3) to waive any provision of law otherwise applicable to such catcher vessel, catcher/processor, mothership, or shoreside processor.

SEC. 209. LIST OF INELIGIBLE VESSELS.

Effective December 31, 1998, the following vessels shall be permanently ineligible for fishery endorsements, and any claims (including relating to catch history) associated with such vessels that could qualify any owners of such vessels for any present or future limited access system permit in any fishery within the exclusive economic zone of the United States (including a vessel moratorium permit or license limitation program permit in fisheries under the authority of the North Pacific Council) are hereby extinguished:

(1) AMERICAN EMPRESS (United States official number 942347);
(2) PACIFIC SCOUT (United States official number 934772);
(3) PACIFIC EXPLORER (United States official number 942592);
(4) PACIFIC NAVIGATOR (Uoited States official number 592204);
(5) VICTORIA ANN (United States official number 592207);
(6) ELIZABETH ANN (United States official number 534721);
(7) CHRISTINA ANN (United States official number 653045);
(8) REBECCA ANN (United States official number 592205); and
(9) BROWNS POINT (United States official number 587440).

SEC. 210. FISHERY COOPERATIVE LIMITATIONS.

(a) PUBLIC NOTICE.—

(1) Any contract implementing a fishery cooperative under section 1 of the Act of June 25, 1934 (15 U.S.C. 521) in the directed pollock fishery and any material modifications to any such contract shall be filed not less than 30 days prior to the start of fishing under the contract with the North Pacific Council and with the Secretary, together with a copy of a letter from a party to the contract requesting a business review letter on the fishery cooperative from the Department of Justice and any response to such request. Notwithstanding section 402 of the Magnuson-Stevens Act (16 U.S.C. 1881a) or any other provision of law, but taking into account the interest of parties to any such contract in protecting the confidentiality of proprietary information, the North Pacific Council and Secretary shall—

(A) make available to the public such information about the contract, contract modifications, or fishery cooperative the North Pacific Council and Secretary deem appropriate, which at a

minimum shall include a list of the parties to the contract, a list of the vessels involved, and the amount of pollock and other fish to be harvested by each party to such con-tract; and

(B) make available to the public in such manner as the North Pacific Council and Secretary deem appropriate information about the harvest by vessels under a fishery cooperative of all species (including bycatch) in the directed pollock fishery on a vessel-by-vessel basis.

(b) CATCHER VESSELS ONSHORE.—

(1) CATCHER VESSEL COOPERATIVES.—Effective January 1, 2000, upon the filing of a contract implementing a fishery cooperative under subsection (a) which—

(A) is signed by the owners of 80 percent or more of the qualified catcher vessels that delivered pollock for processing by a shoreside processor in the directed pollock fishery in the year prior to the year in which the fishery cooperative will be in effect; and

(B) specifies, except as provided in paragraph (6), that such catcher vessels will deliver pollock in the directed pollock fishery only to such shoreside processor during the year in which the fishery cooperative will be in effect and that such shoreside processor has agreed to process such pollock, the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) to harvest the aggregate percentage of the directed fishing allowance under section 206(b)(1) in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of pollock harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) in the directed pollock fishery for processing by the inshore component during 1995, 1996, and 1997 relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component during such years and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to paragraph (2)) from harvesting in aggregate in excess of such percentage of such directed fishing allowance.

(2) VOLUNTARY PARTICIPATION.—Any contract implementing a fishery cooperative under paragraph (1) must allow the owners of other qualified catcher vessels to enter into such contract after it is filed and before the calender year in which fishing will begin under the same terms and conditions as the owners of the qualified catcher vessels who entered into such contract upon filing.

(3) QUALIFIED CATCHER VESSEL.—For the purposes of this subsection, a catcher vessel shall be considered a "qualified catcher vessel" if, during the year prior to the year in which the fishery cooperative will be in effect, it delivered more pollock to the shoreside processor to which it will deliver pollock under the fishery cooperative in paragraph (1) than to any other shoreside processor.

(4) CONSIDERATION OF CERTAIN VESSELS.—Any contract implementing a fishery cooperative under paragraph (1) which has been entered into by the owner of a qualified catcher vessel eligible under section 208(a) that harvested pollock for processing by catcher/processors or motherships in the directed pollock fishery during 1995, 1996, and 1997 shall, to the extent practicable, provide fair and equitable terms and conditions for the owner of such qualified catcher vessel.

(5) OPEN ACCESS.—A catcher vessel eligible under section 208(a) the catch history of which has not been attributed to a fishery cooperative under paragraph (1) may be used to deliver pollock harvested by such vessel from the directed fishing allowance under section 206(b)(1) (other than pollock reserved under paragraph (1) for a fishery cooperative) to any of the shoreside processors eligible under section 208(f). A catcher vessel eligible under section 208(a) the catch history of which has been attributed to a fishery cooperative under paragraph (1) during any calendar year may not harvest any pollock apportioned under section 206(b)(1) in such calendar year other than the pollock reserved under paragraph (1) for such fishery cooperative.

(6) TRANSFER OF COOPERATIVE HARVEST.—A contract implementing a fishery cooperative under paragraph (1) may, notwithstanding the other provisions of this subsection, provide for up to 10 percent of the pollock harvested under such cooperative to be processed by a shoreside processor eligible under section 208(f) other than the shoreside processor to which pollock will be delivered under paragraph (1).

(c) CATCHER VESSELS TO CATCHER/PROCESSORS.—Effective January 1, 1999, not less than 8.5 percent of the directed fishing allowance under section 206(b)(2) shall be available for harvest only by the catcher vessels eligible under section 208(b). The owners of such catcher vessels may participate in a fishery cooperative with the owners of the catcher/processors eligible under paragraphs (1) through (20) of the section 208(e). The owners of such catcher vessels may participate in a fishery cooperative that will be in effect during 1999 only if the contract implementing such cooperative establishes penalties to prevent such vessels from exceeding in 1999 the traditional levels harvested by such vessels in all other fisheries in the exclusive economic zone of the United States.

(d) CATCHER VESSELS TO MOTHERSHIPS.—

(1) PROCESSING.—Effective January 1, 2000, the authority in section 1 of the Act of June 25, 1934 (48 Stat. 1213 and 1214; 15 U.S.C. 521 et seq.) shall extend to processing by motherships eligible under section 208(d) solely for the purposes of forming or participating in a fishery cooperative in the directed pollock fishery upon the filing of a contract to implement a fishery cooperative under subsection (a) which has been entered into by the owners of 80 percent or more of the catcher vessels

eligible under section 208(c) for the duration of such contract, provided that such owners agree to the terms of the fishery cooperative involving processing by the motherships.

(2) VOLUNTARY PARTICIPATION.—Any contract implementing a fishery cooperative described in paragraph (1) must allow the owners of any other catcher vessels eligible under section 208(c) to enter such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the catcher vessels who entered into such contract upon filing.

(e) EXCESSIVE SHARES.—

(1) HARVESTING.—No particular individual, corporation, or other entity may harvest, through a fishery cooperative or otherwise, a total of more than 17.5 percent of the pollock available to be harvested in the directed pollock fishery.

(2) PROCESSING.—Under the authority of section 301(a)(4) of the Magnuson-Stevens Act (16 U.S.C. 1851(a)(4)), the North Pacific Council is directed to recommend for approval by the Secretary conservation and management measures to prevent any particular individual or entity from processing an excessive share of the pollock available to be harvested in the directed pollock fishery. In the event the North Pacific Council recommends and the Secretary approves an excessive processing share that is lower than 17.5 percent, any individual or entity that previously processed a percentage greater than such share shall be allowed to continue to process such percentage, except that their percentage may not exceed 17.5 percent (excluding pollock processed by catcher/processors that was harvested in the directed pollock fishery by catcher vessels eligible under 208(b)) and shall be reduced if their percentage decreases, until their percentage is below such share. In recommending the excessive processing share, the North Pacific Council shall consider the need of catcher vessels in the directed pollock fishery to have competitive buyers for the pollock harvested by such vessels.

(3) REVIEW BY MARITIME ADMINISTRATION.—At the request of the North Pacific Council or the Secretary, any individual or entity believed by such Council or the Secretary to have exceeded the percentage in either paragraph (1) or (2) shall submit such information to the Administrator of the Maritime Administration as the Administrator deems appropriate to allow the Administrator to determine whether such individual or entity has exceeded either such percentage. The Administrator shall make a finding as soon as practicable upon such request and shall submit such finding to the North Pacific Council and the Secretary. For the purposes of this subsection, any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered to be the same entity as the other individual or entity.

(f) LANDING TAX JURISDICTION.—Any contract filed under subsection (a) shall include a contract clause under which the parties to the contract agree to make payments to the State of Alaska for any pollock harvested in the directed pollock fishery which is not landed in the State of Alaska, in amounts which would otherwise accrue had the pollock been landed in the State of Alaska subject to any landing taxes established under Alaska law. Failure to include such a contract clause or for such amounts to be paid shall result in a revocation of the authority to form fishery cooperatives under section 1 of the Act of June 25, 1934 (15 U.S.C. 521 et seq.).

(g) PENALTIES.—The violation of any of the requirements of this section or section 211 shall be considered the commission of an act prohibited by section 307 of the Magnuson-Stevens Act (16 U.S.C. 1857). In addition to the civil penalties and permit sanctions applicable to prohibited acts under section 308 of such Act (16 U.S.C. 1858), any person who is found by the Secretary, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, to have violated a requirement of this section shall be subject to the forfeiture to the Secretary of Commerce of any fish harvested or processed during the commission of such act.

SEC. 211. PROTECTIONS FOR OTHER FISHERIES; CONSERVATION MEASURES.

(a) GENERAL.—The North Pacific Council shall recommend for approval by the Secretary such conservation and management measures as it determines necessary to protect other fisheries under its jurisdiction and the participants in those fisheries, including processors, from adverse impacts caused by this Act or fishery cooperatives in the directed pollock fishery.

(b) CATCHER/PROCESSOR RESTRICTIONS.—

(1) GENERAL.—The restrictions in this sub-section shall take effect on January 1, 1999 and shall remain in effect thereafter except that they may be superceded (with the exception of paragraph (4)) by conservation and management measures recommended after the date of the enactment of this Act by the North Pacific Council and approved by the Secretary in accordance with the Magnuson-Stevens Act.

(2) BERING SEA FISHING.—The catcher/processors eligible under paragraphs (1) through (20) of section 208(e) are hereby prohibited from, in the aggregate—

(A) exceeding the percentage of the harvest available in the offshore component of any Bering Sea and Aleutian Islands groundfish fishery (other than the pollock fishery) that is equivalent to the total harvest by such catcher/processors and the catcher/processors listed in section 209 in the fishery in 1995, 1996, and 1997 relative to the total amount available to be harvested by the offshore component in the fishery in 1995, 1996, and 1997;

(B) exceeding the percentage of the prohibited species available in the offshore component of any Bering Sea and Aleutian Islands groundfish fishery (other than the pollock fishery) that is equivalent to the total of the prohibited species harvested by such catcher/processors and the catcher/processors listed in section 209 in the fishery in 1995, 1996, and 1997 relative to the total amount of prohibited species available to be harvested by the offshore component in the fishery in 1995, 1996, and 1997; and

(C) fishing for Atka mackerel in the eastern area of the Bering Sea and Aleutian Islands and from exceeding the following percentages of the directed harvest available in the Bering Sea and Aleutian Islands Atka mackerel fishery—

(i) 11.5 percent in the central area; and

(ii) 20 percent in the western area.

(3) BERING SEA PROCESSING.—The catcher/processors eligible under paragraphs (1) through (20) of section 208(e) are hereby prohibited from—

(A) processing any of the directed fishing allowances under paragraphs (1) or (3) of section 206(b); and

(B) processing any species of crab harvested in the Bering Sea and Aleutian Islands Management Area.

(4) GULF OF ALASKA.—The catcher/processors eligible under paragraphs (1) through (20) of section 208(e) are hereby prohibited from—

(A) harvesting any fish in the Gulf of Alaska;

(B) processing any groundfish harvested from the portion of the exclusive economic zone off Alaska known as area 630 under the fishery management plan for Gulf of Alaska groundfish; or

(C) processing any pollock in the Gulf of Alaska (other than as bycatch in non-pollock groundfish fisheries) or processing, in the aggregate, a total of more than 10 percent of the cod harvested from areas 610, 620, and 640 of the Gulf of Alaska under the fishery management plan for Gulf of Alaska groundfish.

(5) FISHERIES OTHER THAN NORTH PACIFIC.—The catcher/processors eligible under paragraphs (1) through (20) of section 208(e) and motherships eligible under section 208(d) are hereby prohibited from harvesting fish in any fishery under the authority of any regional fishery management council established under section 302(a) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)) other than the North Pacific Council, except for the Pacific whiting fishery, and from processing fish in any fishery under the authority of any such regional fishery management council other than the North Pacific Council, except in the Pacific whiting fishery, unless the catcher/processor or mothership is

authorized to harvest or process fish under a fishery management plan recommended by the regional fishery management council of jurisdiction and approved by the Secretary.

(6) OBSERVERS AND SCALES.—The catcher/processors eligible under paragraphs (1) through (20) of section 208(e) shall—

(A) have two observers onboard at all times while groundfish is being harvested, processed, or received from another vessel in any fishery under the authority of the North Pacific Council; and

(B) weigh its catch on a scale onboard approved by the National Marine Fisheries Service while harvesting groundfish in fisheries under the authority of the North Pacific Council. This paragraph shall take effect on January 1, 1999 for catcher/processors eligible under paragraphs (1) through (20) of section 208(e) that will harvest pollock allocated under section 206(a) in 1999, and shall take effect on January 1, 2000 for all other catcher/processors eligible under such paragraphs of section 208(e).

(c) CATCHER VESSEL AND SHORESIDE PROCESSOR RESTRICTIONS.—

(1) REQUIRED COUNCIL RECOMMENDATIONS.—By not later than July 1, 1999, the North Pacific Council shall recommend for approval by the Secretary conservation and management measures to—

(A) prevent the catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery; and

(B) protect processors not eligible to participate in the directed pollock fishery from adverse effects as a result of this Act or fishery cooperatives in the directed pollock fishery.

If the North Pacific Council does not recommend such conservation and management measures by such date, or if the Secretary determines that such conservation and management measures recommended by the North Pacific Council are not adequate to fulfill the purposes of this paragraph, the Secretary may by regulation restrict or change the authority in section 210(b) to the extent the Secretary deems appropriate, including by preventing fishery cooperatives from being formed pursuant to such section and by providing greater flexibility with respect to the shoreside processor or shoreside processors to which catcher vessels in a fishery cooperative under section 210(b) may deliver pollock.

(2) BERING SEA CRAB AND GROUNDFISH.—

(A) Effective January 1, 2000, the owners of the motherships eligible under section 208(d) and the shoreside processors eligible under section 208(f) that receive pollock from the directed pollock fishery under a fishery cooperative are hereby prohibited from processing, in the aggregate for each

calendar year, more than the percentage of the total catch of each species of crab in directed fisheries under the jurisdiction of the North Pacific Council than facilities operated by such owners processed of each such species in the aggregate, on average, in 1995, 1996, 1997. For the purposes of this subparagraph, the term "facilities" means any processing plant, catcher/processor, mothership, floating processor, or any other operation that processes fish. Any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered to be the same entity as the other individual or entity for the purposes of this subparagraph.

(B) Under the authority of section 301(a)(4) of the Magnuson-Stevens Act (16 U.S.C. 1851(a)(4)), the North Pacific Council is directed to recommend for approval by the Secretary conservation and management measures to prevent any particular individual or entity from harvesting or processing an excessive share of crab or of groundfish in fisheries in the Bering Sea and Aleutian Islands Management Area.

(C) The catcher vessels eligible under section 208(b) are hereby prohibited from participating in a directed fishery for any species of crab in the Bering Sea and Aleutian Islands Management Area unless the catcher vessel harvested crab in the directed fishery for that species of crab in such Area during 1997 and is eligible to harvest such crab in such directed fishery under the license limitation program recommended by the North Pacific Council and approved by the Secretary. The North Pacific Council is directed to recommend measures for approval by the Secretary to eliminate latent licenses under such program, and nothing in this subparagraph shall preclude the Council from recommending measures more restrictive than under this paragraph.

(3) FISHERIES OTHER THAN NORTH PACIFIC.—

(A) By not later than July 1, 2000, the Pacific Fishery Management Council established under section 302(a)(1)(F) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)(1)(F)) shall recommend for approval by the Secretary conservation and management measures to protect fisheries under its jurisdiction and the participants in those fisheries from adverse impacts caused by this Act or by any fishery cooperatives in the directed pollock fishery.

(B) If the Pacific Council does not recommend such conservation and management measures by such date, or if the Secretary determines that such conservation and management measures recommended by the Pacific Council are not adequate to fulfill the purposes of this paragraph, the Secretary may by regulation implement adequate measures including, but not limited to, restrictions on vessels which harvest pollock under a fishery cooperative which will prevent such

vessels from harvesting Pacific groundfish, and restrictions on the number of processors eligible to process Pacific groundfish.

(d) BYCATCH INFORMATION.—Notwithstanding section 402 of the Magnuson-Stevens Act (16 U.S.C. 1881a), the North Pacific Council may recommend and the Secretary may approve, under such terms and conditions as the North Pacific Council and Secretary deem appropriate, the public disclosure of any information from the groundfish fisheries under the authority of such Council that would be beneficial in the implementation of section 301(a)(9) or section 303(a)(11) of the Magnuson-Stevens Act (16 U.S.C. 1851(a)(9) and 1853(a)(11)).

(e) COMMUNITY DEVELOPMENT LOAN PROGRAM.—Under the authority of title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1271 et seq.), and subject to the availability of appropriations, the Secretary is authorized to provide direct loan obligations to communities eligible to participate in the western Alaska community development quota program established under 304(i) of the Magnuson-Stevens Act (16 U.S.C. 1855(i)) for the purposes of purchasing all or part of an ownership interest in vessels and shoreside processors eligible under subsections (a), (b), (c), (d), (e), or (f) of section 208. Notwithstanding the eligibility criteria in section 208(a) and section 208(c), the LISA MARIE (United States official number 1038717) shall be eligible under such sections in the same manner as other vessels eligible under such sections.

SEC. 212. RESTRICTION ON FEDERAL LOANS.

Section 302(b) of the Fisheries Financing Act (46 U.S.C. 1274 note) is amended—

(1) by inserting "(1)" before "Until October 1, 2001"; and

(2) by inserting at the end the following new paragraph:

"(2) No loans may be provided or guaranteed by the Federal Government for the construction or rebuilding of a vessel intended for use as a fishing vessel (as defined in section 2101 of title 46, United States Code), if such vessel will be greater than 165 feet in registered length, of more than 750 gross registered tons, or have an engine or engines capable of producing a total of more than 3,000 shaft horsepower, after such construction or rebuilding is completed. This prohibition shall not apply to vessels to be used in the menhaden fishery or in tuna purse seine fisheries outside the exclusive economic zone of the United States or the area of the South Pacific Regional Fisheries Treaty."

SEC. 213. DURATION.

(a) GENERAL.—Except as otherwise provided in this title, the provisions of this title shall take effect upon the date of the enactment of this Act. Sections 206, 208, and 210 shall remain in effect until

December 31, 2004, and shall be repealed on such date, except that the North Pacific Council may recommend and the Secretary may approve conservation and management measures as part of a fishery management plan under the Magnuson-Stevens Act to give effect to the measures in such sections thereafter.

(b) EXISTING AUTHORITY.—Except for the measures required by this subtitle, nothing in this subtitle shall be construed to limit the authority of the North Pacific Council or the Secretary under the Magnuson-Stevens Act.

(c) CHANGES TO FISHERY COOPERATIVE LIMITATIONS AND POLLOCK CDQ ALLOCATION.—The North Pacific Council may recommend and the Secretary may approve conservation and management measures in accordance with the Magnuson-Stevens Act—

(1) that supersede the provisions of this title, except for sections 206 and 208, for conservation purposes or to mitigate adverse effects in fisheries or on owners of fewer than three vessels in the directed pollock fishery caused by this title or fishery cooperatives in the directed pollock fishery, provided such measures take into account all factors affecting the fisheries and are imposed fairly and equitably to the extent practicable among and within the sectors in the directed pollock fishery;

(2) that supersede the allocation in section 206(a) for any of the years 2002, 2003, and 2004, upon the finding by such Council that the western Alaska community development quota program for pollock has been adversely affected by the amendments in this title; or

(3) that supersede the criteria required in paragraph (1) of section 210(b) to be used by the Secretary to set the percentage allowed to be harvested by catcher vessels pursuant to a fishery cooperative under such paragraph.

(d) REPORT TO CONGRESS.—Not later than October 1, 2000, the North Pacific Council shall submit a report to the Secretary and to Congress on the implementation and effects of this Act, including the effects on fishery conservation and management, on bycatch levels, on fishing communities, on business and employment practices of participants in any fishery cooperatives, on the western Alaska community development quota program, on any fisheries outside of the authority of the North Pacific Council, and such other matters as the North Pacific Council deems appropriate.

(e) REPORT ON FILLET PRODUCTION.—Not later than June 1, 2000, the General Accounting Office shall submit a report to the North Pacific Council, the Secretary, and the Congress on the whether this Act has negatively affected the market for fillets and fillet blocks, including through the reduction in the supply of such fillets and fillet blocks. If the report determines that such market has been negatively affected, the North Pacific Council shall recommend measures for the Secretary's approval to mitigate any negative effects.

(f) SEVERABILITY.—If any provision of this title, an amendment made by this title, or the application of such provision or amendment to any person or circumstance is held to be unconstitutional, the remainder of this title, the amendments made by this title, and the application of the provisions of such to any person or circumstance shall not be affected thereby.

(g) INTERNATIONAL AGREEMENTS.—In the event that any provision of section 12102(c) or section 31322(a) of title 46, United States Code, as amended by this Act, is determined to be inconsistent with an existing international agreement relating to foreign investment to which the United States is a party with respect to the owner or mortgagee on October 1, 2001 of a vessel with a fishery endorsement, such provision shall not apply to that owner or mortgagee with respect to such vessel to the extent of any such inconsistency. The provisions of section 12102(c) and section 31322(a) of title 46, United States Code, as amended by this Act, shall apply to all subsequent owners and mortgagees of such vessel, and shall apply, notwithstanding the preceding sentence, to the owner on October 1, 2001 of such vessel if any ownership interest in that owner is transferred to or otherwise acquired by a foreign individual or entity after such date.

APPENDIX Ia

OMNIBUS CONSOLIDATED AND EMERGENCY SUPPLEMENTAL APPROPRIATIONS FOR FISCAL YEAR 1999--CONFERENCE REPORT (Senate - October 20, 1998)

[Page: S12696]

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Mr. President, I want to take a moment to talk about two of the provisions that are in the bill that are legislative items. They were bills that I presented to the Senate. One is the American Fisheries Act. It is a culmination of the negotiations that were undertaken with my colleagues from the State of Washington after I had introduced Senate bill 1221.

We reached the agreement to include this American Fisheries Act in the legislation that is being considered. It is title II of division C of the bill. This act will not only complete the process begun in 1976 to give the U.S. interests a priority in the harvest of U.S. fishery resources, but will also significantly decapitalized the Bering Sea pollock fishery.

The 1976 act was, in fact, the Magnuson Act, that extended our jurisdiction to the 200-mile limit. The Bering Sea pollock fishery is the largest, and its present state of overcapacity is the result of mistakes in, and misinterpretations of, the 1987 Commercial Fishing Industry Vessel Anti-Reflagging Act, which is generally known as the Anti-Reflagging Act.

In 1986, as the last of the foreign-flag fishing vessels in the U.S. fleet were being replaced by U.S.-flag vessels, we discovered that Federal law did not prevent U.S.-flag vessels from being entirely owned by foreign interests. We also discovered that Federal law did not require U.S. fishing vessels to carry U.S. crew members, and that U.S. fishing vessels could essentially be built in foreign shipyards under the existing regulatory definition of the word `rebuild.'

The goals of the 1987 Anti-Reflagging Act were to, one, require the U.S. control of fishing vessels that fly the U.S. flag; two, stop the foreign construction of the U.S.-flag vessels under the `rebuild' loophole; and, three, to require the U.S.-flag fishing vessels to carry U.S. crews. Of these three goals, only the U.S. crew requirement was achieved by the 1987 act.

The Anti-Reflagging Act did not stop foreign interests from owning and controlling U.S.-flag fishing vessels. About 30,000 of the 33,000 existing U.S.-flag fishing vessels are not subject to any U.S. controlling interest requirement.

The Anti-Reflagging Act also failed to stop the massive foreign rebuilding programs between 1987 and 1990 that brought almost 20 of the largest fishing vessels ever built in the world into our fisheries as `rebuilt' vessels.

Today, half of the Nation's largest fishery--which is the Bering Sea pollock--continues to be harvested by foreign interests on foreign-built vessels that are not subject to any U.S.-controlling interest standard.

On September 25, 1997, I introduced the American Fisheries Act, S. 1221, to try to fix these mistakes. Senators from almost every fishing region of the country joined me in supporting that effort, including Senators **Breaux**, **Hollings**, **Gregg**, **Wyden** and **Murkowski**.

As introduced, the bill had three primary objectives: requiring the owners of all U.S.-flag fishing vessels to comply with a 75-percent U.S.-controlling interest standard, similar to the standard for other commercial U.S.-flag vessels that operate in U.S. waters; two, to remove from U.S. fisheries at least one-half of the foreign-built factory trawlers that entered the fisheries through the Anti-Reflagging Act foreign rebuild grandfather loophole and that continued to be foreign-owned as of September 25, 1997; and, third, to prohibit the entry of any new fishing vessels above 165 feet, 750 tons, or with engines producing greater than 3,000 horsepower in the North Pacific fisheries fleet.

I am pleased to report that the package we are submitting to the Senate today accomplishes all three of these main objectives of S. 1221 as introduced. I thank Senator **Gorton** and his colleague from Washington, Senator **Murray**, for their efforts, particularly Senator **Gorton** for his tremendous effort in finally reaching an agreement on this bill. For almost a decade now, he and I have had various disagreements on the Bering Sea pollock fishery and issues related to the Anti-Flagging Act.

At the Commerce Committee hearing in March of this year, and later at an Appropriations Committee markup in July, Senator **Gorton** plainly expressed his concerns with my bill, S. 1221. In August, he spent considerable time with representatives from the Bering Sea pollock fishery and by sheer will managed to develop a framework upon which we could agree. After he presented the framework to me, we convened meetings of fishery representatives in September that literally went around the clock for 5 days. Those meetings included Bering Sea pollock fishery industry representatives, industry representatives from other North Pacific fisheries, the State of Alaska, North Pacific council members, National Marine Fisheries, the Coast Guard, the Maritime Administration, environmental representatives and staff for various Members of Congress and the Senate and House committees that have jurisdiction over this.

At the end of those meetings, a consensus had been achieved among Bering Sea fishing representatives on an agreement to reduce capacity in the Bering Sea pollock fishery. For the next 3 weeks, we drafted legislation. We have spent considerable time with the fishing industry from other fisheries that were concerned about the possible impacts of the changes in the Bering Sea pollock fishery upon their areas in offshore fisheries.

The legislation we are passing today includes many safeguards for those other fisheries and for the participants in those fisheries. By delaying implementation of some of the measures until January

1, 2000, it also provides the North Pacific Council and the Secretary of Commerce with sufficient time to develop safeguards for those other fisheries.

This legislation is unprecedented in the 23 years since the enactment of what is now known as the Magnuson- Stevens Act. With the council system, congressional action of this type is not needed in Federal fisheries anymore. However, the mistakes in the Anti-Reflagging Act and the way it was interpreted created unique problems in the Bering Sea pollock fishery that only Congress can fix. The North Pacific Council does not have the authority to turn back the clock by removing fishery endorsements, to provide the funds required under the Federal Credit Reform Act to allow for the $75 million loan to remove the overcapacity in the area, and to strengthen the U.S.-control requirements for fishing vessels, to restrict Federal loans on large fishing vessels, and to do many other things we have agreed to do in this legislation.

While S. 1221 as introduced was more modest in scope, I believe the measures in this agreement are fully justified as a one-time corrective measure for the negative effects of the Anti-Reflagging Act that I have mentioned before.

OMNIBUS CONSOLIDATED AND EMERGENCY SUPPLEMENTAL APPROPRIATIONS FOR FISCAL YEAR 1999--CONFERENCE REPORT (Senate - October 21, 1998)

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[Page: S12777]

THE AMERICAN FISHERIES ACT

Mr. STEVENS. Mr. President, we've reached agreement to include the American Fisheries Act in the legislation being passed today (as title II of division C of the bill). This Act will not only complete the process begun in 1976 to give U.S. interests a priority in the harvest of U.S. fishery resources, but will also significantly decapitalize the Bering Sea pollock fishery.

The Bering Sea pollock fishery is the nation's largest, and its present state of overcapacity is the result of mistakes in, and misinterpretations of, the 1987 Commercial Fishing Industry Vessel Anti-Reflagging Act (the `Anti-Reflagging Act'). In 1986, as the last of the foreign-flag fishing vessels in U.S. fisheries were being replaced by U.S.-flag vessels, we discovered that federal law did not prevent U.S. flag vessels from being entirely owned by foreign interests. We also discovered that federal law did not require U.S. fishing vessels to carry U.S. crew members, and that U.S. fishing vessels could essentially be built in foreign shipyards under the existing regulatory definition of `rebuild.' The goals of the 1987 Anti-Reflagging Act therefore were to: (1) require the U.S.-control of fishing vessels that fly the U.S. flag; (2) stop the foreign construction of U.S. flag vessels under the `rebuild' loophole; and (3) require U.S.-flag fishing vessels to carry U.S. crews.

Of these three goals, only the U.S. crew requirement was achieved. The Anti-Reflagging Act did not stop foreign interests from owning and controlling U.S. flag fishing vessels. In fact, about 30,000 of the 33,000 existing U.S.-flag fishing vessels are not subject to any U.S. controlling interest requirement. The Anti-Reflagging Act also failed to stop the massive foreign shipbuilding programs between 1987 and 1990 that brought almost 20 of the largest fishing vessels ever built into our fisheries as `rebuilds.' Today, half of the nation's largest fishery--Bering Sea pollock--continues to be harvested by foreign interests on foreign-built vessels that are not subject to any U.S.-controlling interest standard.

On September 25, 1997, I introduced the American Fisheries Act (S. 1221) to fix these mistakes. Senators from almost every fishing region of the country joined me in support of this effort, including Senator **Breaux**, Senator **Hollings**, Senator **Gregg**, Senator **Wyden**, and Senator **Murkowski**. As introduced, the bill had three primary objectives: (1) require the owners of all U.S.-flag fishing vessels to comply with a 75 percent U.S.-controlling interest standard (similar to the standard for other commercial U.S.-flag vessels that operate in U.S. waters); (2) remove from U.S. fisheries at least half of the foreign-built factory trawlers that entered the fisheries through the Anti-Reflagging Act foreign rebuild grandfather loophole and that continued to be

foreign-owned on September 25, 1997; and (3) prohibit the entry of any new fishing vessels above 165 feet, 750 tons, or with engines that produce greater than 3,000 horsepower.

I am pleased to report that the package we are approving today accomplishes all three of the main objectives of S. 1221 as introduced.

I wish to thank Senator **Gorton** for his tremendous effort in this. For almost a decade now, he and I have had various disagreements about the Bering Sea pollock fishery and issues relating to the Anti-Reflagging Act. At the Commerce Committee hearing in March, and later, at an Appropriations Committee markup in July, Senator **Gorton** plainly expressed his concerns with S. 1221. In August, however, he spent considerable time with representatives from the Bering Sea pollock fishery and by sheer will managed to develop a framework upon which we could both agree. After he presented the framework to me, we convened meetings in September that went around the clock for five days. Those meetings included Bering Sea pollock fishery industry representatives, industry representatives from other North Pacific fisheries, the State of Alaska, North Pacific Council members, the National Marine Fisheries, the Coast Guard, the Maritime Administration, environmental representatives, and staff for various members of Congress and the Senate and House committees of jurisdiction.

At the end of those meetings, a consensus had been achieved among Bering Sea fishing representatives on an agreement to reduce capacity in the Bering Sea pollock fishery. For the next three weeks, we drafted the legislation to give effect to the agreement, and spent considerable time with the fishing industry from other fisheries who were concerned about the possible impacts of the changes in the Bering Sea pollock fishery. The legislation we are passing today includes many safeguards for other fisheries and the participants in those fisheries. By delaying implementation of some measures until January 1, 2000, it also provides the North Pacific Council and Secretary with sufficient time to develop safeguards for other fisheries.

This legislation is unprecedented in the 23 years since the enactment of the Magnuson-Stevens Act. With the council system, Congressional action of this type is not needed in the federal fisheries anymore. However, the mistakes in the Anti-Reflagging Act and the way it was interpreted created unique problems in the Bering Sea pollock fishery that only Congress can fix. The North Pacific Council simply does not have the authority to turn back the clock by removing fishery endorsements, to provide the funds required under the Federal Credit Reform Act to allow for the $75 million loan to remove capacity, to strengthen the U.S.-control requirements for fishing vessels, to restrict federal loans on large fishing vessels, or to do many other things in this legislation.

While S.1221 as introduced was more modest in scope, I believe the measures in this agreement are fully justified as a one-time corrective measure for the negative effects of Anti-Reflagging Act.

I ask unanimous consent that the section-by-section analysis I have prepared be printed in the **Record**.

There being no objection, the summary was ordered to be printed in the **Record**, as follows:

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Section-by-Section Summary

DIVISION A

Section 120: Appropriation

Section 120 appropriates a total of $30 million for the American Fisheries Act and other purposes. Specifically, it provides: (1) $20 million for the federal contribution to the reduction of capacity in the Bering Sea/Aleutian Islands (BSAI) pollock fishery; (2) $750,000 for the cost under the Federal Credit Reform Act of providing a $75 million loan to the fishing industry for the reduction of capacity in the BSAI pollock fishery; (3) $250,000 for the cost under the Federal Credit Reform Act of providing loans totaling $25 million to communities that participate in the western Alaska community development quota program to enable those communities to increase their participation in BSAI and other North Pacific fisheries; (4) $1,000,000 for the cost under the Federal Credit Reform Act of providing a loan of up to $100 million to the BSAI crab industry if a fishing capacity reduction program is implemented in that fishery under section 312(b) of the Magnuson-Stevens Act; (5) $6 million to the Secretary of Commerce for the costs of implementing subtitle II of the American Fisheries Act; and (6) $2 million to the Secretary of Transportation, primarily to the Maritime Administration for the costs of implementing subtitle I.

DIVISION C--TITLE II

SUBTITLE I--FISHERY ENDORSEMENTS

Section 201: Short Title

This section establishes the title of the legislation as the `American Fisheries Act.' The provisions of title II of division C draw substantially from S. 1221 (also called the American Fisheries Act), which was introduced on September 25, 1997, and cosponsored by Senators Breaux, Murkowski, Hollings, Wyden, and Gregg. A hearing to review S. 1221 was held by the Senate Commerce Committee on March 26, 1998, and a related hearing was held by the House Resources Committee on June 4, 1998.

Section 202: Standard for Fishery Endorsements

Subsection (a) of section 202 amends section 12102(c) of title 46, United States Code to require at least 75 percent of the interest in entities that own U.S.-flag vessels in the fishing industry (including fishing vessels, fish tender vessels and floating processors) to be owned and controlled by citizens of the United States. U.S.-flag vessels in the fishing industry that are owned by individuals must be owned by a citizen of the United States under the requirement of section 12102(a)(1) of title 46, which allows only an individual who is a citizen of the United States to own a vessel that is eligible for documentation. Section 12102(c) of title 46, as amended by subsection (a), would require section 2(c) of the Shipping Act, 1916 to be applied in determining

whether an entity meets the 75-percent requirement. Section 2(c) of the Shipping Act, 1916 states the following:

'Seventy-five per centum of the interest in a corporation shall not be deemed to be owned by citizens of the United States (a) if the title to 75 per centum of its stock is not vested in such citizens free from any trust or fiduciary obligation in favor of any person not a citizen of the United States; or (b) if 75 per centum of the voting power in such corporation is not vested in citizens of the United States; or (c) if, through any contract or understanding, it is so arranged that more than 25 per centum of the voting power in such corporation may be exercised, directly or indirectly, in behalf of any person who is not a citizen of the United States; or (d) if by any other means whatsoever [emphasis added] control of any interest in the corporation in excess of 25 per centum is confered upon or permitted to be exercised by any person who is not a citizen of the United States.'

The application of section 2(c) is intended to ensure that vessels with a fishery endorsement are truly controlled by citizens of the United States. The amendments made by subsection (a) make clear that the term 'corporation' as used in section 2(c) of the Shipping Act, 1916 means a corporation, partnership, association, trust, joint venture, limited liability company, limited liability partnership, or any other entity for the purposes of applying section 2(c) to section 12102(c) of title 46, United States Code.

Subsection (a) also amends section 12102(c) (by adding a new paragraph (2)) to statutorily prohibit some of the types of control which are impermissible under the standard. A new paragraph (3) would prohibit vessels with a fishery endorsement from being leased to a non-citizen of the United States for use as a fishing vessel (to harvest fish) even if the control requirements are satisfied. A new paragraph (4) would allow a person not eligible to own a vessel with a fishery endorsement to nevertheless have an interest greater than 25 percent in the vessel, if the interest is secured by a mortgage to a trustee who is eligible to own a vessel with a fishery endorsement and who complies with specific requirements in the law and other requirements prescribed by the Secretary, and if the arrangement does not violate the 75 percent control requirements.

Subsection (a) amends section 12102(c) with a new paragraph (paragraph (5)) that would exempt the following vessels from the 75 percent standard, provided the owners of the vessels continue to comply with the fishery endorsement law in effect on October 1, 1998: (1) vessels engaged in fisheries under the authority of the Western Pacific Fishery Management Council; and (2) purse seine vessels engaged in tuna fishing in the Pacific Ocean outside the exclusive economic zone or pursuant to the South Pacific Regional Fisheries Treaty. Fishery endorsements issued by the Secretary for these vessels would be valid only in those specific fisheries and the vessels would not be eligible to receive a fishery endorsement to participate in other fisheries unless the owner complied with the 75 percent standard.

Paragraph (6) of section 12102(c), as amended by subsection (a), would prevent new large fishing vessels from entering U.S. fisheries, including former U.S.-flag fishing vessels that have reflagged in recent years to fish in waters outside the U.S. exclusive economic zone. Specifically, it would prohibit the issuance of fishery endorsements to vessels greater than 165 feet in registered length, of more than 750 gross registered tons, or that have an engine or engines capable of producing a total of more than 3,000 shaft horsepower unless: (1) the vessel had a valid fishery endorsement on September 25, 1997 (the day that S. 1221 was introduced), is not placed under foreign registry after the date of the enactment of the American Fisheries Act, and, if the vessel's fishery endorsement is allowed to lapse or is invalidated after the date of the enactment of the American Fisheries Act, an application for a new fishery endorsement is submitted to the Secretary within 15 business days; or (2) the owner of the vessel demonstrates to the Secretary that a regional fishery management council has recommended and the Secretary of Commerce has approved specific measures after the date of the enactment of the American Fisheries Act to allow the vessel to be used in fisheries under that council's authority. The regional councils have the authority and are encouraged to submit for approval to the Secretary of Commerce measures to prohibit vessels that receive a fishery endorsement under section 12102(c)(6) from receiving any permit that would allow the vessel to participate in fisheries under their authority, so that a vessel cannot receive a fishery endorsement through measures recommended by one council, then enter the fisheries under the authority of another Council.

Subsection (b) amends section 31322(a) of title 46, United States Code, to require that a preferred mortgage with respect to a vessel with a fishery endorsement have as a mortgagee only: (1) a person that meets the 75 percent U.S.-controlling interest requirement; (2) a state- or federally-chartered financial institution that meets a majority (more than 50 percent) U.S.-controlling interest requirement; or (3) a person using a trustee under the authority of, and in compliance with, section 12102(c)(4) of title 46, as amended by this Act.

Section 203--Enforcement of Standard

Subsection (a) of section 203 specifies that amendments in section 202 take effect on October 1, 2001, roughly three years from the date of the expected enactment of the American Fisheries Act. As introduced, S. 1221 would have required compliance with the new standard 18 months after enactment. The extended implementation period is intended to provide additional time for the fishing industry to prepare for the new requirements, as well as time for the Secretary of Transportation to prepare to carry out the requirements.

Subsection (b) requires final regulations to implement subtitle I to be published in the Federal Register by April 1, 2000, 18 months before the new requirements go into effect, and requires that the regulations specifically identify: (1) impermissible transfers of ownership or control; (2) transactions that will require prior agency approval; and (3) transactions that will not require prior agency approval. Subsection (b) prohibits the Secretary of Transportation from issuing any letter rulings before publishing the final regulations. It is the intent of Congress that there be a full opportunity for the public to comment on the regulations implementing the new requirements

before any decisions are made with respect to specific vessels or vessel owners. During the implementation of the 1987 Anti-Reflagging Act, numerous letter rulings were issued by the Coast Guard prior to the publication of final regulations to implement the U.S.-control requirements, which limited the Coast Guard's ability to address valid concerns about the regulations. The implementation process set out in subsection (b) will provide an 18 month period for the Secretary of Transportation to promulgate regulations and fully review public comments, followed by an 18 month period in which the fishing industry can obtain letter rulings before the new requirements take effect to avoid disruptions where possible. This framework allows time for the Secretary of Transportation to consult with Congress if the Secretary has concerns about Congressional intent or identifies any technical or other amendments needed to give full effect to the American Fisheries Act.

Subsection (c) requires the Maritime Administration (MarAd), rather than the Coast Guard, to administer the new U.S.-ownership and control requirements for vessels 100 feet in registered length and greater. MarAd will use a more thorough process than has been used in the past to ensure compliance with the new requirements. The process will be based on the process for federal loan guarantees and subsidies. The owners of vessels 100 feet and greater will be required to file an annual statement to demonstrate compliance with section 12102(c), based on an existing citizenship affidavit required to be filed under certain MarAd regulations. Paragraph (2) of subsection (c) directs MarAd to rigorously scrutinize transfers of ownership and control of vessels, and identifies specific areas in which MarAd should pay particular attention.

Subsection (d) directs the Secretary of Transportation to establish the requirements for the owners of vessels less than 100 feet to demonstrate compliance with the new requirements, and allows the Secretary to decide whether the Coast Guard or MarAd should be the implementing agency. Subsection (d) further directs the Secretary to minimize the administrative burden on individuals who own and operate vessels that measure less than 100 feet.

Subsection (e) directs the Secretary of Transportation to revoke the fishery endorsement of any vessel subject to section 12102(c) of title 46 whose owner does not meet the 75-percent ownership and control requirement or otherwise fails to comply with that section.

Subsection (f) increases the penalties for fishery endorsement violations. Specifically, it would make the owner of a vessel with a fishery endorsement liable for a civil penalty of up to $100,000 for each day the vessel is engaged in fishing if the owner has knowingly falsified or concealed a material fact or knowingly made a false statement or representation when applying for or renewing a fishery endorsement. This increased penalty is intended to discourage willful noncompliance with the new requirements.

Subsection (g) provides limited exemptions from the new U.S.-control and ownership requirements in section 12102(c) of title 46 for the owners of five vessels (the EXCELLENCE, GOLDEN ALASKA, OCEAN PHOENIX, NORTHERN TRAVELER, and NORTHERN VOYAGER) under certain conditions. It exempts the owners after October 1, 2001 only until

more than 50 percent of the interest owned and controlled in the entity that owns the vessel changes. The exemption applies only to the present owners, and the subsection not only requires all subsequent owners to comply the 75 percent standard, but requires even the present owners to comply if more than 50 percent of the interest owned and controlled in that owner changes after October 1, 2001. The exemption also automatically terminates with respect to the NORTHERN TRAVELER or NORTHERN VOYAGER if the vessel is used in a fishery other than under the jurisdiction of the New England or Mid-Atlantic fishery management councils, and automatically terminates with respect to the EXCELLENCE, GOLDEN ALASKA, or OCEAN PHOENIX if the vessel is used to harvest fish.

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Section 204--Repeal of Ownership Savings Clause

Section 204 would repeal the U.S.-ownership and control grandfather provision of the 1987 Anti-Reflagging Act, which was interpreted by the Coast Guard (and later upheld by the U.S. Court of Appeals for the D.C. Circuit, see 298 U.S. App. D.C. 331) to 'run with the vessel,' thereby exempting about 90 percent of the U.S.-flag fishing industry vessels in existence today from any U.S.-ownership and control requirements. The American Fisheries Act and provisions of section 204 require that the owners of all vessels comply with the new U.S.-ownership and control requirements when those requirements take effect on October 1, 2001 (except as provided in section 12102(c)(5) of title 46, as amended by the American Fisheries Act (Hawaii exemption), and in section 203(g) of the American Fisheries Act (five specific vessels)).

SUBTITLE II--BERING SEA POLLOCK FISHERY

Section 205--Definitions

Section 205 provides definitions for the following terms used in subtitle II: (1) Bering Sea and Aleutian Islands Management Area; (2) catcher/processor; (3) catcher vessel; (4) directed pollock fishery; (5) harvest; (6) inshore component; (7) Magnuson-Stevens Act; (8) mothership; (9) North Pacific Council; (10) offshore component; (11) Secretary; and (12) shoreside processor.

Section 206--Allocations

Section 206 establishes new allocations in the pollock fishery in the BSAI beginning in 1999. Subsection (a) requires 10 percent of the total allowable catch of pollock to be allocated as a directed fishing allowance to the western Alaska community development quota program. Subsection (b) requires an additional amount from the total allowable catch to be allocated for the incidental catch of pollock in other groundfish fisheries (including the portion of those fisheries harvested under the western Alaska CDQ program). Of the remainder, subsection (b) requires 50 percent to be allocated as a directed fishing allowance for catcher vessels that deliver to shoreside processors, 40 percent to be allocated as a directed fishing allowance for catcher/processors and catcher vessels that deliver to catcher/processors, and 10 percent to be allocated as a directed fishing allowance for catcher vessels that deliver to motherships. Section 206 clarifies that the 10 percent of pollock allocated to the western Alaska CDQ program is allocated as a target species;

consistent with the present method of allocation and with Congressional intent with the respect to the target species allocations required under section 305(i) of the Magnuson-Stevens Act for the western Alaska CDQ program. The section is intended to ensure the continuation of the present system under which the bycatch in the pollock CDQ fishery and the bycatch in the non-pollock groundfish CDQ fisheries are not counted against the CDQ allocations.

Section 207--Buyout

Subsection (a) directs the Secretary of Commerce, using special authority added in 1996 to the title XI loan program, to provide a loan of $75 million to the shoreside processors and catcher vessels that deliver to the shoreside processors to remove fishing capacity from the BSAI pollock fishery. Subsection (b) sets out the terms for the repayment of the loan, requiring the shoreside processors and catcher vessels that deliver to those processors to pay on an equal basis six-tenths (0.6) of one cent per pound of pollock beginning in the year 2000 and continuing until the loan is fully repaid (probably for around 25 years). Subsection (c) authorizes appropriations of an additional $20 million for the removal of fishing capacity from the BSAI pollock fishery, for a total of $95 million.

Subsection (d) establishes the payment formula for the removal of fishing capacity. Paragraph (1) of subsection (d) requires $90 million to be paid by the Secretary to the owners of the nine catcher/processors (also called factory trawlers) listed in section 209, subject to the conditions that one of the vessels (the AMERICAN EMPRESS) not be used outside of the U.S. exclusive economic zone (EEZ) to harvest stocks that occur within the U.S. EEZ, and that eight of the vessels be scrapped by December 31, 2000. Paragraph (2) of subsection (d) requires the payment of $5 million to either the owners of certain catcher/processors listed in section 208(e), or to owners of catcher vessels eligible under section 208(b) and the 20 catcher/processors eligible under section 208(e), depending on whether or not a contract to implement a fishery cooperative has been filed by December 31, 1998. These payments totaling $95 million are for the removal of fishing capacity only, and are in no way intended as compensation for any allocation adjustments, nor should they be construed to create any right of compensation for any allocation adjustments or any right, title, or interest in or to any fish in any fishery. Subsection (d) authorizes the Secretary of Commerce to reduce the payments by any amount owed to the federal government which has not been satisfied by the owners of the vessels.

Subsection (e) allows the Secretary to suspend any or all of the federal fishing permits held by the owners who receive payments under subsection (d) if the vessel identified in paragraph (1) of section 209 is used outside of the U.S. exclusive economic zone (EEZ) to harvest stocks that occur within the U.S. EEZ, or if the other eight catcher/processors identified in section 209 are not scrapped by December 31, 2000.

Subsection (f) allows the repayment period for the $75 million loan to the shoreside processors and catcher vessels that deliver to the shoreside processors to be paid back over as many as 30

years. The general authority for fishing capacity reduction loans under the title XI program allows a repayment period of only up to 20 years.

Subsection (g) directs the Secretary of Commerce to publish proposed regulations to implement the fishing capacity reduction program under title XI and under the Magnuson-Stevens Act by October 15, 1998. This program was enacted on October 11, 1996 as part of the Sustainable Fisheries Act (P.L. 104-297), yet the proposed regulations to implement the program have not yet been published for review. Subsection (g) is intended to bring about the expeditious publication of the proposed regulations.

Section 208--Eligible Vessels and Processors

Subsection (a) of section 208 establishes the criteria for the catcher vessels that, beginning on January 1, 2000, will be eligible to harvest the pollock allocated under section 206(b)(1) for processing by the inshore component. To be eligible a vessel must: (1) have delivered at least 250 metric tons of pollock in the BSAI directed pollock fishery (or at least 40 metric tons if the vessel is less than 60 feet in length overall) to the inshore component in one of 1996 or 1997; or before September 1, 1998; (2) be eligible for a license under the license limitation program; and (3) not be eligible under subsection (b) to deliver pollock to catcher/processors. Any vessel which cannot meet these criteria will be ineligible as of January 1, 2000 to harvest the pollock allocated for processing by the inshore component.

Subsection (b) lists the particular catcher vessels and establishes criteria for other catcher vessels that, beginning on January 1, 1999, will be eligible to harvest pollock allocated under section 206(b)(2) for processing by catcher/processors. In addition to the seven listed vessels, any catcher vessel which (1) delivered at least 250 metric tons and at least 75 percent of the pollock it harvested in the BSAI directed pollock fishery to catcher processors in 1997, and (2) is eligible for a license under the license limitation program, will also be eligible as of January 1, 1999 to harvest pollock allocated for processing by catcher/processors. Any vessel which is not listed or cannot meet these criteria will be ineligible as of January 1, 1999 to harvest the pollock allocated for processing by catcher/processors.

Subsection (c) lists the particular catcher vessels and establishes criteria for other catcher vessels that, beginning on January 1, 2000, will be eligible to harvest pollock allocated under section 206(b)(3) for processing by motherships. In addition to the twenty listed vessels, any catcher vessel which (1) delivered at least 250 metric tons of pollock from the BSAI directed pollock fishery to motherships in one of 1996 or 1997, or before September 1, 1998, (2) is eligible for a license under the license limitation program, and (3) is not eligible under subsection (b) to deliver pollock to catcher/processors, will also be eligible as of January 1, 2000 to harvest pollock allocated for processing by motherships. Any vessel which is not listed or cannot meet these criteria will be ineligible as of January 1, 2000 to harvest the pollock allocated for processing by motherships.

Subsection (d) lists the three motherships that will be eligible beginning on January 1, 2000 to process the pollock allocated under section 206(b)(3). Any vessel which is not listed will be ineligible as of January 1, 2000 to process the pollock allocated for processing by motherships in the BSAI directed pollock fishery.

Subsection (e) lists the particular catcher/processors that, beginning on January 1, 2000, will be eligible to harvest pollock allocated under section 206(b)(2) for processing by catcher/processors. In addition to the twenty vessels listed, under paragraph (21) of subsection (e), any catcher/processor which harvested more than 2,000 metric tons of pollock in the BSAI directed pollock fishery in 1997, and is eligible for a license under the license limitation program, will be eligible to harvest a small portion of the pollock allocated under section 206(b)(2). The vessel or vessels eligible under paragraph (21) are prohibited from harvesting more than one-half percent in the aggregate of the pollock allocated under subsection 206(b)(2). This provision is intended to allow a small number of catcher/processors (perhaps as few as one) to continue to harvest the relatively small amount of pollock they harvested in the past while relying primarily on other fisheries. The last sentence of subsection (e) would allow the catcher/processors listed in paragraphs (1) through (20) to continue to be eligible for a fishery endorsement even if it is ultimately determined that the vessel did not satisfy the foreign rebuild grandfather provisions of the 1987 Anti-Reflagging Act--provided that the owner of the vessel complies with all other requirements for a fishery endorsement. The removal of nine catcher/processors in section 209 is intended to address the overcapacity concerns that resulted from the entry under the Anti-Reflagging Act of foreign built vessels contrary to Congressional intent.

Subsection (f) establishes the criteria for shoreside processors to which the catcher vessels eligible under section 208(a) may deliver pollock from the BSAI directed pollock fishery beginning on January 1, 2000. To be eligible, a shoreside processor (which may include moored vessels) must have processed more than 2,000 metric tons of pollock in the inshore component of the BSAI directed pollock fishery during each of 1996 and 1997. Any shoreside processor that processed pollock in the inshore component in 1996 or 1997, but processed less than 2,000 metric tons, would be allowed under paragraph (1)(B) to continue processing up to 2,000 metric tons per year after January 1, 2000. Paragraph (2) of subsection (f) would allow the North Pacific Council to recommend (and the Secretary to approve) the entry of additional shoreside processors to process the allocation under section 206(b)(1) if the total allowable catch for pollock increases by more than 10 percent above the 1997 total allowable catch, or if any of the shoreside processors eligible to process more than 2,000 metric tons is lost.

Subsection (g) establishes requirements for the replacement of any of the vessels eligible to harvest pollock under section 208 if the vessel is lost by an event other than the willful misconduct of the owner or agent of the owner.

Subsection (h) allows vessels and shoreside processors for which an application for eligibility under section 208 has been filed to be allowed to participate in the BSAI directed pollock fishery until the Secretary of Commerce can make a final determination about the eligible of the vessel or

shoreside processor. This subsection is intended to minimize disruptions in the event the Secretary is unable to complete determinations for all vessels and processors prior to the effective dates of the eligible criteria.

Subsection (i) clarifies that eligibility under section 208 does not confer any right of compensation if the eligibility is subsequently revoked or limited, does not create any right to any fish in any fishery, and does not waive any provision of law otherwise applicable to an eligible vessel or shoreside processor. Section 208 simply prevents the participation of vessels and shoreside processors not listed or that do not meet the eligibility criteria, and ineligible vessels and shoreside processors similarly have no right of compensation or right to any fish of any kind.

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Section 209--List of Ineligible Vessels

Section 209 identifies nine catcher/processors that, effective December 31, 1998, are permanently ineligible for fishery endorsements. Section 209 also extinguishes all claims associated with the vessels that could qualify the owners of the vessels for any limited access system permit.

Section 210--Fishery Cooperative Limitations

Subsection (a) of section 210 requires all contracts implementing a fishery cooperative in the BSAI directed pollock fishery and all material modifications to those contracts to be filed with the North Pacific Council and Secretary of Commerce, and requires information about the contracts to be made available to the public. With the limitations in section 208 on further entry into the BSAI directed pollock fishery, the American Fisheries Act increases the likelihood that fishery cooperatives will be formed under the 1934 Act (15 U.S.C. 521 et seq.) that allows fishermen to act together . . . in collectively catching, producing, preparing for market, processing, handling, and marketing' fish and fish products without being subject to federal anti-trust laws. The 1934 Act does not require the public disclosure of the details from contracts implementing fishery cooperatives, nor does it include many of the other restrictions and limitations in section 210 that would apply to fishery cooperatives in the BSAI directed pollock fishery. Subsection (a) will require at a minimum the public disclosure of the parties to the contract, the vessels involved, the amount of fish each vessel is expected to harvest, and, after the fishing season, the amount of fish (including bycatch) each vessel actually harvested. In addition, the North Pacific Council and Secretary may require other information that they deem appropriate from participants in a fishery cooperative for public disclosure.

Subsection (b) allows the catcher vessels that deliver pollock to shoreside processors to form fishery cooperatives with fewer than the whole class of vessels eligible under section 208(a) so that they will be able to compete in the event that fishery cooperatives are formed in the other BSAI directed pollock fishery sectors which have fewer vessels. Paragraph (1) requires the Secretary to establish a separate allocation within the allocation under section 206(b)(1) if at least 80 percent of the catcher vessels that delivered most of their pollock in the previous year to a

shoreside processor decide to form a fishery cooperative to deliver pollock to that shoreside processor and that processor has agreed to process the pollock. The allocation for those vessels would be equal to the average percentage those vessels caught in the aggregate in 1995, 1996, and 1997. If a fishery cooperative is formed, other catcher vessels that delivered most of the their catch to that shoreside processor would be required to be allowed to join the fishery cooperative under the same terms and conditions as other participants at any time before the calendar year in which fishing under the cooperative will begin. Vessels which participate in a fishery cooperative will not be allowed to harvest any of the pollock that remains in the 'open access' portion of the allocation under section 206(b)(1). The 'open access' portion will be equal to the average percentage that the vessels which do not elect to participate in fishery cooperatives caught in the aggregate in 1995, 1996, and 1997. The vessels eligible to harvest pollock allocated for processing by shoreside processors would continue to have the authority to form a fishery cooperative on a class-wide basis as well.

Subsection (c) requires at least 8.5 percent of the pollock allocated under section 206(b)(2) for processing by catcher/processors to be available for harvesting by the catcher vessels eligible under section 208(b). This requirement will help ensure that the traditional harvest of those catcher vessels will not be reduced. The catcher vessels may participate in a fishery cooperative with the 20 catcher/processors eligible under section 208(e), but may participate during 1999 only if the contract implementing the fishery cooperative includes penalties to prevent the catcher vessels from exceeding their traditional harvest levels in other fisheries. Under a fishery cooperative, vessel owners have more control over the time during which they will fish, and without these provisions in 1999, the catcher vessels could target other fisheries during the time they would traditionally be participating in the BSAI directed pollock fishery. By the year 2000, the North Pacific Council will have been able to recommend (and the Secretary to approve) any measures needed to protect other fisheries.

Subsection (d) extends the 1934 fishery cooperative authority to motherships for purposes of processing pollock if 80 percent of the catcher vessels eligible to harvest the pollock allocated for processing by motherships decide to form a fishery cooperative. The possible extension of this authority would not begin until January 1, 2000, and would remain in effect only for the duration of the contract implementing the fishery cooperative. If a fishery cooperative is formed, other catcher vessels eligible to harvest the pollock allocated for processing by motherships would be required to be allowed to join the fishery cooperative under the same terms and conditions as other participants at any time before the calendar year in which fishing under the cooperative will begin.

Subsection (e) prohibits any individual or any single entity from harvesting more than 17.5 percent of the pollock in the BSAI directed pollock fishery to ensure competion. Presently in that fishery, a single entity in that fishery harvests close to 30 percent of the pollock in the BSAI directed pollock fishery. In addition, paragraph (2) of subsection (e) directs the North Pacific Council to establish an excessive share cap for the processing of pollock in the BSAI directed pollock fishery. Paragraph (3) requires any individual or entity believed by the North Pacific Council or

Secretary to have exceeded the harvesting or processing caps to submit information to MarAd, and requires MarAd make a determination as soon as possible. If an individual or entity owns 10 percent or more of another entity, they will be considered to be the same entity as that other entity for the purposes of the harvesting and processing caps.

Subsection (f) requires contracts that implement fishery cooperatives in the BSAI directed pollock fishery to include clauses under which the participants will pay landing taxes established under Alaska law for pollock that is not landed in the State of Alaska. The failure to include the clause or to pay the landing taxes results in the permanent revocation of the authority to form fishery cooperatives under the 1934 Act for the parties to the contract implement the fishery cooperative and the vessels involved in the fishery cooperative.

Subsection (g) specifies that the violation of any of the provisions of section 210 (fishery cooperative limitations) or section 211 (protections for other fisheries and conservation measures) constitutes a violation of the prohibited acts section of the Magnuson-Stevens Act and is subject to the civil penalties and permit sanctions under section 308 of the Magnuson-Stevens Act. In addition, subsection (g) specifies that any person found to have violated either of section 210 or 211 is subject to the forfeiture of any fish harvested or processed during the commission of the violation.

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Section 211--Protections for Other Fisheries; Conservation Measures

Subsection (a) of section 211 directs the North Pacific Council to submit measures for the consideration and approval of the Secretary of Commerce to protect other fisheries under its authority and the participants in those fisheries from adverse impacts caused by the subtitle II of the American Fisheries Act or by fishery cooperatives in the BSAI directed pollock fishery. The Congress intends for the North Pacific Council to consider particularly any potential adverse effects on fishermen in other fisheries resulting from increased competition in those fisheries from vessels eligible to fish in the BSAI directed pollock fishery or in fisheries resulting from any decreased competition among processors.

Subsection (b) includes specific measures to restrict the participation in other fisheries of the catcher/processors eligible to participate in the BSAI directed pollock fishery (other than the vessel or vessels eligible under paragraph (21) of section 208(e)). While these types of limitations are appropriately for the North Pacific Council to develop, the catcher/processors eligible under section 208(e) may form a fishery cooperative for 1999 before the North Pacific Council can recommend (and the Secretary approve) necessary limitations. The restrictions in subsection (b) would therefore take effect on January 1, 1999 and remain in effect thereafter unless the North Pacific Council recommends and the Secretary approves measures that supercede the restrictions. Subparagraphs (A) and (B) of paragraph (2) prohibit the catcher/processors eligible to participate in the BSAI directed pollock fishery from exceeding the aggregate amounts of targeted species and bycatch in other fisheries that catcher/processors from the BSAI directed pollock fishery caught on average in 1995, 1996, and 1997. Subparagraph (C) prohibits those catcher/processors

from fishing for Atka mackerel in the eastern area of the BSAI or from exceeding specific percentages in the central area or western area. The limitations in subparagraphs (A), (B), and (C) do not ensure that the BSAI pollock-eligible catcher/processors will be able to harvest any amount of fish, they simply establish additional caps after which those catcher/processors, as a class, will be prohibited from further fishing.

Paragraph (3) of section 211(b) prohibits the catcher/processors eligible to participate in the BSAI directed pollock fishery from processing any of the pollock allocated for processing by motherships or shoreside processors in the BSAI directed pollock fishery and from processing any species of crab harvested in the BSAI. Paragraph (4) prohibits the BSAI pollock-eligible catcher/processors from harvesting any fish in the Gulf of Alaska, from processing any groundfish harvested in area 630 of the Gulf of Alaska, from processing any pollock in the Gulf of Alaska other than as bycatch, and from processing in the aggregate a total of more than 10 percent of the cod harvested in areas 610, 620, and 640 of the Gulf of Alaska. Paragraph (5) prohibits BSAI-eligible catcher/processors and motherships from harvesting or processing fish in any fishery under the authority of another regional fishery management council unless the council authorizes their participation, with the exception of the Pacific whiting fishery under the Pacific Council's authority, where the catcher/processors and motherships are already participating.

Paragraph (6) of section 211(b) requires the BSAI pollock eligible catcher/processors to carry two observers on board and to install scales on board and weigh all fish harvested by the vessel while participating in pollock and other groundfish fisheries under the North Pacific Council's authority. The requirements of paragraph (6) take effect in 1999 for catcher/processors that will harvest pollock allocated to the western Alaska community development quota program, and in 2000 for the other BSAI pollock-eligible catcher/processors.

Subsection (c) of section 211 requires the North Pacific Council to submit measures by July 1, 1999 to prevent the expanded participation of BSAI pollock-eligible catcher vessels in other fisheries as a result of BSAI pollock fishery cooperatives and to protect processors in other fisheries from any adverse effects caused by subtitle II of the American Fisheries or by BSAI pollock fishery cooperatives. Paragraph (1) of subsection (c) allows the Secretary to restrict or change the BSAI pollock fishery cooperative authority for catcher vessels delivering to shoreside processors (including by allowing those vessels to deliver to shoreside processors other than those which are BSAI pollock-eligible) if the North Pacific Council does not recommend measures by July 1, 1999 or if the Secretary determines that those measures are not adequate.

Paragraph (2)(A) prohibits the BSAI pollock-eligible motherships and shoreside processors from processing in the aggregate more crab in fisheries under the North Pacific Council's authority than the percentage of crab those motherships and shoreside processed in the fishery in the aggregate and on average in 1995, 1996, and 1997. The intent of paragraph (2) is to protect processors that are not BSAI pollock-eligible from increased competition from the shoreside processors who may have a financial advantage as a result of the increased pollock allocation under the American Fisheries Act or by receiving pollock under a fishery cooperative. Paragraph (2)(B) directs the

North Pacific Council to establish excessive share harvesting and processing caps in the BSAI crab and non-pollock groundfish fisheries for similar purposes.

Paragraph (3) of subsection (c) directs the Pacific Council to submit any measures that may be necessary to protect fisheries under its authority by July 1, 2000 and allows the Secretary of Commerce to implement measures if the Pacific Council does not submit measures or if the measures submitted are determined by the Secretary to be inadequate.

Subsection (d) give the North Pacific Council the authority with approval of the Secretary to publically disclose information on a vessel-by-vessel basis from any of the groundfish fisheries under the Council's authority that may be useful in carrying out the requirements of the Magnuson-Stevens Act which require the avoidance of bycatch. The North Pacific Council is directed to use this new authority to the maximum extent necessary to fully implement the bycatch measures added to the Magnuson-Stevens Act by the 1996 Sustainable Fisheries Act.

Subsection (e) creates a special federal loan program within the existing title XI loan program to allow communities eligible to participate in the western Alaska community development quota program to increase their participation in the Bering Sea pollock fishery by purchasing all or part of an ownership interest in vessels and shoreside processors.

Section 212--Restriction on Federal Loans

Section 212 amends the title XI loan program to prohibit federal loans for the construction or rebuilding of vessels that will be used to harvest fish and that are greater than 165 feet, of more than 750 tons, or that have an engine or engines capable of producing a total of more than 3,000 shaft horsepower. The prohibition does not apply to vessels to be used only in the menhaden fishery or a tuna purse seine fishery outside the U.S. EEZ or in the area of the South Pacific Regional Fisheries Treaty.

Section 213--Duration

Subsection (a) of section 213 explains that the provisions of the American Fisheries Act take effect upon its enactment, except where other effective dates are specified. The allocations in section 206, BSAI pollock eligibility criteria/lists of vessels in section 208, and fishery cooperative limitations in section 210 remain in effect only until December 31, 2004, and are repealed on that date except to the extent the North Pacific Council has recommended, and the Secretary has approved measures to give effect to those sections thereafter.

Subsection (b) clarifies that except as specifically provided, none of the provisions in subtitle II of the American Fisheries Act limit the authority of the North Pacific Council or the Secretary of Commerce under the Magnuson-Stevens Act. Subsection (c) sets out specific circumstances under which the North Pacific Council may submit measures to supersede provisions of subtitle II. The Council may submit measures to supersede any of the provisions of subtitle II, with the

exception of the provisions of section 206 (BSAI pollock allocations) and section 208 (eligibility criteria/vessels), for conservation purposes, to mitigate adverse effects in other fisheries or in the BSAI pollock fishery, or to mitigate adverse effects on the participants in the BSAI directed pollock fishery that only own only one or two vessels. If the Council does submit such measures, the measures must take into account all factors affecting the fisheries and be imposed fairly and equitably to the extent practicable among and within the sectors in the BSAI directed pollock fishery. With respect to the allocations in section 206, the Council may submit measures to increase the allocation to the western Alaska community development quota program for the year 2002 and thereafter if the Council determines that the program has been adversely affected by any provision of subtitle II of the American Fisheries Act. To the extent of its authority under the Magnuson-Stevens Act, the Council has general authority to submit measures that affect or supersede the fishery cooperative limitations in section 210. Paragraph (3) of section 213(c) identifies the specific authority of the Council to submit different catch-year criteria for the calculation of the allocations for catcher vessels that deliver to shoreside processors and that form fishery cooperatives.

Subsection (d) requires the North Pacific Council to report to the Secretary of Commerce and to the Congress by October 1, 2000 on the implementation and effects of subtitle II of the American Fisheries Act.

Subsection (e) requires the General Accounting Office to submit a report to the North Pacific Council and the Secretary of Commerce by June 1, 2000 on whether subtitle II of the American Fisheries Act has negatively affected the market for fillet or fillet blocks, and requires the North Pacific Council to submit for Secretarial approval any measures it determines appropriate to mitigate any negative effects that have occurred.

Section (f) specifies that if any of the provisions of the American Fisheries Act are held to be unconstitutional, the remainder of the Act shall not be affected.

Section (g) specifies that in the event the new U.S. ownership and control requirements or preferred mortgage requirements of subtitle I of the American Fisheries Act are deemed to be inconsistent with an existing international agreement relating to foreign investment with respect to a specific owner or mortgagee on October 1, 2001 of a vessel with a fishery endorsement, that the provision shall not apply to that specific owner or mortgagee with respect to that particular vessel to the extent of the inconsistency. Section (g) does not exempt any subsequent owner or mortgagee of the vessel, and is therefore not an exemption that `runs with the vessel.' In addition, the exemption in section (g) ceases to apply even to the owner on October 1, 2001 of the vessel if any ownership interest in that owner is acquired by a foreign individual or entity after October 1, 2001.

Customary international law and the United Nations Conference on the Law of the Sea (article 62) clearly protect the right of a coastal nation to harvest the living resources of its exclusive economic zone. Many of the bilateral treaties to which the United States is a party that might

otherwise involve U.S. fisheries or investments in U.S. fisheries include specific exemptions for fishing vessels and for measures to protect the fishery resources. For example, the Treaty of Friendship, Commerce, and Consular Rights between the United States and the Kingdom of Norway (1932) provides that `[n]othing in this Treaty shall be construed to restrict the right of either [the United States or Norway] to impose, on such terms as it may see fit, prohibitions or restrictions designed to protect human, animal, or plant health or life' (emphasis added). The Treaty and Protocol between the United States and Japan Regarding Friendship, Commerce, and Navigation (1953) provides that `Notwithstanding any other provision of the present Treaty, each Party may reserve exclusive rights and privileges to its own vessels with respect to the coasting trade, national fisheries, and inland navigation' (Article XIX(6); emphasis added). Similarly, the Agreement between the United States and the Republic of Korea Regarding Friendship, Commerce, and Navigation (1957) provides that `each Party may reserve exclusive rights and privileges to its own vessels with respect to the coasting trade, inland navigation, and national fisheries'.(Article XIX(3); emphasis added).

While Congress does not believe that any of the requirements of the American Fisheries Act violate any international agreements relating to foreign investment to which the United States is a party, subsection (g) is included as a precaution. If the citizenship or preferred mortgage requirements in subtitle I are deemed to be inconsistent with such an international agreement, only *the current owner on October 1, 2001 to which* the international agreement applies will be grandfathered, and to the extent that any interest in that owner/entity is sold, the interest must be sold to citizens of the United States until the owner/entity comes into compliance with the 75 standard.

CONFERENCE REPORT ON H.R. 4328, DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS ACT, 1999 (House of Representatives - October 20, 1998)

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[Page: H11654]

- Mr. YOUNG of Alaska. Mr. Speaker, section 06(a) requires the Secretary to allocate ten percent of the total allowable catch (TAC) of pollock in the Bering Sea and Aleutian Islands area as a target species to the western Alaska community development quota (CDQ) program, beginning on January 1, 1999. And, prior to allocating the remaining ninety percent of the TAC of pollock to catcher vessels and catcher/processors pursuant to paragraphs (1)-(3) of section 06(b), section 06(b) requires the Secretary to allocate to the CDQ program the amount of additional pollock that will be incidentally taken by vessels that harvest the directed fishing allowance of non-pollock groundfish species that has been allocated to the CDQ program.
- During the 1998 fishing year, the Secretary has regulated the CDQ programs for Bering Sea and Aleutian Islands pollock and for Bering Sea and Aleutian Islands non-pollock groundfish species as two separate regulatory programs. To ensure that vessels that participate in the CDQ pollock fishery are afforded an opportunity to harvest the entire ten percent of the TAC of pollock that subsection (a) allocates to the CDQ program, section 06(a) and (b) collectively direct the Secretary to continue, for the purpose of catch accounting only, to regulate the CDQ fisheries for Bering Sea and Aleutian Islands pollock and for Bering Sea and Aleutian Islands non-pollock groundfish species as separate regulatory programs.
- Separate accounting for the by-catch of non-pollock groundfish species in the directed CDQ pollock fishery and for the catch of non-pollock groundfish species in the directed CDQ non-pollock groundfish fishery will prevent the by-catch of non-pollock groundfish species in the directed CDQ pollock fishery from being deducted from the 7.5 percent of the TAC of non-pollock groundfish species that the Secretary has allocated to the CDQ program. This will allow vessels participating in the directed CDQ pollock fishery to collectively harvest as by-catch a small amount of non-pollock groundfish species in addition to the 7.5 percent of the TAC for such species that the Secretary has allocated to the CDQ program. However, the total harvest of non-pollock groundfish species--both as by-catch and in the directed fisheries for such species--shall not exceed the allowable biological catch for each species. And it continues to be the intent of Congress that the Secretary regulate the CDQ programs for Bering Sea and Aleutian Islands pollock and for Bering Sea and Aleutian Islands non-pollock groundfish species in a manner that continues to ensure that no species is subjected to overfishing.
- Because they take effect on January 1, 1999, the Secretary must implement subsections (a) and (b) of section 06 by promulgating emergency regulations. However, as soon thereafter as practicable, the Secretary shall implement section 06(a) and (b) by promulgating

regulations that have been recommended by the North Pacific Council to implement those subsections and other appropriate conservation and management measures.

APPENDIX II

Table 1: Final TACs in the Bering Sea and Aleutian Islands by Year

Species by TAC Grouping	YEAR						1995-97 Total	Grand Total
	1992	1993	1994	1995	1996	1997		
Atka Mackerel - Aleutian Islands	43,000						-	43,000
Atka Mackerel - Central Aleutian Islands		27,000	44,525	50,000	33,600	19,500	103,100	174,625
Atka Mackerel - Eastern Aleutian Islands		3,520	13,475	13,500	26,700	15,000	55,200	72,195
Atka Mackerel - Western Aleutian Islands		14,080	10,000	16,500	45,857	32,200	94,557	118,637
Arrowtooth Flounder - Bering Sea and Aleutian Islands	8,500	8,500	10,000	10,227	9,000	17,646	36,873	63,873
Other Flatfish - Bering Sea and Aleutian Islands	67,150	67,150	47,600	19,540	29,750	43,138	92,428	274,328
Flathead Sole - Bering Sea and Aleutian Islands				25,500	25,500	36,975	87,975	87,975
Greenland Turbot - Aleutian Islands			2,333	2,331	1,983	2,525	6,839	9,172
Greenland Turbot - Bering Sea			4,667	4,669	3,967	8,275	16,911	21,578
Greenland Turbot - Bering Sea and Aleutian Islands	5,950	7,000					-	12,950
Other Species - Bering Sea and Aleutian Islands	17,000	22,610	22,432	20,000	20,125	25,800	65,925	127,967
Pacific Cod (All Gear) - Bering Sea and Aleutian Islands	154,700	164,500					-	319,200
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands			92,040	121,800	138,200	152,700	412,700	504,740
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands			3,820	1,000	1,000	400	2,400	6,220
Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands			95,140	127,200	130,800		258,000	353,140
Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI						65,450	65,450	65,450
Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI						51,450	51,450	51,450
Pollock - Aleutian Islands	47,730						-	47,730
Pollock (Inshore) - Aleutian Islands		16,706	18,324	18,324	11,525	9,065	38,914	73,944
Pollock (Offshore) - Aleutian Islands		31,024	34,031	34,031	21,404	16,835	72,270	137,325
Pollock - Bogoslof	850						-	850
Pollock (Inshore) - Bogoslof		298	298	298	298	298	894	1,490
Pollock (Offshore) - Bogoslof		552	552	552	552	552	1,656	2,760
Pollock - Bering Sea	1,105,000						-	1,105,000
Pollock (Inshore) - Bering Sea		420,875	430,588	404,687	385,263	365,837	1,155,787	2,007,250
Pollock (Offshore) - Bering Sea		781,625	799,662	751,563	715,487	679,413	2,146,463	3,727,750
Pacific Ocean Perch - Aleutian Islands	3,009	13,900	10,900	10,500			10,500	38,309
Pacific Ocean Perch - Bering Sea	9,945	3,330	1,910	1,850	1,530	2,380	5,760	20,945
Pacific Ocean Perch - Central Aleutian Islands					3,025	3,170	6,195	6,195
Pacific Ocean Perch - Eastern Aleutian Islands					3,025	3,240	6,265	6,265
Pacific Ocean Perch - Western Aleutian Islands					6,050	6,390	12,440	12,440
Other Rockfish - Aleutian Islands	786	706	655	589	728	607	1,924	4,071
Other Rockfish - Bering Sea	340	306	310	329	380	317	1,026	1,982
Rock Sole - Bering Sea and Aleutian Islands	34,000	63,750	63,750	60,000	59,500	82,607	202,107	363,607
Sablefish (Fixed Gear) - Aleutian Islands	1,913	1,950	2,100	1,320	720	720	2,760	8,723
Sablefish (Fixed Gear) - Bering Sea	595	638	270	640	440	440	1,520	3,023
Sablefish (Trawl Gear) - Aleutian Islands	638	650	700	550	330	255	1,135	3,123
Sablefish (Trawl Gear) - Bering Sea	595	637	270	800	468	468	1,736	3,238
Sharpchin/Northern Rockfish - Aleutian Islands	4,820	5,100	5,670	5,103	4,445	3,706	13,254	28,844
Squid - Bering Sea and Aleutian Islands	1,700	1,700	2,644	850	850	1,970	3,670	9,714
Shortraker/Rougheye Rockfish - Aleutian Islands	1,037	1,100	1,037	933	956	938	2,827	6,001
Other Red Rockfish - Bering Sea	1,190	1,200	1,190	1,070	1,071	893	3,034	6,614
Yellowfin Sole - Bering Sea and Aleutian Islands	199,750	187,000	170,325	161,500	170,000	195,500	527,000	1,084,075
Grand Total	1,710,198	1,847,407	1,891,218	1,867,756	1,854,529	1,846,660	5,568,945	11,017,768

Source: National Marine Fisheries Service AKR Webpage (for example - http://www.fakr.noaa.gov.1993/gcatch93.txt)

Table 2: Catch of All Eligible AFA Catcher Vessels in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)	Non-Pick Fisheries (118 Vessels)	CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)	All Fisheries (118 Vessels)
Atka Mackerel - Central Aleutian Islands	-	1	-	-	1	15	2	-	-	17
Atka Mackerel - Eastern Aleutian Islands	16	7	1	10	34	452	10	2	11	475
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	1,741	137	73	240	2,191	2,766	369	245	352	3,732
Other Flatfish - Bering Sea and Aleutian Islands	6,171	517	257	563	7,508	7,792	646	356	607	9,401
Flathead Sole - Bering Sea and Aleutian Islands	4,851	251	197	444	5,743	6,293	613	483	668	8,057
Greenland Turbot - Aleutian Islands	2	-	-	9	11	4	-	-	10	14
Greenland Turbot - Bering Sea	538	10	4	39	591	653	24	12	44	733
Other Species - Bering Sea and Aleutian Islands	3,050	216	138	338	3,742	3,500	339	229	416	4,484
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	50	13	-	195	258	50	13	-	195	258
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	40,884	3,118	2,057	4,957	51,016	45,449	3,831	2,620	5,754	57,654
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pollock (Inshore) - Aleutian Islands	10	-	-	-	10	36,116	238	-	-	36,354
Pollock (Offshore) - Aleutian Islands	121	287	54	263	725	2,229	672	84	1,358	4,343
Pollock (Inshore) - Bering Sea	23,325	1,262	878	655	26,120	1,143,057	22,383	1,925	2,403	1,169,768
Pollock (Offshore) - Bering Sea	1,937	1,141	669	1,180	4,927	62,958	174,161	144,521	94,129	475,769
Pacific Ocean Perch - Bering Sea	8	3	-	3	14	717	25	16	9	767
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	7	-	-	-	7
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	1	-	-	3	4	27	-	-	3	30
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	1	-	3	4	1	1	-	4	6
Other Rockfish - Bering Sea	24	1	-	4	29	51	2	1	6	60
Rock Sole - Bering Sea and Aleutian Islands	11,963	610	382	584	13,539	13,250	1,119	652	861	15,882
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	54	1	-	3	58	68	1	-	4	73
Sablefish (Trawl Gear) - Bering Sea	1	-	-	-	1	1	-	-	-	1
Sharpchin/Northern Rockfish - Aleutian Islands	1	11	-	5	17	1	12	-	6	19
Squid - Bering Sea and Aleutian Islands	7	-	-	-	7	1,427	53	20	14	1,514
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	3	-	-	-	3
Other Red Rockfish - Bering Sea	49	10	2	7	68	58	13	4	11	86
Yellowfin Sole - Bering Sea and Aleutian Islands	33,070	4,196	894	997	39,157	33,249	4,402	1,043	1,036	39,730

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 3: Percent of TAC Harvested by All Eligible AFA Catcher Vessels in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)	Non-Plck Fisheries (118 Vessels)	CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)	All Fisheries (118 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	0.01%	-	-	-	0.01%
Atka Mackerel - Eastern Aleutian Islands	0.03%	0.01%	-	0.02%	0.06%	0.82%	0.02%	-	0.02%	0.86%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	4.72%	0.37%	0.20%	0.65%	5.94%	7.50%	1.00%	0.66%	0.95%	10.11%
Other Flatfish - Bering Sea and Aleutian Islands	6.68%	0.56%	0.28%	0.61%	8.13%	8.43%	0.70%	0.39%	0.66%	10.18%
Flathead Sole - Bering Sea and Aleutian Islands	5.51%	0.29%	0.22%	0.50%	6.52%	7.15%	0.70%	0.55%	0.76%	9.16%
Greenland Turbot - Aleutian Islands	0.03%	-	-	0.13%	0.16%	0.06%	-	-	0.15%	0.21%
Greenland Turbot - Bering Sea	3.18%	0.06%	0.02%	0.23%	3.49%	3.86%	0.14%	0.07%	0.26%	4.33%
Other Species - Bering Sea and Aleutian Islands	4.63%	0.33%	0.21%	0.51%	5.68%	5.31%	0.51%	0.35%	0.63%	6.80%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0.01%	-	-	0.05%	0.06%	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	62.47%	4.76%	3.14%	7.57%	77.94%	69.44%	5.85%	4.00%	8.79%	88.08%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.14%	0.05%	-	0.05%	0.24%	12.45%	0.43%	0.28%	0.16%	13.32%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	0.11%	-	-	-	0.11%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	0.02%	-	-	0.05%	0.07%	0.43%	-	-	0.05%	0.48%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	0.05%	-	0.16%	0.21%	0.05%	0.05%	-	0.21%	0.31%
Other Rockfish - Bering Sea	2.34%	0.10%	-	0.39%	2.83%	4.97%	0.19%	0.10%	0.58%	5.84%
Rock Sole - Bering Sea and Aleutian Islands	5.92%	0.30%	0.19%	0.29%	6.70%	6.56%	0.55%	0.32%	0.43%	7.86%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	4.76%	0.09%	-	0.26%	5.11%	5.99%	0.09%	-	0.35%	6.43%
Sablefish (Trawl Gear) - Bering Sea	0.06%	-	-	-	0.06%	0.06%	-	-	-	0.06%
Sharpchin/Northern Rockfish - Aleutian Islands	0.01%	0.08%	-	0.04%	0.13%	0.01%	0.09%	-	0.05%	0.15%
Squid - Bering Sea and Aleutian Islands	0.19%	-	-	-	0.19%	38.88%	1.44%	0.54%	0.38%	41.24%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	0.11%	-	-	-	0.11%
Other Red Rockfish - Bering Sea	1.62%	0.33%	0.07%	0.23%	2.25%	1.91%	0.43%	0.13%	0.36%	2.83%
Yellowfin Sole - Bering Sea and Aleutian Islands	6.28%	0.80%	0.17%	0.19%	7.44%	6.31%	0.84%	0.20%	0.20%	7.55%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 4: Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in Non-Plck Fisheries (118 Vessels)	AFA CV Harvests				Total Catch in All Fisheries (118 Vessels)
	CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)		CV Inshore (90 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	CV to CP (7 Vessels)	
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	0.01%	-	-	-	0.01%
Atka Mackerel - Eastern Aleutian Islands	0.03%	0.01%	-	0.02%	0.06%	0.77%	0.02%	-	0.02%	0.81%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	5.12%	0.40%	0.21%	0.71%	6.44%	8.13%	1.08%	0.72%	1.03%	10.96%
Other Flatfish - Bering Sea and Aleutian Islands	10.01%	0.84%	0.42%	0.91%	12.18%	12.64%	1.05%	0.58%	0.98%	15.25%
Flathead Sole - Bering Sea and Aleutian Islands	9.25%	0.48%	0.38%	0.85%	10.96%	12.00%	1.17%	0.92%	1.27%	15.36%
Greenland Turbot - Aleutian Islands	0.04%	-	-	0.19%	0.23%	0.09%	-	-	0.21%	0.30%
Greenland Turbot - Bering Sea	3.29%	0.06%	0.02%	0.24%	3.61%	3.99%	0.15%	0.07%	0.27%	4.48%
Other Species - Bering Sea and Aleutian Islands	4.45%	0.32%	0.20%	0.49%	5.46%	5.10%	0.49%	0.33%	0.61%	6.53%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0.01%	-	-	0.05%	0.06%	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	65.02%	4.96%	3.27%	7.88%	81.13%	72.28%	6.09%	4.17%	9.15%	91.69%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.17%	0.06%	-	0.06%	0.29%	15.26%	0.53%	0.34%	0.19%	16.32%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	0.12%	-	-	-	0.12%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	0.02%	-	-	0.05%	0.07%	0.44%	-	-	0.05%	0.49%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	0.13%	-	0.39%	0.52%	0.13%	0.13%	-	0.52%	0.78%
Other Rockfish - Bering Sea	4.04%	0.17%	-	0.67%	4.88%	8.59%	0.34%	0.17%	1.01%	10.11%
Rock Sole - Bering Sea and Aleutian Islands	7.06%	0.36%	0.23%	0.34%	7.99%	7.82%	0.66%	0.38%	0.51%	9.37%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	37.33%	0.69%	-	2.07%	40.09%	47.01%	0.69%	-	2.77%	50.47%
Sablefish (Trawl Gear) - Bering Sea	0.20%	-	-	-	0.20%	0.20%	-	-	-	0.20%
Sharpchin/Northern Rockfish - Aleutian Islands	0.01%	0.09%	-	0.04%	0.14%	0.01%	0.10%	-	0.05%	0.16%
Squid - Bering Sea and Aleutian Islands	0.26%	-	-	-	0.26%	53.20%	1.98%	0.75%	0.52%	56.45%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	0.12%	-	-	-	0.12%
Other Red Rockfish - Bering Sea	6.42%	1.31%	0.26%	0.92%	8.91%	7.60%	1.70%	0.52%	1.44%	11.26%
Yellowfin Sole - Bering Sea and Aleutian Islands	7.57%	0.96%	0.20%	0.23%	8.96%	7.61%	1.01%	0.24%	0.24%	9.10%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 5: Number and Average Length of Vessels by Sub-Sideboard Class and Sector

Sector	All		<5,000 mt		<3,000 mt		<1,000 mt	
	No. of Vessels	Avg. Length	No. of Vessels	Avg. Length	No. of Vessels	Avg. Length	No. of Vessels	Avg. Length
C_IN	90	119	55	102	40	96	18	85
C_IN/MS	11	107	3	102				
C_MS	10	109	6	107	2	128		
C_CP	7	102	5	99	1	96		
Total	118	116	69	102	43	98	18	85

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 6: Catch of Selected Species by Sub-Sideboard Class and Sector (1995-97)

Species	Sector	Catch Class All	<5,000 mt	<3,000 mt	<1,000 mt
Pacific Cod	C_IN	92,018	55,043	32,664	8,160
(Trawl Gear) BSAI: 1995 & 1996	C_IN/MS	9,734	conf.		
	C_MS	6,387	2,093	conf.	
	C_CP	6,057	4,199	conf.	
	Total	114,195	conf.	conf.	8,160
Pacific Cod	C_IN	46,264	25,517	14,399	3,093
(Trawl Gear, Catcher Vessels)	C_IN/MS	3,831	conf.		
BSAI: 1997	C_MS	2,620	922	conf.	
	C_CP	5,754	4,957	conf.	
	Total	58,470	conf.	conf.	3,093
Rock Sole	C_IN	13,250	5,177	2,528	738
BSAI	C_IN/MS	1,119	conf.		
	C_MS	652	278	conf.	
	C_CP	861	583	conf.	
	Total	15,882	conf.	conf.	738
Yellowfin Sole	C_IN	33,249	1,733	1,123	305
BSAI	C_IN/MS	4,402	conf.		
	C_MS	1,043	60	conf.	
	C_CP	1,036	929	conf.	
	Total	39,730	conf.	1,140	305

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 7: Catch of the Eligible AFA Catcher Vessels in the BSAI with Less than 5,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (55 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	Non-Pick Fisheries (69 Vessels)	CV Inshore (55 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	All Fisheries (69 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	1	-	-	10	11	144	-	1	11	156
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	989	conf.	21	186	conf.	1,404	conf.	100	253	conf.
Other Flatfish - Bering Sea and Aleutian Islands	2,126	conf.	60	544	conf.	2,740	conf.	82	570	conf.
Flathead Sole - Bering Sea and Aleutian Islands	1,965	conf.	116	351	conf.	2,540	conf.	259	481	conf.
Greenland Turbot - Aleutian Islands	-	-	-	9	9	-	-	-	10	10
Greenland Turbot - Bering Sea	225	-	4	39	268	239	conf.	6	41	conf.
Other Species - Bering Sea and Aleutian Islands	1,552	conf.	82	302	conf.	1,732	conf.	123	351	conf.
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	49	-	-	195	244	49	-	-	195	244
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	24,066	conf.	715	4,364	conf.	25,517	conf.	922	4,957	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	4	-	-	1	5	148	conf.	5	6	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	3	3	-	-	-	3	3
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	3	3	-	-	-	4	4
Other Rockfish - Bering Sea	7	-	-	3	10	15	-	-	5	20
Rock Sole - Bering Sea and Aleutian Islands	4,785	conf.	143	433	conf.	5,177	conf.	278	583	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	19	-	-	3	22	21	-	-	3	24
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	5	5	-	-	-	6	6
Squid - Bering Sea and Aleutian Islands	2	-	-	-	2	131	conf.	5	4	conf.
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	42	-	-	3	45	45	-	2	7	54
Yellowfin Sole - Bering Sea and Aleutian Islands	1,640	conf.	36	895	conf.	1,733	conf.	60	929	conf.

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 8: Percent of TAC Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 5,000 mt Average Pollock Landings from 1995-1997

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (56 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	Non-Pick Fisheries (70 Vessels)	CV Inshore (56 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	All Fisheries (70 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	0.02%	0.02%	0.26%	-	-	0.02%	0.28%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	2.68%	conf.	0.06%	0.50%	conf.	3.81%	conf.	0.27%	0.69%	conf.
Other Flatfish - Bering Sea and Aleutian Islands	2.30%	conf.	0.06%	0.59%	conf.	2.96%	conf.	0.09%	0.62%	conf.
Flathead Sole - Bering Sea and Aleutian Islands	2.23%	conf.	0.13%	0.40%	conf.	2.89%	conf.	0.29%	0.55%	conf.
Greenland Turbot - Aleutian Islands	-	-	-	0.13%	0.13%	-	-	-	0.15%	0.15%
Greenland Turbot - Bering Sea	1.33%	-	0.02%	0.23%	1.58%	1.41%	conf.	0.04%	0.24%	conf.
Other Species - Bering Sea and Aleutian Islands	2.35%	conf.	0.12%	0.46%	conf.	2.63%	conf.	0.19%	0.53%	conf.
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0.01%	-	-	0.05%	0.06%	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	36.77%	conf.	1.09%	6.67%	conf.	38.99%	conf.	1.41%	7.57%	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.07%	-	-	0.02%	0.09%	2.57%	conf.	0.09%	0.10%	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	0.05%	0.05%	-	-	-	0.05%	0.05%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	0.16%	0.16%	-	-	-	0.21%	0.21%
Other Rockfish - Bering Sea	0.68%	-	-	0.29%	0.97%	1.46%	-	-	0.49%	1.95%
Rock Sole - Bering Sea and Aleutian Islands	2.37%	conf.	0.07%	0.21%	conf.	2.56%	conf.	0.14%	0.29%	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	1.67%	-	-	0.26%	1.93%	1.85%	-	-	0.26%	2.11%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	0.04%	0.04%	-	-	-	0.05%	0.05%
Squid - Bering Sea and Aleutian Islands	0.05%	-	-	-	0.05%	3.57%	conf.	0.14%	0.11%	conf.
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	1.38%	-	-	0.10%	1.48%	1.48%	-	0.07%	0.23%	1.78%
Yellowfin Sole - Bering Sea and Aleutian Islands	0.31%	-	0.01%	0.17%	0.49%	0.33%	-	0.01%	0.18%	0.52%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 9: Percent of Catch Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 5,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (56 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	Non-Plck Fisheries (70 Vessels)	CV Inshore (56 Vessels)	CV to IN/MS (3 Vessels)	CV to MS (6 Vessels)	CV to CP (5 Vessels)	All Fisheries (70 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	0.02%	0.02%	0.25%	-	-	0.02%	0.27%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	2.91%	conf.	0.06%	0.55%	3.61%	4.13%	conf.	0.29%	0.74%	conf.
Other Flatfish - Bering Sea and Aleutian Islands	3.45%	conf.	0.10%	0.88%	4.56%	4.44%	conf.	0.13%	0.92%	conf.
Flathead Sole - Bering Sea and Aleutian Islands	3.75%	conf.	0.22%	0.67%	4.84%	4.84%	conf.	0.49%	0.92%	conf.
Greenland Turbot - Aleutian Islands	-	-	-	0.19%	0.19%	-	-	-	0.21%	0.21%
Greenland Turbot - Bering Sea	1.38%	-	0.02%	0.24%	1.64%	1.46%	conf.	0.04%	0.25%	conf.
Other Species - Bering Sea and Aleutian Islands	2.26%	conf.	0.12%	0.44%	2.93%	2.53%	conf.	0.18%	0.51%	conf.
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0.01%	-	-	0.05%	0.06%	0.01%	-	-	0.05%	0.06%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	38.27%	conf.	1.14%	6.94%	48.40%	40.58%	conf.	1.47%	7.88%	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.09%	-	-	0.02%	0.11%	3.15%	conf.	0.11%	0.13%	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	0.05%	0.05%	-	-	-	0.05%	0.05%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	0.39%	0.39%	-	-	-	0.52%	0.52%
Other Rockfish - Bering Sea	1.18%	-	-	0.51%	1.69%	2.53%	-	-	0.84%	3.37%
Rock Sole - Bering Sea and Aleutian Islands	2.83%	conf.	0.08%	0.26%	3.29%	3.06%	conf.	0.16%	0.34%	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	13.13%	-	-	2.07%	15.20%	14.52%	-	-	2.07%	16.59%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	0.04%	0.04%	-	-	-	0.05%	0.05%
Squid - Bering Sea and Aleutian Islands	0.07%	-	-	-	0.07%	4.88%	conf.	0.19%	0.15%	conf.
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	5.50%	-	-	0.39%	5.89%	5.90%	-	0.26%	0.92%	7.08%
Yellowfin Sole - Bering Sea and Aleutian Islands	0.38%	-	0.01%	0.20%	0.59%	0.40%	-	0.01%	0.21%	0.62%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

** Denotes TAC groups that do not extend throughout entire time period.*

Table 10: Catch of the Eligible AFA Catcher Vessels in the BSAI with Less than 3,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (40 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	Non-Pick Fisheries (43 Vessels)	CV Inshore (40 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	All Fisheries (43 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	1	-	-	-	1	1	-	-	-	26
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	661	-	conf.	conf.	690	690	-	conf.	conf.	conf.
Other Flatfish - Bering Sea and Aleutian Islands	1,135	-	-	conf.	conf.	1,140	-	conf.	conf.	conf.
Flathead Sole - Bering Sea and Aleutian Islands	1,242	-	conf.	conf.	1,310	1,310	-	conf.	conf.	conf.
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	169	-	-	-	169	169	-	-	-	174
Other Species - Bering Sea and Aleutian Islands	797	-	conf.	conf.	844	844	-	conf.	conf.	940
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	34	-	-	-	34	34	-	-	-	34
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	13,891	-	-	conf.	conf.	14,286	-	-	conf.	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	2	-	-	-	2	2	-	-	conf.	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	conf.	conf.	1	-	-	conf.	conf.
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	conf.	conf.	1	-	-	conf.	conf.
Other Rockfish - Bering Sea	5	-	-	-	5	5	-	-	conf.	conf.
Rock Sole - Bering Sea and Aleutian Islands	2,382	-	-	conf.	conf.	2,403	-	-	conf.	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	18	-	-	-	18	18	-	-	-	18
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	conf.	conf.	1	-	-	conf.	conf.
Squid - Bering Sea and Aleutian Islands	1	-	-	-	1	1	-	-	-	61
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	39	-	-	conf.	conf.	40	-	-	conf.	conf.
Yellowfin Sole - Bering Sea and Aleutian Islands	1,058	-	-	-	1,058	1,058	-	conf.	conf.	1,141

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 11: Percent of TAC Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 3,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (40 Vessels)	CV to IN/AI (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	Non-Pick Fisheries (43 Vessels)	CV Inshore (40 Vessels)	CV to IN/AI (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	All Fisheries (43 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	0.05%	-	-	-	0.05%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	1.79%	-	conf.	conf.	1.87%	2.42%	-	conf.	conf.	2.56%
Other Flatfish - Bering Sea and Aleutian Islands	1.23%	-	-	-	1.23%	1.56%	-	-	-	1.57%
Flathead Sole - Bering Sea and Aleutian Islands	1.41%	-	-	conf.	conf.	1.73%	-	conf.	conf.	1.86%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	1.00%	-	-	-	1.00%	1.02%	-	-	-	1.03%
Other Species - Bering Sea and Aleutian Islands	1.21%	-	-	conf.	conf.	1.33%	-	conf.	conf.	1.42%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0.01%	-	-	-	0.01%	0.01%	-	-	-	0.01%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	21.22%	-	-	conf.	conf.	22.00%	-	-	conf.	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.03%	-	-	-	0.03%	0.68%	-	-	conf.	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	conf.	conf.	-	-	-	conf.	conf.
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	conf.	conf.	-	-	-	conf.	conf.
Other Rockfish - Bering Sea	0.49%	-	-	-	0.49%	0.58%	-	-	conf.	conf.
Rock Sole - Bering Sea and Aleutian Islands	1.18%	-	-	conf.	conf.	1.25%	-	-	conf.	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	1.59%	-	-	-	1.59%	1.59%	-	-	-	1.59%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	conf.	conf.	-	-	-	conf.	conf.
Squid - Bering Sea and Aleutian Islands	0.03%	-	-	-	0.03%	1.63%	-	-	-	1.66%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	1.29%	-	-	conf.	conf.	1.32%	-	-	conf.	conf.
Yellowfin Sole - Bering Sea and Aleutian Islands	0.20%	-	-	-	0.20%	0.21%	-	-	-	0.21%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 12: Percent of Catch Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 3,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (40 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	Non-Plck Fisheries (43 Vessels)	CV Inshore (40 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (2 Vessel)	CV to CP (1 Vessel)	All Fisheries (43 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	0.04%	-	-	-	0.04%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	2.01%	-	conf.	conf.	2.10%	2.63%	-	conf.	conf.	2.75%
Other Flatfish - Bering Sea and Aleutian Islands	1.65%	-	-	-	1.65%	2.07%	-	-	-	2.07%
Flathead Sole - Bering Sea and Aleutian Islands	2.46%	-	-	conf.	conf.	2.94%	-	conf.	conf.	3.11%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	1.24%	-	-	-	1.24%	1.26%	-	-	-	1.26%
Other Species - Bering Sea and Aleutian Islands	1.23%	-	-	conf.	conf.	1.34%	-	conf.	conf.	1.42%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	20.23%	-	-	conf.	conf.	20.99%	-	-	conf.	conf.
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.11%	-	-	-	0.11%	0.85%	-	-	conf.	conf.
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	conf.	conf.	-	-	-	conf.	conf.
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	conf.	conf.	-	-	-	conf.	conf.
Other Rockfish - Bering Sea	0.84%	-	-	-	0.84%	1.01%	-	-	conf.	conf.
Rock Sole - Bering Sea and Aleutian Islands	1.47%	-	-	conf.	conf.	1.55%	-	-	conf.	conf.
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	14.52%	-	-	-	14.52%	14.52%	-	-	-	14.52%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	conf.	conf.	-	-	-	conf.	conf.
Squid - Bering Sea and Aleutian Islands	0.04%	-	-	-	0.04%	1.90%	-	-	-	1.90%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	5.24%	-	-	conf.	conf.	5.37%	-	-	conf.	conf.
Yellowfin Sole - Bering Sea and Aleutian Islands	0.25%	-	-	-	0.25%	0.26%	-	-	-	0.26%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 13: Catch of the Eligible AFA Catcher Vessels in the BSAI with Less than 1,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	Non-Pick Fisheries (18 Vessels)	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	All Fisheries (18 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	7	-	-	-	7
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	285	-	-	-	285	374	-	-	-	374
Other Flatfish - Bering Sea and Aleutian Islands	186	-	-	-	186	257	-	-	-	257
Flathead Sole - Bering Sea and Aleutian Islands	456	-	-	-	456	547	-	-	-	547
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	47	-	-	-	47	48	-	-	-	48
Other Species - Bering Sea and Aleutian Islands	307	-	-	-	307	331	-	-	-	331
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	2,968	-	-	-	2,968	3,093	-	-	-	3,093
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	2	-	-	-	2	8	-	-	-	8
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Bering Sea	3	-	-	-	3	3	-	-	-	3
Rock Sole - Bering Sea and Aleutian Islands	654	-	-	-	654	738	-	-	-	738
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	4	-	-	-	4	4	-	-	-	4
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	13	-	-	-	13
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	2	-	-	-	2	2	-	-	-	2
Yellowfin Sole - Bering Sea and Aleutian Islands	295	-	-	-	295	305	-	-	2	307

Source: Alaska Department of Fish and Game fish ticket data, National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 14: Percent of TAC Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 1,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	Non-Plck Fisheries (18 Vessels)	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	All Fisheries (18 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	0.01%	-	-	-	0.01%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	0.77%	-	-	-	0.77%	1.01%	-	-	-	1.01%
Other Flatfish - Bering Sea and Aleutian Islands	0.20%	-	-	-	0.20%	0.28%	-	-	-	0.28%
Flathead Sole - Bering Sea and Aleutian Islands	0.52%	-	-	-	0.52%	0.62%	-	-	-	0.62%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	0.28%	-	-	-	0.28%	0.28%	-	-	-	0.28%
Other Species - Bering Sea and Aleutian Islands	0.47%	-	-	-	0.47%	0.50%	-	-	-	0.50%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	4.53%	-	-	-	4.53%	4.73%	-	-	-	4.73%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.03%	-	-	-	0.03%	0.14%	-	-	-	0.14%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Bering Sea	0.29%	-	-	-	0.29%	0.29%	-	-	-	0.29%
Rock Sole - Bering Sea and Aleutian Islands	0.32%	-	-	-	0.32%	0.37%	-	-	-	0.37%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	0.35%	-	-	-	0.35%	0.35%	-	-	-	0.35%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	0.35%	-	-	-	0.35%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	0.07%	-	-	-	0.07%	0.07%	-	-	-	0.07%
Yellowfin Sole - Bering Sea and Aleutian Islands	0.06%	-	-	-	0.06%	0.06%	-	-	-	0.06%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 15: Percent of Catch Harvested by the Eligible AFA Catcher Vessels in the BSAI with Less than 1,000 mt Average Pollock Landings from 1995-97

Species by TAC Grouping	Non-Pollock Target Fisheries					Non-Pollock Target Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	Non-Plck Fisheries (18 Vessels)	CV Inshore (18 Vessels)	CV to IN/MS (0 Vessels)	CV to MS (0 Vessels)	CV to CP (0 Vessels)	All Fisheries (18 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	0.01%	-	-	-	0.01%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	0.84%	-	-	-	0.84%	1.10%	-	-	-	1.10%
Other Flatfish - Bering Sea and Aleutian Islands	0.30%	-	-	-	0.30%	0.42%	-	-	-	0.42%
Flathead Sole - Bering Sea and Aleutian Islands	0.87%	-	-	-	0.87%	1.04%	-	-	-	1.04%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	0.29%	-	-	-	0.29%	0.29%	-	-	-	0.29%
Other Species - Bering Sea and Aleutian Islands	0.45%	-	-	-	0.45%	0.48%	-	-	-	0.48%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	4.72%	-	-	-	4.72%	4.92%	-	-	-	4.92%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0.04%	-	-	-	0.04%	0.17%	-	-	-	0.17%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Bering Sea	0.51%	-	-	-	0.51%	0.51%	-	-	-	0.51%
Rock Sole - Bering Sea and Aleutian Islands	0.39%	-	-	-	0.39%	0.44%	-	-	-	0.44%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	2.77%	-	-	-	2.77%	2.77%	-	-	-	2.77%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	0.48%	-	-	-	0.48%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	0.26%	-	-	-	0.26%	0.26%	-	-	-	0.26%
Yellowfin Sole - Bering Sea and Aleutian Islands	0.07%	-	-	-	0.07%	0.07%	-	-	-	0.07%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 16: BSAI Catch of All Eligible Catcher Vessels in the Mothership Sector Prior to February 1 (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries			All Fisheries		
	AFA CV Harvests		Total Catch in	AFA CV Harvests		Total Catch in
	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	Non-Plck Fisheries (21 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	All Fisheries (21 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	-	-	-	13	12	25
Other Flatfish - Bering Sea and Aleutian Islands	-	-	-	5	4	9
Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	24	22	46
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-
Greenland Turbot - Bering Sea	-	-	-	1	1	2
Other Species - Bering Sea and Aleutian Islands	-	-	-	10	9	19
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	-	-	-	103	70	173
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	-	-	-	1	1	2
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Rockfish - Bering Sea	-	-	-	-	-	-
Rock Sole - Bering Sea and Aleutian Islands	-	-	-	76	47	123
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	2	1	3
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	-	-	-	-	-	-
Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	2	1	3

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 17: Percent of BSAI TAC Harvested by All Eligible Catcher Vessels in the Mothership Sector Prior to February 1 (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries			All Fisheries		
	AFA CV Harvests		Total Catch in	AFA CV Harvests		Total Catch in
	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	Non-Plck Fisheries (21 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	All Fisheries (21 Vessels)
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	-	-	-	0.04%	0.03%	0.07%
Other Flatfish - Bering Sea and Aleutian Islands	-	-	-	0.01%	-	0.01%
Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	0.03%	0.03%	0.06%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-
Greenland Turbot - Bering Sea	-	-	-	0.01%	0.01%	0.02%
Other Species - Bering Sea and Aleutian Islands	-	-	-	0.02%	0.01%	0.03%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	-	-	-	0.16%	0.11%	0.27%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	-	-	-	0.02%	0.02%	0.04%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Rockfish - Bering Sea	-	-	-	-	-	-
Rock Sole - Bering Sea and Aleutian Islands	-	-	-	0.04%	0.02%	0.06%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	0.05%	0.03%	0.08%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	-	-	-	-	-	-
Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 18: Percent of BSAI Catch Harvested by All Eligible Catcher Vessels in the Mothership Sector Prior to February 1 (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries			All Fisheries		
	AFA CV Harvests		Total Catch in	AFA CV Harvests		Total Catch in
	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	Non-Plck Fisheries (21 Vessels)	CV to IN/MS (11 Vessels)	CV to MS (10 Vessels)	All Fisheries (21 Vessels).
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	-	-	-	-	-	-
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	-	-	-	0.04%	0.04%	0.08%
Other Flatfish - Bering Sea and Aleutian Islands	-	-	-	0.01%	0.01%	0.02%
Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	0.05%	0.04%	0.09%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-
Greenland Turbot - Bering Sea	-	-	-	0.01%	0.01%	0.02%
Other Species - Bering Sea and Aleutian Islands	-	-	-	0.01%	0.01%	0.02%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	-	-	-	0.16%	0.11%	0.27%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	-	-	-	0.02%	0.02%	0.04%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Rockfish - Bering Sea	-	-	-	-	-	-
Rock Sole - Bering Sea and Aleutian Islands	-	-	-	0.04%	0.03%	0.07%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	-	-	-	-	-	-
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	0.07%	0.04%	0.11%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	-	-	-	-	-	-
Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 19: Catch History of All Eligible Catcher Vessels in the Inshore Sector in the Bering Sea and Aleutian Islands for Selected Target Species (1995-97)

Vessel Length	Targeted Species	Total Catch	# of Shoreside Deliveries	Shoreside Catch	Avg Catch per Delivery	Std Dev	# of Offshore Hauls	Offshore Catch	Avg Catch per Haul	Std Dev
Less than 100'	Flathead Sole - Bering Sea and Aleutian Islands	152.2	4	152.2	38.0	40.2	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	42,548.8	917	42,317.8	46.1	28.4	28	231.0	8.2	3.6
	Rock Sole - Bering Sea and Aleutian Islands	69.4	5	69.4	13.9	6.7	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	151.4	5	63.4	12.7	-	11	88.0	8.0	3.8
100'-124'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	44,520.8	847	43,048.6	50.8	29.5	47	1,472.3	31.3	20.7
	Rock Sole - Bering Sea and Aleutian Islands	39.4	1	39.4	39.4	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	8,661.7	68	8,661.7	127.4	79.6	-	-	-	-
125' and Greater	Flathead Sole - Bering Sea and Aleutian Islands	982.3	2	982.3	491.2	666.2	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	32,131.8	382	23,071.2	60.4	37.0	595	9,060.6	15.2	14.4
	Rock Sole - Bering Sea and Aleutian Islands	456.8	8	453.6	56.7	37.9	1	3.2	3.2	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	23,223.0	114	23,041.6	202.1	128.4	39	181.4	4.7	3.4

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 20: Catch History of All Eligible Catcher Vessels in the Inshore / Mothership Sector in the Bering Sea and Aleutian Islands for Selected Target Species (1995-97)

Vessel Length	Targeted Species	Total Catch	# of Shoreside Deliveries	Shoreside Catch	Avg Catch per Delivery	Std Dev	# of Offshore Hauls	Offshore Catch	Avg Catch per Haul	Std Dev
Less than 100'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	3,275.9	31	1,428.4	46.1	18.7	104	1,847.5	17.8	12.3
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	205.1	-	-	-	-	18	205.1	11.4	6.9
100'-124'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	6,883.3	96	5,229.5	54.5	31.0	114	1,653.8	14.5	12.1
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	3,585.7	16	2,946.0	184.1	72.1	51	639.8	12.5	7.3
125' and Greater	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 21: Catch History of All Eligible Catcher Vessels in the Mothership Sector in the Bering Sea and Aleutian Islands for Selected Target Species (1995-97)

Vessel Length	Targeted Species	Total Catch	# of Shoreside Deliveries	Shoreside Catch	Avg Catch per Delivery	Std Dev	# of Offshore Hauls	Offshore Catch	Avg Catch per Haul	Std Dev
Less than 100'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	1,624.0	23	851.2	37.0	15.0	66	772.8	11.7	11.0
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
100'-124'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	4,865.8	84	4,360.6	51.9	24.8	39	505.2	13.0	10.8
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	842.7	-	-	-	-	64	842.7	13.2	8.0
125' and Greater	Flathead Sole - Bering Sea and Aleutian Islands	1.1	-	-	-	-	1	1.1	1.1	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	301.2	7	301.2	43.0	12.0	-	-	-	-
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 22: Catch History of All Eligible Catcher Vessels in the Catcher / Processor Sector in the Bering Sea and Aleutian Islands for Selected Target Species (1995-97)

Vessel Length	Targeted Species	Total Catch	# of Shoreside Deliveries	Shoreside Catch	Avg Catch per Delivery	Std Dev	# of Offshore Hauls	Offshore Catch	Avg Catch per Haul	Std Dev
Less than 100'	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	2,732.3	7	201.7	28.8	19.4	127	2,530.6	19.9	16.9
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	107.6	-	-	-	-	13	107.6	8.3	8.8
100'-124'	Flathead Sole - Bering Sea and Aleutian Islands	2.3	-	-	-	-	1	2.3	2.3	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	6,224.7	46	2,104.6	45.8	29.3	254	4,120.1	16.2	14.0
	Rock Sole - Bering Sea and Aleutian Islands	5.5	-	-	-	-	1	5.5	5.5	#DIV/0!
	Yellowfin Sole - Bering Sea and Aleutian Islands	439.6	-	-	-	-	44	439.6	10.0	6.2
125' and Greater	Flathead Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Pacific Cod (Trawl Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Rock Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-
	Yellowfin Sole - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

Table 23: Catch of Pacific Cod in the BSAI Prior to March 1 for AFA Catcher Vessels, by Vessels with a Majority of non-Pollock Catch in A Seasons (1995-97)

Pacific Cod (Trawl Gear)		Non-Pollock Target Fisheries					All Fisheries				
		CV Inshore	CV to IN/MS	CV to MS	CV to CP	Total Catch in Non-Plck Fisheries	CV Inshore	CV to IN/MS	CV to MS	CV to CP	Total Catch in All Fisheries
Pollock majority (111 vessels)	Catch (metric tons)	3,261	205	-	78	3,544	11,404	1,756	1,019	1,190	15,369
	Percent of TAC	1.01%	0.06%	-	0.02%	1.10%	3.53%	0.54%	0.32%	0.37%	4.75%
	Percent of catch	1.10%	0.07%	-	0.03%	1.20%	3.85%	0.59%	0.34%	0.40%	5.19%
Pcod majority (7 vessels)	Catch (metric tons)	14,953	-	-	-	14,953	15,156	-	-	-	15,156
	Percent of TAC	4.62%	-	-	-	4.62%	4.69%	-	-	-	4.69%
	Percent of catch	5.05%	-	-	-	5.05%	5.12%	-	-	-	5.12%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 24: 1st Qarter Percentage of AFA Catcher Vessels' Catch in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	Non-Pick Fisheries (120 Vessels)	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	All Fisheries (120 Vessels)
Atka Mackerel - Central Aleutian Islands	-	100%	-	-	100%	100%	100%	-	-	100%
Atka Mackerel - Eastern Aleutian Islands	0%	75%	100%	90%	47%	1%	64%	100%	91%	5%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	46%	66%	80%	55%	53%	41%	41%	45%	46%	42%
Other Flatfish - Bering Sea and Aleutian Islands	44%	33%	36%	28%	42%	40%	35%	35%	28%	38%
Flathead Sole - Bering Sea and Aleutian Islands	68%	54%	46%	53%	66%	61%	53%	51%	53%	59%
Greenland Turbot - Aleutian Islands	100%	-	-	100%	92%	100%	-	-	90%	93%
Greenland Turbot - Bering Sea	3%	0%	0%	3%	3%	5%	19%	22%	4%	6%
Other Species - Bering Sea and Aleutian Islands	52%	54%	34%	67%	52%	51%	50%	38%	62%	51%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	17%	0%	-	82%	62%	17%	0%	-	82%	62%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	67%	43%	50%	85%	66%	68%	47%	54%	82%	67%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	46%	67%	-	67%	56%	1%	27%	29%	44%	3%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	100%	-	-	-	100%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	100%	-	-	100%	100%	100%	-	-	100%	100%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	100%	-	100%	100%	100%	100%	-	100%	100%
Other Rockfish - Bering Sea	14%	-	-	50%	19%	24%	50%	-	50%	28%
Rock Sole - Bering Sea and Aleutian Islands	62%	55%	50%	59%	61%	63%	68%	63%	66%	64%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	2%	0%	-	33%	3%	1%	50%	-	33%	4%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	100%	92%	-	100%	94%	100%	92%	-	100%	95%
Squid - Bering Sea and Aleutian Islands	16%	-	-	-	16%	5%	22%	22%	14%	6%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	100%	-	-	-	100%
Other Red Rockfish - Bering Sea	92%	64%	100%	86%	87%	81%	69%	75%	80%	79%
Yellowfin Sole - Bering Sea and Aleutian Islands	36%	38%	47%	42%	37%	36%	40%	46%	41%	37%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 25: 2nd Quarter Percentage of Catcher Vessels' Catch in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in Non-Pick Fisheries (120 Vessels)	AFA CV Harvests				Total Catch in All Fisheries (120 Vessels)
	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)		CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	
Atka Mackerel - Central Aleutian Islands	-	0%	-	-	0%	0%	0%	-	-	0%
Atka Mackerel - Eastern Aleutian Islands	93%	13%	0%	10%	47%	7%	9%	0%	9%	7%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	54%	18%	11%	36%	43%	42%	4%	4%	22%	23%
Other Flatfish - Bering Sea and Aleutian Islands	53%	53%	61%	52%	53%	42%	46%	50%	49%	43%
Flathead Sole - Bering Sea and Aleutian Islands	30%	34%	50%	36%	31%	24%	13%	24%	20%	22%
Greenland Turbot - Aleutian Islands	0%	-	-	11%	8%	0%	-	-	10%	7%
Greenland Turbot - Bering Sea	96%	100%	100%	92%	96%	79%	35%	44%	80%	77%
Other Species - Bering Sea and Aleutian Islands	44%	39%	64%	24%	43%	40%	23%	44%	18%	37%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	30%	100%	-	0%	13%	30%	100%	-	0%	13%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	33%	57%	48%	15%	34%	30%	46%	40%	13%	30%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	31%	0%	-	0%	22%	1%	0%	0%	0%	1%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	0%	-	-	-	0%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	0%	-	-	0%	0%	0%	-	-	0%	0%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	0%	-	0%	0%	0%	0%	-	0%	0%
Other Rockfish - Bering Sea	86%	-	-	50%	81%	39%	0%	-	33%	37%
Rock Sole - Bering Sea and Aleutian Islands	37%	40%	49%	37%	38%	35%	21%	31%	25%	33%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	96%	100%	-	67%	95%	78%	50%	-	67%	77%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	0%	8%	-	0%	16%	0%	8%	-	0%	5%
Squid - Bering Sea and Aleutian Islands	16%	-	-	-	16%	0%	0%	0%	0%	0%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	0%	-	-	-	0%
Other Red Rockfish - Bering Sea	8%	9%	0%	14%	9%	7%	8%	0%	10%	7%
Yellowfin Sole - Bering Sea and Aleutian Islands	62%	39%	8%	38%	58%	62%	36%	8%	36%	57%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period

Table 26: 3rd Quarter Percentage of Catcher Vessels' Catch in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	Non-Plck Fisheries (120 Vessels)	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	All Fisheries (120 Vessels)
Atka Mackerel - Central Aleutian Islands	-	0%	-	-	0%	0%	0%	-	-	0%
Atka Mackerel - Eastern Aleutian Islands	0%	13%	0%	0%	3%	91%	27%	0%	0%	87%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	0%	14%	7%	4%	3%	11%	37%	32%	20%	23%
Other Flatfish - Bering Sea and Aleutian Islands	1%	8%	4%	5%	2%	7%	11%	10%	6%	8%
Flathead Sole - Bering Sea and Aleutian Islands	0%	11%	3%	7%	1%	7%	25%	18%	18%	10%
Greenland Turbot - Aleutian Islands	0%	-	-	0%	0%	0%	-	-	0%	0%
Greenland Turbot - Bering Sea	0%	0%	0%	5%	0%	11%	42%	33%	13%	12%
Other Species - Bering Sea and Aleutian Islands	0%	7%	2%	3%	1%	4%	21%	14%	12%	7%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0%	0%	-	0%	0%	0%	0%	-	0%	0%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	0%	0%	0%	0%	0%	1%	5%	4%	5%	2%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	23%	33%	-	0%	22%	70%	70%	71%	44%	69%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	0%	-	-	-	0%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	0%	-	-	0%	0%	0%	-	-	0%	0%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	0%	-	0%	0%	0%	0%	-	0%	0%
Other Rockfish - Bering Sea	0%	-	-	0%	0%	35%	50%	-	17%	33%
Rock Sole - Bering Sea and Aleutian Islands	0%	5%	1%	2%	0%	1%	9%	5%	6%	2%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	2%	0%	-	0%	2%	14%	0%	-	0%	14%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	0%	0%	-	0%	0%	0%	0%	-	0%	0%
Squid - Bering Sea and Aleutian Islands	68%	-	-	-	68%	77%	73%	78%	86%	77%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	0%	-	-	-	0%
Other Red Rockfish - Bering Sea	0%	27%	0%	0%	4%	8%	23%	25%	10%	12%
Yellowfin Sole - Bering Sea and Aleutian Islands	1%	23%	44%	16%	5%	2%	23%	46%	17%	6%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 27: 4th Quarter Percentage of Catcher Vessels' Catch in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non-Pollock Target Fisheries					All Fisheries				
	AFA CV Harvests				Total Catch in	AFA CV Harvests				Total Catch in
	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	Non-Pick Fisheries (120 Vessels)	CV Inshore (92 Vessels)	CV to IN/MS (14 Vessels)	CV to MS (7 Vessels)	CV to CP (7 Vessels)	All Fisheries (120 Vessels)
Atka Mackerel - Central Aleutian Islands	-	0%	-	-	0%	0%	0%	-	-	0%
Atka Mackerel - Eastern Aleutian Islands	7%	0%	0%	0%	3%	2%	0%	0%	0%	1%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	0%	3%	2%	3%	1%	6%	18%	19%	11%	12%
Other Flatfish - Bering Sea and Aleutian Islands	2%	6%	0%	15%	4%	11%	9%	6%	17%	11%
Flathead Sole - Bering Sea and Aleutian Islands	1%	1%	1%	4%	1%	8%	9%	7%	8%	8%
Greenland Turbot - Aleutian Islands	0%	-	-	0%	0%	0%	-	-	0%	0%
Greenland Turbot - Bering Sea	1%	0%	0%	0%	1%	5%	4%	0%	2%	4%
Other Species - Bering Sea and Aleutian Islands	4%	1%	0%	6%	3%	5%	6%	5%	7%	5%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	53%	0%	-	18%	25%	53%	0%	-	18%	25%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	0%	0%	2%	0%	0%	1%	1%	2%	1%	1%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	0%	0%	-	0%	0%	28%	3%	0%	11%	27%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	0%	-	-	-	0%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	0%	-	-	0%	0%	0%	-	-	0%	0%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	0%	-	0%	0%	0%	0%	-	0%	0%
Other Rockfish - Bering Sea	0%	-	-	0%	0%	2%	0%	-	0%	2%
Rock Sole - Bering Sea and Aleutian Islands	1%	1%	0%	2%	1%	1%	2%	1%	3%	1%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	0%	0%	-	0%	0%	6%	0%	-	0%	5%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	0%	0%	-	0%	0%	0%	0%	-	0%	0%
Squid - Bering Sea and Aleutian Islands	0%	-	-	-	0%	18%	5%	0%	0%	17%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	0%	-	-	-	0%
Other Red Rockfish - Bering Sea	0%	0%	0%	0%	0%	3%	0%	0%	0%	2%
Yellowfin Sole - Bering Sea and Aleutian Islands	0%	1%	0%	5%	1%	1%	1%	1%	5%	1%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 28: Quarterly Catch of Catcher Vessels in the Inshore Sector in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non - Pick Fisheries					All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	100%	0%	0%	0%	100%
Atka Mackerel - Eastern Aleutian Islands	0%	93%	0%	7%	100%	1%	7%	91%	2%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	46%	54%	0%	0%	100%	41%	42%	11%	6%	100%
Other Flatfish - Bering Sea and Aleutian Islands	44%	53%	1%	2%	100%	40%	42%	7%	11%	100%
Flathead Sole - Bering Sea and Aleutian Islands	68%	30%	0%	1%	100%	61%	24%	7%	8%	100%
Greenland Turbot - Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Greenland Turbot - Bering Sea	3%	96%	0%	1%	100%	5%	79%	11%	5%	100%
Other Species - Bering Sea and Aleutian Islands	52%	44%	0%	4%	100%	51%	40%	4%	5%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	17%	30%	0%	53%	100%	17%	30%	0%	53%	100%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	67%	33%	0%	0%	100%	68%	30%	1%	1%	100%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	46%	31%	23%	0%	100%	1%	1%	70%	28%	100%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	14%	86%	0%	0%	100%	24%	39%	35%	2%	100%
Rock Sole - Bering Sea and Aleutian Islands	62%	37%	0%	1%	100%	63%	35%	1%	1%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	2%	96%	2%	0%	100%	1%	78%	14%	6%	100%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	16%	16%	68%	0%	100%	5%	0%	77%	18%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	100%	0%	0%	0%	100%
Other Red Rockfish - Bering Sea	92%	8%	0%	0%	100%	81%	7%	8%	3%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	36%	62%	1%	0%	100%	36%	62%	2%	1%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 29: Quarterly Catch of Catcher Vessels in the Inshore / Mothership Sector in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non - Pick Fisheries					All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Atka Mackerel - Eastern Aleutian Islands	75%	13%	13%	0%	100%	64%	9%	27%	0%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	66%	18%	14%	3%	100%	41%	4%	37%	18%	100%
Other Flatfish - Bering Sea and Aleutian Islands	33%	53%	8%	6%	100%	35%	46%	11%	9%	100%
Flathead Sole - Bering Sea and Aleutian Islands	54%	34%	11%	1%	100%	53%	13%	25%	9%	100%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	0%	100%	0%	0%	100%	19%	35%	42%	4%	100%
Other Species - Bering Sea and Aleutian Islands	54%	39%	7%	1%	100%	50%	23%	21%	6%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	0%	100%	0%	0%	100%	0%	100%	0%	0%	100%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	43%	57%	0%	0%	100%	47%	46%	5%	1%	100%
* Pacific Cod (Trawl Gear, Catcher Processor-Vessels) - BSAI - (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	67%	0%	33%	0%	100%	27%	0%	70%	3%	100%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	-	-	-	-	-	50%	0%	50%	0%	100%
Rock Sole - Bering Sea and Aleutian Islands	55%	40%	5%	1%	100%	68%	21%	9%	2%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	0%	100%	0%	0%	100%	50%	50%	0%	0%	100%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	92%	8%	0%	0%	100%	92%	8%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	22%	0%	73%	5%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	64%	9%	27%	0%	100%	69%	8%	23%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	38%	39%	23%	1%	100%	40%	36%	23%	1%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 30: Quarterly Catch of Catcher Vessels in the Mothership Sector in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non - Pick Fisheries					All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	80%	11%	7%	2%	100%	45%	4%	32%	19%	100%
Other Flatfish - Bering Sea and Aleutian Islands	36%	61%	4%	0%	100%	35%	50%	10%	6%	100%
Flathead Sole - Bering Sea and Aleutian Islands	46%	50%	3%	1%	100%	51%	24%	18%	7%	100%
Greenland Turbot - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Greenland Turbot - Bering Sea	0%	100%	0%	0%	100%	22%	44%	33%	0%	100%
Other Species - Bering Sea and Aleutian Islands	34%	64%	2%	0%	100%	38%	44%	14%	5%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	50%	48%	0%	2%	100%	54%	40%	4%	2%	100%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	-	-	-	-	-	29%	0%	71%	0%	100%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Bering Sea	-	-	-	-	-	-	-	-	-	-
Rock Sole - Bering Sea and Aleutian Islands	50%	49%	1%	0%	100%	63%	31%	5%	1%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	22%	0%	78%	0%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	100%	0%	0%	0%	100%	75%	0%	25%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	47%	8%	44%	0%	100%	46%	8%	46%	1%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 31: Quarterly Catch of Catcher Vessels in the Catcher / Processor Sector in the Bering Sea and Aleutian Islands (1995-97)

Species by TAC Grouping	Non - Pick Fisheries					All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
Atka Mackerel - Central Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Atka Mackerel - Eastern Aleutian Islands	90%	10%	0%	0%	100%	91%	9%	0%	0%	100%
Atka Mackerel - Western Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Arrowtooth Flounder - Bering Sea and Aleutian Islands	56%	37%	4%	3%	100%	46%	22%	20%	11%	100%
Other Flatfish - Bering Sea and Aleutian Islands	28%	52%	5%	15%	100%	28%	49%	6%	17%	100%
Flathead Sole - Bering Sea and Aleutian Islands	53%	36%	7%	4%	100%	53%	20%	18%	8%	100%
Greenland Turbot - Aleutian Islands	90%	10%	0%	0%	100%	90%	10%	0%	0%	100%
Greenland Turbot - Bering Sea	3%	92%	5%	0%	100%	4%	80%	13%	2%	100%
Other Species - Bering Sea and Aleutian Islands	67%	25%	3%	6%	100%	62%	18%	12%	7%	100%
Pacific Cod (Fixed Gear) - Bering Sea and Aleutian Islands	82%	0%	0%	18%	100%	82%	0%	0%	18%	100%
Pacific Cod (Jig Gear) - Bering Sea and Aleutian Islands	-	-	-	-	-	-	-	-	-	-
* Pacific Cod (Trawl Gear, Catcher Vessels) - BSAI (1997 only)	85%	15%	0%	0%	100%	82%	13%	5%	1%	100%
* Pacific Cod (Trawl Gear, Catcher Processor Vessels) - BSAI (1997 only)	-	-	-	-	-	-	-	-	-	-
Pacific Ocean Perch - Bering Sea	100%	0%	0%	0%	100%	44%	0%	44%	11%	100%
* Pacific Ocean Perch - Central Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
* Pacific Ocean Perch - Eastern Aleutian Islands (1996 through 1997 only)	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
* Pacific Ocean Perch - Western Aleutian Islands (1996 through 1997 only)	-	-	-	-	-	-	-	-	-	-
Other Rockfish - Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Other Rockfish - Bering Sea	50%	50%	0%	0%	100%	50%	33%	17%	0%	100%
Rock Sole - Bering Sea and Aleutian Islands	59%	37%	2%	2%	100%	66%	25%	6%	3%	100%
Sablefish (Fixed Gear) - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Sablefish (Fixed Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sablefish (Trawl Gear) - Aleutian Islands	33%	67%	0%	0%	100%	33%	67%	0%	0%	100%
Sablefish (Trawl Gear) - Bering Sea	-	-	-	-	-	-	-	-	-	-
Sharpchin/Northern Rockfish - Aleutian Islands	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Squid - Bering Sea and Aleutian Islands	-	-	-	-	-	14%	0%	86%	0%	100%
Shortraker/Rougheye Rockfish - Aleutian Islands	-	-	-	-	-	-	-	-	-	-
Other Red Rockfish - Bering Sea	86%	14%	0%	0%	100%	80%	10%	10%	0%	100%
Yellowfin Sole - Bering Sea and Aleutian Islands	42%	38%	16%	5%	100%	41%	36%	17%	5%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 32: Catch of All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	AFA CV Harvests				Total Catch in All Fisheries (102 Vessels)
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	
*Atka Mackerel - Central Gulf (1995 through 1996)	7	2	0	1	10
*Atka Mackerel - Gulf of Alaska (1997)		-			-
*Atka Mackerel - Western Gulf (1995 through 1996)	227	-	15	6	247
Arrowtooth Flounder - Central Gulf	7,028	55	166	435	7,683
Arrowtooth Flounder - Eastern Gulf	103		23	3	129
Arrowtooth Flounder - Western Gulf	107	1	3	0	111
Deep Water Flatfish - Central Gulf	3,023		143	26	3,193
Deep Water Flatfish - Eastern Gulf	88		6	14	108
Deep Water Flatfish - Western Gulf	0		0		0
Flathead Sole - Central Gulf	1,139	1	17	125	1,281
Flathead Sole - Eastern Gulf	36		1	6	42
Flathead Sole - Western Gulf	90	0	12	1	103
Northern Rockfish - Central Gulf	1,432		28	4	1,464
Northern Rockfish - Eastern Gulf	5		0	-	5
Northern Rockfish - Western Gulf	2	-			2
Other Species - Gulf of Alaska	1,656	2	11	93	1,762
Pacific Cod (Inshore) - Central Gulf	27,148		2,586	168	29,902
Pacific Cod (Offshore) - Central Gulf	-	37	314	386	737
Pacific Cod (Inshore) - Eastern Gulf	275			5	280
Pacific Cod (Offshore) - Eastern Gulf	-		-	0	0
Pacific Cod (Inshore) - Western Gulf	9,714		2,105	340	12,159
Pacific Cod (Offshore) - Western Gulf		13	109	527	648
Pelagic Shelf Rockfish - Central Gulf	438	0	1	6	445
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	1	-	-	0	1
Pelagic Shelf Rockfish - Eastern Gulf	0		1	19	20
Pelagic Shelf Rockfish - Western Gulf	2	-	0	-	2
Pollock - Chirikof District	29,875	10	41	151	30,078
Pollock - Eastern Gulf	4,088		1,037	166	5,291
Pollock - Kodiak	30,689	9	2,951	659	34,308
Pollock - Shumagin District	57,162	316	2,720	91	60,289
Pacific Ocean Perch - Central Gulf	3,560	7	199	107	3,872
Pacific Ocean Perch - Eastern Gulf	7		1	146	153
Pacific Ocan Perch - Western Gulf	66	-	0	-	66
Rex Sole - Central Gulf	710	20	18	47	795
Rex Sole - Eastern Gulf	112		8	9	129
Rex Sole - Western Gulf	14	0	0	-	14
Slope Rockfish - Central Gulf	17	-	3	-	20
Slope Rockfish - Eastern Gulf	0		0	0	1
Slope Rockfish - Western Gulf	0	-	0	-	0
Sablefish (Fixed Gear) - Central Gulf	36				36
Sablefish (Fixed Gear) - Western Gulf	0		-	-	0
Sablefish (Trawl Gear) - Central Gulf	627	0	31	15	673
Sablefish (Trawl Gear) - Southeast	-		-	1	1
Sablefish (Trawl Gear) - Western Gulf	4	-	-	-	4
Sablefish (Trawl Gear) - Western Yakutat	10		0	11	20
Shallow Water Flatfish - Central Gulf	7,079	1	101	240	7,422
Shallow Water Flatfish - Eastern Gulf	12		8	30	50
Shallow Water Flatfish - Western Gulf	338	0	18	32	388
Shortraker / Rougheye - Central Gulf	182	-	3	3	187
Shortraker / Rougheye - Eastern Gulf	7		2	11	19
Shortraker / Rougheye - Western Gulf	1	-	0	-	1
Thornyhead - Gulf of Alaska	183	0	6	14	203

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 33: Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	AFA CV Harvests				Total Catch in All Fisheries (102 Vessels)
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	
*Atka Mackerel - Central Gulf (1995 through 1996)	1.80%	0.51%	0.03%	0.16%	2.50%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	11.89%	-	0.80%	0.30%	12.99%
Arrowtooth Flounder - Central Gulf	14.53%	0.11%	0.34%	0.90%	15.88%
Arrowtooth Flounder - Eastern Gulf	3.47%	-	0.78%	0.09%	4.34%
Arrowtooth Flounder - Western Gulf	1.81%	0.01%	0.04%	-	1.86%
Deep Water Flatfish - Central Gulf	46.49%	-	2.21%	0.40%	49.10%
Deep Water Flatfish - Eastern Gulf	6.05%	-	0.40%	0.98%	7.43%
Deep Water Flatfish - Western Gulf	0.16%	-	0.02%	-	0.18%
Flathead Sole - Central Gulf	20.11%	0.02%	0.30%	2.20%	22.63%
Flathead Sole - Eastern Gulf	18.82%	-	0.35%	3.02%	22.19%
Flathead Sole - Western Gulf	4.86%	0.02%	0.65%	0.06%	5.59%
Northern Rockfish - Central Gulf	12.47%	-	0.24%	0.04%	12.75%
Northern Rockfish - Eastern Gulf	5.69%	-	0.06%	-	5.75%
Northern Rockfish - Western Gulf	0.54%	-	-	-	0.54%
Other Species - Gulf of Alaska	12.45%	0.01%	0.08%	0.70%	13.24%
Pacific Cod (Inshore) - Central Gulf	21.38%	-	2.04%	0.13%	23.55%
Pacific Cod (Offshore) - Central Gulf	-	0.38%	3.22%	3.97%	7.57%
Pacific Cod (Inshore) - Eastern Gulf	9.81%	-	-	0.17%	9.98%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	1.22%	1.22%
Pacific Cod (Inshore) - Western Gulf	16.34%	-	3.54%	0.57%	20.45%
Pacific Cod (Offshore) - Western Gulf	-	0.19%	1.62%	7.83%	9.64%
Pelagic Shelf Rockfish - Central Gulf	24.80%	-	0.05%	0.36%	25.21%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0.03%	-	-	-	0.03%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	0.08%	1.40%	1.48%
Pelagic Shelf Rockfish - Western Gulf	0.39%	-	-	-	0.39%
Pollock - Chirikof District	51.25%	0.02%	0.07%	0.26%	51.60%
Pollock - Eastern Gulf	41.31%	-	10.48%	1.67%	53.46%
Pollock - Kodiak	47.81%	0.01%	4.60%	1.03%	53.45%
Pollock - Shumagin District	70.71%	0.39%	3.36%	0.11%	74.57%
Pacific Ocean Perch - Central Gulf	24.63%	0.05%	1.37%	0.74%	26.79%
Pacific Ocean Perch - Eastern Gulf	0.13%	-	0.02%	2.95%	3.10%
Pacific Ocan Perch - Western Gulf	1.55%	-	-	-	1.55%
Rex Sole - Central Gulf	6.30%	0.18%	0.16%	0.42%	7.06%
Rex Sole - Eastern Gulf	20.60%	-	1.55%	1.57%	23.72%
Rex Sole - Western Gulf	0.95%	-	0.02%	-	0.97%
Slope Rockfish - Central Gulf	0.71%	-	0.11%	-	0.82%
Slope Rockfish - Eastern Gulf	-	-	0.02%	0.04%	0.06%
Slope Rockfish - Western Gulf	0.21%	-	-	-	0.21%
Sablefish (Fixed Gear) - Central Gulf	0.23%	-	-	-	0.23%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	13.09%	-	0.66%	0.32%	14.07%
Sablefish (Trawl Gear) - Southeast	-	-	-	0.79%	0.79%
Sablefish (Trawl Gear) - Western Gulf	2.92%	-	-	-	2.92%
Sablefish (Trawl Gear) - Western Yakutat	1.40%	-	-	1.53%	2.93%
Shallow Water Flatfish - Central Gulf	33.26%	-	0.48%	1.13%	34.87%
Shallow Water Flatfish - Eastern Gulf	14.55%	-	9.07%	35.71%	59.33%
Shallow Water Flatfish - Western Gulf	27.82%	-	1.49%	2.64%	31.95%
Shortraker / Rougheye - Central Gulf	5.88%	-	0.08%	0.09%	6.05%
Shortraker / Rougheye - Eastern Gulf	0.35%	-	0.09%	0.58%	1.02%
Shortraker / Rougheye - Western Gulf	0.33%	-	-	-	0.33%
Thornyhead - Gulf of Alaska	5.33%	-	0.18%	0.40%	5.91%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 34: 1st Quarter Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	% of Sector's Total Catch				% of Total Catch
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	by all Sectors (102 Vessels)
*Atka Mackerel - Central Gulf (1995 through 1996)	71%	100%	-	100%	80%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	4%	-	0%	100%	6%
Arrowtooth Flounder - Central Gulf	12%	0%	1%	0%	11%
Arrowtooth Flounder - Eastern Gulf	10%	-	4%	0%	9%
Arrowtooth Flounder - Western Gulf	66%	0%	33%	-	65%
Deep Water Flatfish - Central Gulf	12%	-	0%	0%	11%
Deep Water Flatfish - Eastern Gulf	0%	-	0%	0%	0%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	18%	0%	0%	0%	16%
Flathead Sole - Eastern Gulf	0%	-	0%	0%	0%
Flathead Sole - Western Gulf	80%	-	92%	100%	81%
Northern Rockfish - Central Gulf	3%	-	0%	0%	3%
Northern Rockfish - Eastern Gulf	0%	-	-	-	0%
Northern Rockfish - Western Gulf	100%	-	-	-	100%
Other Species - Gulf of Alaska	21%	0%	20%	10%	20%
Pacific Cod (Inshore) - Central Gulf	81%	-	98%	0%	82%
Pacific Cod (Offshore) - Central Gulf	-	78%	100%	100%	99%
Pacific Cod (Inshore) - Eastern Gulf	80%	-	-	0%	78%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	99%	-	100%	100%	99%
Pacific Cod (Offshore) - Western Gulf	-	0%	94%	100%	97%
Pelagic Shelf Rockfish - Central Gulf	5%	-	-	0%	5%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	-	-	-	0%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	0%	0%	0%
Pelagic Shelf Rockfish - Western Gulf	100%	-	-	-	100%
Pollock - Chirikof District	33%	100%	39%	52%	33%
Pollock - Eastern Gulf	100%	-	100%	98%	100%
Pollock - Kodiak	21%	0%	3%	0%	19%
Pollock - Shumagin District	23%	0%	52%	52%	24%
Pacific Ocean Perch - Central Gulf	0%	0%	0%	0%	0%
Pacific Ocean Perch - Eastern Gulf	43%	-	0%	0%	2%
Pacific Ocan Perch - Western Gulf	0%	-	-	-	0%
Rex Sole - Central Gulf	11%	0%	0%	0%	9%
Rex Sole - Eastern Gulf	1%	-	0%	0%	1%
Rex Sole - Western Gulf	87%	-	-	-	87%
Slope Rockfish - Central Gulf	33%	-	0%	-	30%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	0%	-	-	-	0%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	4%	-	0%	0%	3%
Sablefish (Trawl Gear) - Southeast	-	-	-	0%	0%
Sablefish (Trawl Gear) - Western Gulf	75%	-	-	-	75%
Sablefish (Trawl Gear) - Western Yakutat	0%	-	-	0%	0%
Shallow Water Flatfish - Central Gulf	29%	100%	18%	3%	28%
Shallow Water Flatfish - Eastern Gulf	31%	-	0%	3%	10%
Shallow Water Flatfish - Western Gulf	37%	-	89%	100%	45%
Shortraker / Rougheye - Central Gulf	6%	-	0%	0%	5%
Shortraker / Rougheye - Eastern Gulf	67%	-	50%	0%	26%
Shortraker / Rougheye - Western Gulf	0%	-	-	-	0%
Thornyhead - Gulf of Alaska	9%	-	0%	0%	8%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 35: 2nd Quarter Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	% of Sector's Total Catch				% of Total Catch
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	by all Sectors (102 Vessels)
*Atka Mackerel - Central Gulf (1995 through 1996)	0%	0%	-	0%	0%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	56%	-	100%	0%	57%
Arrowtooth Flounder - Central Gulf	24%	100%	75%	54%	27%
Arrowtooth Flounder - Eastern Gulf	0%	-	96%	0%	17%
Arrowtooth Flounder - Western Gulf	3%	0%	0%	-	3%
Deep Water Flatfish - Central Gulf	70%	-	94%	72%	71%
Deep Water Flatfish - Eastern Gulf	0%	-	100%	0%	6%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	34%	100%	25%	52%	36%
Flathead Sole - Eastern Gulf	0%	-	100%	0%	2%
Flathead Sole - Western Gulf	0%	-	0%	0%	0%
Northern Rockfish - Central Gulf	2%	-	0%	0%	2%
Northern Rockfish - Eastern Gulf	0%	-	-	-	0%
Northern Rockfish - Western Gulf	0%	-	-	-	0%
Other Species - Gulf of Alaska	34%	100%	70%	72%	36%
Pacific Cod (Inshore) - Central Gulf	3%	-	1%	36%	3%
Pacific Cod (Offshore) - Central Gulf	-	22%	0%	0%	1%
Pacific Cod (Inshore) - Eastern Gulf	0%	-	-	0%	0%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	1%	-	0%	0%	1%
Pacific Cod (Offshore) - Western Gulf	-	0%	0%	0%	0%
Pelagic Shelf Rockfish - Central Gulf	0%	-	-	17%	0%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	-	-	-	0%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	100%	0%	5%
Pelagic Shelf Rockfish - Western Gulf	0%	-	-	-	0%
Pollock - Chirikof District	19%	0%	61%	48%	19%
Pollock - Eastern Gulf	0%	-	0%	0%	0%
Pollock - Kodiak	20%	100%	48%	66%	23%
Pollock - Shumagin District	16%	0%	15%	48%	16%
Pacific Ocean Perch - Central Gulf	1%	100%	14%	0%	2%
Pacific Ocean Perch - Eastern Gulf	0%	-	100%	0%	1%
Pacific Ocan Perch - Western Gulf	0%	-	-	-	0%
Rex Sole - Central Gulf	24%	100%	50%	69%	29%
Rex Sole - Eastern Gulf	0%	-	100%	0%	6%
Rex Sole - Western Gulf	0%	-	-	-	0%
Slope Rockfish - Central Gulf	22%	-	0%	-	20%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	78%	-	-	-	78%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	27%	-	28%	19%	27%
Sablefish (Trawl Gear) - Southeast	-	-	-	0%	0%
Sablefish (Trawl Gear) - Western Gulf	0%	-	-	-	0%
Sablefish (Trawl Gear) - Western Yakutat	0%	-	-	0%	0%
Shallow Water Flatfish - Central Gulf	24%	0%	45%	38%	25%
Shallow Water Flatfish - Eastern Gulf	15%	-	100%	0%	19%
Shallow Water Flatfish - Western Gulf	59%	-	0%	0%	51%
Shortraker / Rougheye - Central Gulf	39%	-	100%	67%	40%
Shortraker / Rougheye - Eastern Gulf	0%	-	50%	0%	5%
Shortraker / Rougheye - Western Gulf	0%	-	-	-	0%
Thornyhead - Gulf of Alaska	52%	-	71%	7%	49%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data.

* Denotes TAC groups that do not extend throughout entire time period.

Table 36: 3rd Quarter Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	% of Sector's Total Catch				% of Total Catch by all Sectors (102 Vessels)
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	
*Atka Mackerel - Central Gulf (1995 through 1996)	29%	0%	-	0%	20%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	40%	-	0%	0%	37%
Arrowtooth Flounder - Central Gulf	44%	0%	5%	22%	42%
Arrowtooth Flounder - Eastern Gulf	66%	-	0%	100%	55%
Arrowtooth Flounder - Western Gulf	27%	100%	0%	-	27%
Deep Water Flatfish - Central Gulf	16%	-	6%	20%	16%
Deep Water Flatfish - Eastern Gulf	62%	-	0%	100%	64%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	32%	0%	75%	29%	32%
Flathead Sole - Eastern Gulf	26%	-	0%	100%	34%
Flathead Sole - Western Gulf	19%	-	0%	0%	17%
Northern Rockfish - Central Gulf	93%	-	100%	100%	93%
Northern Rockfish - Eastern Gulf	100%	-	-	-	100%
Northern Rockfish - Western Gulf	0%	-	-	-	0%
Other Species - Gulf of Alaska	26%	0%	0%	13%	26%
Pacific Cod (Inshore) - Central Gulf	3%	-	0%	11%	2%
Pacific Cod (Offshore) - Central Gulf	-	0%	0%	0%	0%
Pacific Cod (Inshore) - Eastern Gulf	20%	-	-	100%	21%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	0%	-	0%	0%	0%
Pacific Cod (Offshore) - Western Gulf	-	100%	6%	0%	3%
Pelagic Shelf Rockfish - Central Gulf	93%	-	-	83%	93%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	100%	-	-	-	100%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	0%	100%	95%
Pelagic Shelf Rockfish - Western Gulf	0%	-	-	-	0%
Pollock - Chirikof District	48%	0%	0%	0%	47%
Pollock - Eastern Gulf	0%	-	0%	2%	0%
Pollock - Kodiak	31%	0%	27%	22%	30%
Pollock - Shumagin District	49%	100%	6%	0%	47%
Pacific Ocean Perch - Central Gulf	98%	0%	86%	100%	98%
Pacific Ocean Perch - Eastern Gulf	57%	-	0%	100%	97%
Pacific Ocan Perch - Western Gulf	95%	-	-	-	95%
Rex Sole - Central Gulf	52%	0%	50%	25%	49%
Rex Sole - Eastern Gulf	38%	-	0%	100%	40%
Rex Sole - Western Gulf	7%	-	-	-	7%
Slope Rockfish - Central Gulf	39%	-	0%	-	35%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	14%	-	-	-	14%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	68%	-	72%	75%	68%
Sablefish (Trawl Gear) - Southeast	-	-	-	100%	100%
Sablefish (Trawl Gear) - Western Gulf	25%	-	-	-	25%
Sablefish (Trawl Gear) - Western Yakutat	60%	-	-	100%	81%
Shallow Water Flatfish - Central Gulf	23%	0%	34%	43%	23%
Shallow Water Flatfish - Eastern Gulf	38%	-	0%	97%	67%
Shallow Water Flatfish - Western Gulf	3%	-	0%	0%	3%
Shortraker / Rougheye - Central Gulf	56%	-	0%	33%	55%
Shortraker / Rougheye - Eastern Gulf	17%	-	0%	100%	63%
Shortraker / Rougheye - Western Gulf	100%	-	-	-	100%
Thornyhead - Gulf of Alaska	37%	-	29%	93%	41%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 37: 4th Quarter Percent of Catch Harvested by All Eligible AFA Catcher Vessels in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	% of Sector's Total Catch				% of Total Catch
	CV Inshore (80 Vessels)	CV to IN/MS (9 Vessels)	CV to MS (7 Vessels)	CV to CP (6 Vessels)	by all Sectors (102 Vessels)
*Atka Mackerel - Central Gulf (1995 through 1996)	0%	0%	-	0%	0%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	0%	-	0%	0%	0%
Arrowtooth Flounder - Central Gulf	20%	0%	18%	24%	20%
Arrowtooth Flounder - Eastern Gulf	24%	-	0%	0%	19%
Arrowtooth Flounder - Western Gulf	4%	0%	67%	-	5%
Deep Water Flatfish - Central Gulf	3%	-	0%	8%	2%
Deep Water Flatfish - Eastern Gulf	38%	-	0%	0%	31%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	16%	0%	0%	19%	16%
Flathead Sole - Eastern Gulf	74%	-	0%	0%	63%
Flathead Sole - Western Gulf	1%	-	8%	0%	2%
Northern Rockfish - Central Gulf	3%	-	0%	0%	3%
Northern Rockfish - Eastern Gulf	0%	-	-	-	0%
Northern Rockfish - Western Gulf	0%	-	-	-	0%
Other Species - Gulf of Alaska	20%	0%	10%	5%	19%
Pacific Cod (Inshore) - Central Gulf	14%	-	1%	53%	13%
Pacific Cod (Offshore) - Central Gulf	-	0%	0%	0%	0%
Pacific Cod (Inshore) - Eastern Gulf	0%	-	-	0%	0%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	0%	-	0%	0%	0%
Pacific Cod (Offshore) - Western Gulf	-	0%	1%	0%	0%
Pelagic Shelf Rockfish - Central Gulf	1%	-	-	0%	1%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	-	-	-	0%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	0%	0%	0%
Pelagic Shelf Rockfish - Western Gulf	0%	-	-	-	0%
Pollock - Chirikof District	1%	0%	0%	0%	1%
Pollock - Eastern Gulf	0%	-	0%	0%	0%
Pollock - Kodiak	28%	0%	22%	12%	27%
Pollock - Shumagin District	12%	0%	27%	0%	12%
Pacific Ocean Perch - Central Gulf	0%	0%	0%	0%	0%
Pacific Ocean Perch - Eastern Gulf	0%	-	0%	0%	0%
Pacific Ocan Perch - Western Gulf	5%	-	-	-	5%
Rex Sole - Central Gulf	14%	0%	0%	6%	12%
Rex Sole - Eastern Gulf	62%	-	0%	0%	53%
Rex Sole - Western Gulf	7%	-	-	-	7%
Slope Rockfish - Central Gulf	6%	-	100%	-	15%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	8%	-	-	-	8%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	1%	-	0%	6%	1%
Sablefish (Trawl Gear) - Southeast	-	-	-	0%	0%
Sablefish (Trawl Gear) - Western Gulf	0%	-	-	-	0%
Sablefish (Trawl Gear) - Western Yakutat	40%	-	-	0%	19%
Shallow Water Flatfish - Central Gulf	24%	0%	4%	17%	24%
Shallow Water Flatfish - Eastern Gulf	15%	-	0%	0%	4%
Shallow Water Flatfish - Western Gulf	1%	-	11%	0%	1%
Shortraker / Rougheye - Central Gulf	0%	-	0%	0%	0%
Shortraker / Rougheye - Eastern Gulf	17%	-	0%	0%	5%
Shortraker / Rougheye - Western Gulf	0%	-	-	-	0%
Thornyhead - Gulf of Alaska	2%	-	0%	0%	1%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 38: Quarterly Catch of Catcher Vessels in the Inshore Sector in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
*Atka Mackerel - Central Gulf (1995 through 1996)	71%	0%	29%	0%	100%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	4%	56%	40%	0%	100%
Arrowtooth Flounder - Central Gulf	12%	24%	44%	20%	100%
Arrowtooth Flounder - Eastern Gulf	10%	0%	66%	24%	100%
Arrowtooth Flounder - Western Gulf	66%	3%	27%	4%	100%
Deep Water Flatfish - Central Gulf	12%	70%	16%	3%	100%
Deep Water Flatfish - Eastern Gulf	0%	0%	62%	38%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	18%	34%	32%	16%	100%
Flathead Sole - Eastern Gulf	0%	0%	26%	74%	100%
Flathead Sole - Western Gulf	80%	0%	19%	1%	100%
Northern Rockfish - Central Gulf	3%	2%	93%	3%	100%
Northern Rockfish - Eastern Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Western Gulf	100%	0%	0%	0%	100%
Other Species - Gulf of Alaska	21%	34%	26%	20%	100%
Pacific Cod (Inshore) - Central Gulf	81%	3%	3%	14%	100%
Pacific Cod (Offshore) - Central Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Eastern Gulf	80%	0%	20%	0%	100%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	99%	1%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Central Gulf	5%	0%	93%	1%	100%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Eastern Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Western Gulf	100%	0%	0%	0%	100%
Pollock - Chirikof District	33%	19%	48%	1%	100%
Pollock - Eastern Gulf	100%	0%	0%	0%	100%
Pollock - Kodiak	21%	20%	31%	28%	100%
Pollock - Shumagin District	23%	16%	49%	12%	100%
Pacific Ocean Perch - Central Gulf	0%	1%	98%	0%	100%
Pacific Ocean Perch - Eastern Gulf	43%	0%	57%	0%	100%
Pacific Ocan Perch - Western Gulf	0%	0%	95%	5%	100%
Rex Sole - Central Gulf	11%	24%	52%	14%	100%
Rex Sole - Eastern Gulf	1%	0%	38%	62%	100%
Rex Sole - Western Gulf	87%	0%	7%	7%	100%
Slope Rockfish - Central Gulf	33%	22%	39%	6%	100%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	0%	78%	14%	8%	100%
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	4%	27%	68%	1%	100%
Sablefish (Trawl Gear) - Southeast	-	-	-	-	-
Sablefish (Trawl Gear) - Western Gulf	75%	0%	25%	0%	100%
Sablefish (Trawl Gear) - Western Yakutat	0%	0%	60%	40%	100%
Shallow Water Flatfish - Central Gulf	29%	24%	23%	24%	100%
Shallow Water Flatfish - Eastern Gulf	31%	15%	38%	15%	100%
Shallow Water Flatfish - Western Gulf	37%	59%	3%	1%	100%
Shortraker / Rougheye - Central Gulf	6%	39%	56%	0%	100%
Shortraker / Rougheye - Eastern Gulf	67%	0%	17%	17%	100%
Shortraker / Rougheye - Western Gulf	0%	0%	100%	0%	100%
Thornyhead - Gulf of Alaska	9%	52%	37%	2%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 39: Quarterly Catch of Catcher Vessels in the Inshore / Mothership Sector in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
*Atka Mackerel - Central Gulf (1995 through 1996)	100%	0%	0%	0%	100%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	-	-	-	-	-
Arrowtooth Flounder - Central Gulf	0%	100%	0%	0%	100%
Arrowtooth Flounder - Eastern Gulf	-	-	-	-	-
Arrowtooth Flounder - Western Gulf	0%	0%	100%	0%	100%
Deep Water Flatfish - Central Gulf	-	-	-	-	-
Deep Water Flatfish - Eastern Gulf	-	-	-	-	-
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	100%	0%	0%	100%
Flathead Sole - Eastern Gulf	-	-	-	-	-
Flathead Sole - Western Gulf	-	-	-	-	-
Northern Rockfish - Central Gulf	-	-	-	-	-
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	0%	100%	0%	0%	100%
Pacific Cod (Inshore) - Central Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Central Gulf	78%	22%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Western Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	100%	0%	0%	0%	100%
Pollock - Eastern Gulf	-	-	-	-	-
Pollock - Kodiak	0%	100%	0%	0%	100%
Pollock - Shumagin District	0%	0%	100%	0%	100%
Pacific Ocean Perch - Central Gulf	0%	100%	0%	0%	100%
Pacific Ocean Perch - Eastern Gulf	-	-	-	-	-
Pacific Ocan Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	100%	0%	0%	100%
Rex Sole - Eastern Gulf	-	-	-	-	-
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	-	-	-	-	-
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Southeast	-	-	-	-	-
Sablefish (Trawl Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Western Yakutat	-	-	-	-	-
Shallow Water Flatfish - Central Gulf	100%	0%	0%	0%	100%
Shallow Water Flatfish - Eastern Gulf	-	-	-	-	-
Shallow Water Flatfish - Western Gulf	-	-	-	-	-
Shortraker / Rougheye - Central Gulf	-	-	-	-	-
Shortraker / Rougheye - Eastern Gulf	-	-	-	-	-
Shortraker / Rougheye - Western Gulf	-	-	-	-	-
Thornyhead - Gulf of Alaska	-	-	-	-	-

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 40: Quarterly Catch of Catcher Vessels in the Mothership Sector in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
*Atka Mackerel - Central Gulf (1995 through 1996)	-	-	-	-	-
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	0%	100%	0%	0%	100%
Arrowtooth Flounder - Central Gulf	1%	75%	5%	18%	100%
Arrowtooth Flounder - Eastern Gulf	4%	96%	0%	0%	100%
Arrowtooth Flounder - Western Gulf	33%	0%	0%	67%	100%
Deep Water Flatfish - Central Gulf	0%	94%	6%	0%	100%
Deep Water Flatfish - Eastern Gulf	0%	100%	0%	0%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	25%	75%	0%	100%
Flathead Sole - Eastern Gulf	0%	100%	0%	0%	100%
Flathead Sole - Western Gulf	92%	0%	0%	8%	100%
Northern Rockfish - Central Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	20%	70%	0%	10%	100%
Pacific Cod (Inshore) - Central Gulf	98%	1%	0%	1%	100%
Pacific Cod (Offshore) - Central Gulf	100%	0%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	100%	0%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	94%	0%	6%	1%	100%
Pelagic Shelf Rockfish - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	0%	100%	0%	0%	100%
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	39%	61%	0%	0%	100%
Pollock - Eastern Gulf	100%	0%	0%	0%	100%
Pollock - Kodiak	3%	48%	27%	22%	100%
Pollock - Shumagin District	52%	15%	6%	27%	100%
Pacific Ocean Perch - Central Gulf	0%	14%	86%	0%	100%
Pacific Ocean Perch - Eastern Gulf	0%	100%	0%	0%	100%
Pacific Ocan Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	50%	50%	0%	100%
Rex Sole - Eastern Gulf	0%	100%	0%	0%	100%
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	0%	0%	0%	100%	100%
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	0%	28%	72%	0%	100%
Sablefish (Trawl Gear) - Southeast	-	-	-	-	-
Sablefish (Trawl Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Western Yakutat	-	-	-	-	-
Shallow Water Flatfish - Central Gulf	18%	45%	34%	4%	100%
Shallow Water Flatfish - Eastern Gulf	0%	100%	0%	0%	100%
Shallow Water Flatfish - Western Gulf	89%	0%	0%	11%	100%
Shortraker / Rougheye - Central Gulf	0%	100%	0%	0%	100%
Shortraker / Rougheye - Eastern Gulf	50%	50%	0%	0%	100%
Shortraker / Rougheye - Western Gulf	-	-	-	-	-
Thornyhead - Gulf of Alaska	0%	71%	29%	0%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

Table 41: Quarterly Catch of Catcher Vessels in the Catcher / Processor Sector in the Gulf of Alaska (1995-97)

Species by TAC Grouping	All Fisheries				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
*Atka Mackerel - Central Gulf (1995 through 1996)	100%	0%	0%	0%	100%
*Atka Mackerel - Gulf of Alaska (1997)	-	-	-	-	-
*Atka Mackerel - Western Gulf (1995 through 1996)	100%	0%	0%	0%	100%
Arrowtooth Flounder - Central Gulf	0%	54%	22%	24%	100%
Arrowtooth Flounder - Eastern Gulf	0%	0%	100%	0%	100%
Arrowtooth Flounder - Western Gulf	-	-	-	-	-
Deep Water Flatfish - Central Gulf	0%	72%	20%	8%	100%
Deep Water Flatfish - Eastern Gulf	0%	0%	100%	0%	100%
Deep Water Flatfish - Western Gulf	-	-	-	-	-
Flathead Sole - Central Gulf	0%	52%	29%	19%	100%
Flathead Sole - Eastern Gulf	0%	0%	100%	0%	100%
Flathead Sole - Western Gulf	100%	0%	0%	0%	100%
Northern Rockfish - Central Gulf	0%	0%	100%	0%	100%
Northern Rockfish - Eastern Gulf	-	-	-	-	-
Northern Rockfish - Western Gulf	-	-	-	-	-
Other Species - Gulf of Alaska	10%	72%	13%	5%	100%
Pacific Cod (Inshore) - Central Gulf	0%	36%	11%	53%	100%
Pacific Cod (Offshore) - Central Gulf	100%	0%	0%	0%	100%
Pacific Cod (Inshore) - Eastern Gulf	0%	0%	100%	0%	100%
Pacific Cod (Offshore) - Eastern Gulf	-	-	-	-	-
Pacific Cod (Inshore) - Western Gulf	100%	0%	0%	0%	100%
Pacific Cod (Offshore) - Western Gulf	100%	0%	0%	0%	100%
Pelagic Shelf Rockfish - Central Gulf	0%	17%	83%	0%	100%
Pelagic Shelf Rockfish (Nearshore) - Central Gulf	-	-	-	-	-
Pelagic Shelf Rockfish - Eastern Gulf	0%	0%	100%	0%	100%
Pelagic Shelf Rockfish - Western Gulf	-	-	-	-	-
Pollock - Chirikof District	52%	48%	0%	0%	100%
Pollock - Eastern Gulf	98%	0%	2%	0%	100%
Pollock - Kodiak	0%	66%	22%	12%	100%
Pollock - Shumagin District	52%	48%	0%	0%	100%
Pacific Ocean Perch - Central Gulf	0%	0%	100%	0%	100%
Pacific Ocean Perch - Eastern Gulf	0%	0%	100%	0%	100%
Pacific Ocan Perch - Western Gulf	-	-	-	-	-
Rex Sole - Central Gulf	0%	69%	25%	6%	100%
Rex Sole - Eastern Gulf	0%	0%	100%	0%	100%
Rex Sole - Western Gulf	-	-	-	-	-
Slope Rockfish - Central Gulf	-	-	-	-	-
Slope Rockfish - Eastern Gulf	-	-	-	-	-
Slope Rockfish - Western Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Central Gulf	-	-	-	-	-
Sablefish (Fixed Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Central Gulf	0%	19%	75%	6%	100%
Sablefish (Trawl Gear) - Southeast	0%	0%	100%	0%	100%
Sablefish (Trawl Gear) - Western Gulf	-	-	-	-	-
Sablefish (Trawl Gear) - Western Yakutat	0%	0%	100%	0%	100%
Shallow Water Flatfish - Central Gulf	3%	38%	43%	17%	100%
Shallow Water Flatfish - Eastern Gulf	3%	0%	97%	0%	100%
Shallow Water Flatfish - Western Gulf	100%	0%	0%	0%	100%
Shortraker / Rougheye - Central Gulf	0%	67%	33%	0%	100%
Shortraker / Rougheye - Eastern Gulf	0%	0%	100%	0%	100%
Shortraker / Rougheye - Western Gulf	-	-	-	-	-
Thornyhead - Gulf of Alaska	0%	7%	93%	0%	100%

Source: Alaska Department of Fish and Game fish ticket data; National Marine Fisheries Service observer data

* Denotes TAC groups that do not extend throughout entire time period.

APPENDIX III

ECONOMIC RELIANCE ON CRAB BY AFA SECTION 208 CROSSOVER VESSELS: IMPLICATIONS FOR SIDEBOARDS

Final Report and Testimony to the North Pacific Fishery Management Council
Anchorage, AK

June 7-15, 1999

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ECONOMIC RELIANCE ON CRAB BY AFA SECTION 208 CROSSOVER VESSELS: IMPLICATIONS FOR SIDEBOARDS

INTRODUCTION

Section 211(a) of the American Fisheries Act (AFA) requires the North Pacific Fisheries Management Council (Council) to "...recommend for approval by the Secretary such conservation and management measures as it deems necessary to protect other fisheries under its jurisdiction and the participants in those fisheries, including processors, from adverse impacts caused by this Act or fishery cooperatives in the directed pollock fishery." Subsection (c)(1)(A) further requires the Council, by no later than July 1, 1999, to "recommend for approval by the Secretary such conservation and management measures to "prevent catcher vessels eligible under subsections (a), (b), and (c) of section 208 from exceeding in the aggregate the traditional harvest levels of such vessels in other fisheries under the authority of the North Pacific Council as a result of fishery cooperatives in the directed pollock fishery." Such recommendations shall hereafter be referred to as sideboards.

The general intent of this report is to provide background information and analysis that may assist the Council in framing sideboards as they pertain to the North Pacific crab fisheries. This report portrays historical performance of section 208 crossover vessels that are also crab License Limitation Program (LLP)-Alternative 9 qualified. The purpose of such analysis is to identify likely behavioral motivations that underpin historical economic dependence--what has come to be referred to as "economic reliance". Comparable information was developed for Alternative 9 qualified vessels that are not defined by AFA as section 208 crossover vessels. This additional non-crossover information was requested by Dave Fraser during the April Council meeting. Discussion of this non-crossover analysis is limited to issues that may alter Council sideboard deliberations.

It is important to recognize that the concept of "economic reliance" has no formal definition in economic theory. What may seem to be reliance to one individual may be regarded as non-reliance to another. Accordingly, the analysis presented in this report will illustrate various perspectives of historical reliance; each may yield different impressions/insights into how important a crab fishery has been to a particular vessel.

APPROACH

The general framework is to contrast economic performance of the 258 vessels qualified to fish crab under the LLP-Alternative 9 with the 39 AFA section 208 crossover vessels that are also Alternative 9 qualified. Both sets of vessels were identified by Council staff at the December 1998 Council meeting. The following notation is used to distinguish between the crossover and non-crossover vessels. The 258 non-crossovers are labeled "NXO", while the 39 crossover vessels are labeled "XO".

It became apparent during the analysis that the 39 XO vessels required a subdivision. Each policy period had a few XO vessels that caught most of the opilio crab harvested by the XO fleet and, in fact, appeared to behave more like NXO vessels than XO vessels, at least with respect to opilio. These vessels were segregated into a separate category. The number of top opilio revenue earners among the 39 varied from year-to-year, but was never less than three. Accordingly, the segregated category was defined as the top three vessels. This segregation is intended to provide visibility for the behavior of the class of top performers.

Several levels of comparisons are made in this analysis. The most aggregate level compares the distribution of estimated fishery gross earnings by NXO and XO. The least aggregated comparison enumerates each of the 39 XO vessels, though reports performance in terms of percentages of gross revenue in all fishing activities or percentage of crab-specific gross revenue in order to protect vessel anonymity and comply with state and federal confidentiality requirements. Consistent with objectives of Section 211, *PROTECTIONS FOR OTHER **FISHERIES***, only revenues earned from fishing are considered in this analysis.

Each comparison is made for four different policy periods: 1997, 1996-97, 1995-97, and 1988-97. It is through this yearly differential policy perspective that different notions of economic reliance come into focus. The first three policy periods take different views of recent participation. The shorter the historical perspective, the more difficult it is to provide any insight into a meaningful notion of economic reliance because it provides limited or no insight into vessel motivation or behavior. Longer historical views provide more information to infer vessel motivation and thus, how or why "reliance" changed over time.

For example, the single year, 1997, was potentially an anomalous year for discerning economic reliance; reconsideration of crab LLP was introduced at the April 1997 Council meeting (Agenda item C-4(c) Buyback Program; Industry Report), with Council decision to be made in Fall 1998. Behavior in 1997 may have been more representative of the policy incentive to "fish-for-rights" as opposed to fishing for crab because this activity is an important contributor to XO vessel economic performance. A meaningful definition of economic reliance should be a function of behavior related primarily to economic performance and not solely a response to policy changes. A longer time perspective is essential to uncover what the underlying motivation may have been in 1997.

The fourth policy period takes a longer, 10-year perspective for one main reason. Unraveling the components of economic reliance requires examining a sufficient number of years in which there were no policy changes that could distort economic behavior. For example, the public was notified on September 5, 1990 (FR 36382) of the Council's intent to develop measures to limit access to the groundfish, crab and halibut fisheries off Alaska. The Council subsequently defined 1991-94 as qualifying years under the original crab LLP. Specific qualifying years differed by crab species and, in some cases, area. These qualifying years conceivably could distort evidence of reliance for precisely the same fishing-for-rights reason that may have occurred in 1997. Furthermore, the Bristol Bay red king crab fishery was closed in 1994 and 1995, making the 1995-97 policy period potentially less informative in terms of vessel behavior than desirable, at least for red king crab. The 1988-97 period contains years in which there are no policy-induced behavioral incentives. In fact, this 10-year policy period guarantees that the number of years in which there are no potential policy distortions is greater than or equal to the number potential policy distortion years for all crab species.. It follows that this 10-year period provides an opportunity to examine behavioral consistency outside the potential distortion years.

The analysis unveiled below will illustrate that the use of averages to represent meaningful policy information should be viewed with skepticism.[1] Each policy period is examined working back to 1988. The analysis will show that conclusions drawn from each period may be misleading. As the analysis moves from policy period to policy period, some insights may be discovered, but sometimes at the expense of

[1] Averages were calculated assuming vessels existed all ten years, 1988 through 1997. Accordingly, no distinction was made between "did not fish" versus "did not exist". Average revenues for vessels that did not exist in the earliest years would be understated.

other distortions. The difficulty stems not simply from an incomplete view of history but from the use of averages and therefore, an inability to uncover behavioral motivation that strikes at the heart of economic reliance. It isn't until a year-by-year perspective is taken (Figures 7, 8 and 9) that underlying economic motivations become clearer.

Throughout the analysis, no attempt was given to reconciling changes in fishing seasons that may have contributed to changing behavior. This potential shortcoming may be of greatest concern prior to the termination of the JV pollock era, i.e., prior to 1991.

DATA

The analysis was conducted using a blend of CFEC fish ticket data, 1988-97, and federal data on offshore landings, 1992-1997. The CFEC data contains complete landings (round pounds) and gross earnings estimates for fish and shellfish landed onshore. It also contains complete offshore data prior to 1991 when fish tickets were required for fish landed in the U.S. EEZ. Offshore reporting/record keeping responsibility shifted to the federal government in 1991, though some vessels continued to complete fish tickets on at least a portion of their offshore landings.

Catch and earnings data (exclusive of roe bonuses) for non-crossover vessels came from the CFEC fish ticket files. Crossover data came from the CFEC files for crab and an aggregate "other shellfish" category, and from the blended federal and CFEC data for P. cod, pollock and an aggregate fish category, "other finfish". Unfortunately, several errors were found in the CFEC aggregated data that are embedded in this analysis because the errors were found too late to rectify.[2] Other finfish in the offshore sector was defined by federal data as consisting only of Atka mackerel, yellowfin sole, rockfish and flatfish, whereas, all other finfish, including IFQ fish, were included in the CFEC data. The federal data contains only landings estimates. Corresponding gross earnings for fish landed offshore were derived by multiplying landings times an annual Bering Sea Aleutian Islands area exvessel price estimate for each species.[3] Like the onshore data, roe bonuses are not included in the pollock price estimate. Accordingly, pollock gross earnings are understated, making the crossover vessels appear more dependent on crab revenues.

Anomalies were found in the federal data set during data verification. The CFEC offshore landings data were at best partial during 1991-97. The blended crossover data consisting of the complete CFEC data, less CFEC offshore landings, plus federal offshore landings, theoretically had to be greater than or equal to the original complete CFEC data set. This was not always the case. CDQ data were missing from the federal data and there were substantial irregularities during the pre-CDQ period. Accordingly, the final blended data set used in this analysis was compiled under the following protocol. Federal offshore data replaced CFEC offshore data if and only if the federal landings data exceeded the CFEC counterpart; else, the complete CFEC data was used. This protocol was implemented on a vessel-by-vessel, year-by-year basis. The result is a data set that accurately captures onshore landings (except for CDQ pollock) but

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[2] CFEC inadvertently included brown king crab under the "other finfish" category rather than "other shellfish". This error overstates other finfish (understates crab earnings) by the NXO fleet. CFEC also reported CDQ pollock as other finfish, rather than as pollock. It follows that the XO earnings from pollock are understated.

[3] Source: Exvessel prices in the domestic groundfish fisheries off Alaska by area gear and species, National Marine Fisheries Service office of the Pacific Marine Fisheries Commission.

which under-states offshore landings, especially in the pre-CDQ time period. The implication of this data deficiency is that it under-reports revenues from the XO fleet, making XO vessels appear to be more dependent on crab revenues. Likewise, inclusion of brown king crab under "other finfish" under-reports the NXO share of revenue from crab and over-reports its share coming from other finfish. The XO fleet was largely unaffected by the inappropriate categorization of brown king crab.

ANALYSIS

The analysis presented below focuses on three species of crab: red king crab, opilio Tanner crab, and bairdi Tanner crab. The other crab species examined include blue king crab and Korean horsehair crab. Neither of these two species are of economic importance to the crossover fleet. Initially, revenue performance is compared between NXO and XO vessels. Then, a closer examination of XO fleet activity is presented. Finally, comparative insights concerning the NXO fleet performance are made.

REVENUE COMPARISONS. Figure 1 provides the most aggregate view of fishery-specific performance. It compares the average revenue earned by fishery for a typical vessel in the 258-vessel NXO fleet, to a typical vessel in the 39-vessel XO fleet. The XO fleet was divided into two groups in order to illustrate the differential importance that crab can have on some of the XO vessels. The top three crabbing vessels among the XO fleet are labeled XO3 for each historical period, while the remaining 36 XO vessels are labeled XO36. Segregating out the top three crab producers should not be construed to imply only three vessels rely heavily on crab. The extent of economic reliance varies across years, as will be shown throughout the analysis.

Fisheries are aggregated in Figure 1 into four species designations: crab, pollock, other finfish, and P. cod (other shellfish was dropped because it accounted for only 0.1% to 0.5% of total income). The two graphs contained in this figure show the average gross earnings per vessel by species category and the percentage contribution of each species category to gross earnings. For example, in 1997, NXO vessels earned on average $620,000 in contrast to $1,680,000 for XO36, while XO3 vessels earned $1,469,000.[4] Eighty-one percent of the NXO income derived from crab (exclusive of brown crab), whereas, crab accounted for less than 7% of XO36 income and 34% of XO3 income. The share of NXO income attributable to crab increases to more than eighty-eight percent when brown crab is included in the crab category, rather than in other finfish. The XO fleet is unaffected by CFEC's inappropriate categorization of brown crab.[5] With the exception of a single vessel in a single policy period (1995-97), each the XO3 vessels earned

[4] Differences in "average earnings" depicted in Figure 1, with notable exceptions, mirror the variation in gross earnings between NXO and XO vessels. For example, the active NXO fleet (exclusive of catcher-processors) earned a 10-year minimum of $1 million and a maximum of $27.5 million, while the XO fleet earned a minimum $4.4 million and a maximum of $26.1million. Note that "minimum" was defined for the NXO fleet as the fifth-lowest catcher over 60 feet. This very low minimum reflects LLP-Alternative 9 vessels that fished few of the 10 years and may have qualified by acquiring latent licenses, e.g., sunken vessel licenses. In contrast, all 39 XO vessels fished each of the 10 years. The maximum NXO revenue also is not very reflective of "highliner" NXO earnings. The highest revenue NXO-catcher vessels specialized in both opilio and brown crab, an uncommon practice.

[5] In ten years, only two XO vessels ever landed any brown crab; one landed brown crab in two different years, the other landed brown crab in a single year. The 10-year cumulative brown crab earnings were just $52,000 for these two XO vessels.

considerably less than the top XO36 vessels who typically target pollock in both the A and B seasons every year.

The impression left by Figure 1: 1997 is similar to that of 1996-97, except that crab became more important to XO3 (crab's share of revenue rose to over 44%) and less important to XO36 (dropped to 5%). The 1995-97 and 1988-97 historical perspectives change more dramatically. The XO3 vessels earned, on average, more total income than their XO36 counterparts in 1995-97, because they earned almost as much income from crab ($566,163) as the average NXO vessel. The 1988-97 period yields yet a different conclusion. All vessel categories appear to rely more on crab than in any other period. During this 10-year horizon, crab accounts for 85%, 9% and 69%, respectively, for NXO, XO36 and XO3. The average XO3 vessels even out-performed the average NXO vessel. The appearance of increased economic reliance as the historical perspective elongates may be somewhat illusory. Each of the time periods contains behavioral incentives that must be understood in order assess the level of "reliance". The 1988-97 time period, for example, contains all years in which the behavioral motivation could have been fishing-for-rights. It also contains all years in which crossover participation in a particular crab fishery could have been motivated by high-expected revenues. And crab income during these high-expected revenue years may have been sufficiently large for just a very few number of vessels that the XO36 sub-fleet average was pulled up. These apparent motivations and anomalies can be uncovered by systematically examining XO performance in each of the crab fisheries.

Figure 2 shows the percentage distribution of crab revenue for NXO and all 39 XO vessels. In 1997, 83% of the XO-crab revenues were derived from red king crab. The remainder came from opilio, even though only three XO vessels fished opilio. The NXO fleet, in contrast, derived most of its income (70%) from opilio; only 20% came from red crab.

Comparing 1997 with 1996-97 would seem to suggest that there was not much structural difference between these historical periods, i.e., the underlying fishing behavior seemed to change little during the two years. In fact, this conclusion is not correct. Thirty-eight XO boats fished red crab in 1997 when LLP was being reconsidered; only nine fished in 1996. One might think that the red crab share of gross revenues would fall dramatically when, in fact, it only dropped from 83 to 75%. This slight drop is a consequence of total XO revenues falling, as well.

The first striking change in the XO crab portfolio is apparent by contrasting 1997 with 1995-97. Opilio took on a more prominent role than red crab for XO vessels. Red crab's share for a so-called "typical" XO vessel dropped by nearly half, while opilio's share increased nearly three-fold (17 to 47%). This apparent change is misleading for two reasons. First, only 9 XO vessels fished opilio in 1995--twice the number of XO vessels that fished in 1996 and three times the number that fished in 1997. Second, 1995 alone accounted for more than twice the industry-wide opilio gross revenues of 1996 and 1997 combined, $180 million versus $85.6 million and $92.5 million, respectively (see 1998 Crab SAFE document, Table 5-28). This greater share of a larger sum of money was distributed across all 39 vessels (which defines a "typical" vessel). But this limited participation and large variation in gross earnings across years belies "typical". No significant behavioral changes really occurred in this policy period, despite the appearance of change.

The 1988-97 historical perspective in Figure 2 is misleading for similar reasons. All LLP qualifying years are included in the XO average performance and all atypically high gross earnings by a small portion of the XO fleet are incorporated.

DETAILED LOOK AT XO FLEET. Figure 3 provides a more detailed examination of individual XO vessel performance because it reveals the vessel-by-vessel distribution of total revenue. Red king crab

appears to play a **relatively** consistent role in the XO fleet income. However, it is important to keep in mind that 38 of the 39 XO vessels fished in 1997, while only nine fished in 1996. This difference appears to be due to the fact that 1997 was a LLP qualifying year, i.e., the high participation rate was induced by a policy incentive to fish-for-rights. Pre-season expected gross earnings (price times GHL) were nearly identical ($20 million in 1996 versus $22.8 million in 1997). Both were years of low expected earnings, so, the high participation rate in 1997 cannot be attributed to greater expected earnings potential. Some have argued, however, that entry into a crab fishery is driven by GHL rather than expected income. If correct, the low GHL in 1996 (half that of 1997) may explain the low XO participation rate. But if participation is not motivated by economic considerations, the entire question of economic reliance is moot, as is the argument that fleets need to diversify to mitigate revenue volatility.

Red crab revenues as a share of total revenues dropped across the XO fleet in 1995-97 policy period because the Bristol Bay fishery was closed in 1994 and 1995. The 10-year policy horizon shows red crab revenues as a share of total revenues rose nearly to the 1997 level. This increased contribution to red crab is attributable to three additional LLP qualifying years, 1991 through 1993. Interestingly, the highest two expected-income years; 1989 and 1990 generated very little red crab effort by the XO fleet, five and 12 vessels, respectively. End of the JV era probably explains low participation in 1989, but not in 1990. The 1990 pollock fishery ended two weeks prior to the red king crab opening, adequate time to change fisheries. Details surrounding the role LLP may have played in determining XO participation versus the role of expected revenue will discussed later.

Caution is still warranted when inferences are made because three of the four-Figure 3 graphs average across years. There clearly is a wide range of dependence on red king crab for revenue. The greatest variation between XO vessels deriving the lowest and highest share of revenue from red crab occurred in the last LLP qualifying year, 1997, when red crab accounted for as little as zero and as much as 18% of total revenues for an individual vessel. Comparing the distribution of total revenue across years seems to suggest some vessels "relied" on (*sic*, earned a substantial share of their income from) red crab. This inference is only partially correct. Vessels are sorted in Figure 3 from largest to smallest share of income due to red king crab, i.e., vessel ordering changes across time. A vessel that earned a large percentage share of income from red crab in one historical period may have earned a lower share in a different period. Moreover, the **average share** in 1996-97, 1995-97 and 1988-97 is partially a reflection of participation in just a few years.

Figure 4 provides additional insight into the distribution of crab revenues across time. In 1997, only red king crab and opilio were landed by the XO fleet, and only three of the vessels landed opilio. One additional vessel landed opilio in 1996, and ten vessels landed bairdi. Some of the bairdi was bycatch to red king crab fishing in 1996! The 1995-97 period shows that about one third of the XO fleet derived significant crab earnings from bairdi and opilio. This change in performance relative to subsequent years is due exclusively to 1995 fishing behavior. Opilio (and bairdi) garnered an even greater share of XO crab revenues in the 10-year scenario primarily because of policy-induced entry (and increased bairdi participation during qualifying years) combined with the very high value of the opilio fishery during 1991-95. Nevertheless, all crab accounted for a relatively minor share of gross earnings for most XO vessels.

Figure 5 illustrates the significance of the top three XO crab vessels in terms of their share of opilio revenues, the big money crab fishery. In 1997, only three XO vessels landed any opilio at all. This share slipped to 90%, 63% and 61%, respectively in 1996-97, 1995-97 and 1988-97. The reason the 1995-97 share for XO3 slipped is because 1995 was a high-expected revenue year for opilio. Even so, only nine XO vessels participated in the 1995 opilio fishery, several after the A-pollock season ended. Participation by these nine vessels represents a three-fold increase over the 1997 participation rate and more than double

the rate of 1996. That increase in vessel participation, combined with much greater earnings, markedly decreased the relative importance of the top three vessels. The 1988-97 historical period was similarly influenced by five years of high-expected earnings and, coincidentally, three LLP qualifying years. Again, annual participation remained low, peaking at 14 vessels in 1994. Perhaps the most important issue to be gleaned from Figure 5 is that few of the crossover vessels consistently garnered much of the opilio earnings. The sideboard policy significance of this issue will become clearer when annual participation (Figure 8) is discussed.

Figure 6 provides further detail concerning the relative importance of the opilio fishery to crossover vessels. This figure shows opilio as a share of total revenue for 39 XOs. Several conclusions deserve amplification. First, it is clear that some vessels derived a substantial portion of their income from opilio, others derived little income from opilio, but the majority never relied on opilio. Second, those who fished opilio occasionally or who earned a relatively small fraction of their total income from opilio, typically did not target opilio instead of A-season pollock. Rather, they tended to finish the A season and then, turned to opilio, especially in years with long opilio seasons. The important sideboard inference is that XO vessels freed up under a cooperative are most likely to have adverse economic impacts in the opilio fishery for two reasons. First, this is the highest value crab fishery and it is underutilized by most of the XO fleet—all of whom are LLP qualified for opilio, primarily through a general Tanner crab qualification. Second, if the XO fleet were capped at its historical level by a fleet-wide cap, only two to five XO vessels caught most of the opilio because they routinely targeted opilio, often instead of A-season pollock. Depending upon how an aggregate crossover cap is applied, these few vessels could be severely damaged by other XO vessels freed up under an AFA cooperative.

As usual, care is warranted when drawing inferences across multiple-year scenarios. Each of the historical-periods portrayed in Figure 6 reflects average XO performance across the specific years. This averaging over-states **annual** participation. For example, the 1988-97 period seems to suggest 24 different vessels participated, when in fact the correct interpretation is that 24 **different** vessels participated **at least** one of the 10 years. The maximum number of vessels to participate in a single year is 14; the minimum number is three.

Figures 7, 8 and 9 show the year-by-year participation of each XO vessel, which provides the behavioral insights that simply are not available from the various averages contained in Figures 1-6. These behavioral insights will help clarify the concept of economic reliance.

All three figures identify individual vessel participation by LLP qualifying and non-qualifying years for the entire 10-year period. The vessels are ranked from the highest to lowest number of participation years, summarized in the far right column. Three other features are contained in this graph. The second to last row summarizes the total number of vessels that participated in a particular year. The last row indicates the preseason expected revenue measured as price times GHL. The years of high-expected revenue are highlighted. Bristol Bay red king crab closure years (1994-95) and the bairdi closure year (1997) are also highlighted.

Figure 7 reveals that most participation in the red king crab fishery appears to be motivated by qualifying for LLP. Of the 39 XO vessels, 30 to 38 fished in each of the four qualifying years (1991-93 and 1997). The maximum participation in non-qualifying years ranged from as little as three to at most 12 vessels.

High-expected revenue did not contribute to a high participation rate, i.e., revenue does not appear to be the motivational force underlying red king crab participation. Only five and 12 vessels participated in the two high-expected revenue years, 1989-90. It also appears that red king crab participation is not generally

motivated by a portfolio strategy, which is exemplified by routine participation in a fishery. Vessels routinely participate in several fisheries in order to minimize the risk of revenue volatility or because they systematically rely on the contribution of several fisheries to overall income. Few of the XO fleet **consistently** relied on red king crab as part of their overall fishing portfolio. Just over a third of the XO fleet fished red king crab five or more of 10 years (eight years that the Bristol Bay fishery was open); only seven of 39 XO vessels fished at least six of the 10 (eight) years.

Figure 8 tells a different story about opilio. Regardless of any motivational factor, participation was low in all years, ranging from three to 14 vessels. Participation was, however, highest for the intersection of high-expected revenue years (1991-95) and initial LLP qualifying years (1992-94), making it difficult to discern which of these motivational factors is more important. It would appear that there is a limited but important portfolio effect with up to five vessels, at most. One vessel fished all 10 years, one fished eight years and three fished five years. The remaining 34 vessels fished three or fewer years during the 10-year period; 15 never fished opilio at all. But are still opilio qualified under the general Tanner crab LLP.

Figure 9 illustrates the pattern of participation in the bairdi fishery.[6] First, it is important to note that only a single vessel qualified for a general Tanner crab endorsement because of bairdi bycatch landed during the 1993 red king crab fishery. Second, participation *appears* to be motivated less by LLP than observed with red crab. While most participation in the bairdi fishery still occurred in the first two of three qualifying years (1992 and 1993), two non-qualifying years (1991 and 1995) also were years of high participation. High participation in 1991 (24 of 39 vessels) is probably due to a symbiotic relationship between Bristol Bay red king crab and fall bairdi fisheries. The first LLP qualifying season for red king crab (1991) ended seven days before the bairdi season opened. There is no obvious explanation why 19 of 39 XO vessels fished in 1995, a closure year for red king crab and a year of low expected bairdi income. Participation in the next year, 1996, once again emulates that of the Bristol Bay red king crab fishery, when only half as many XO vessels fished bairdi in 1996 compared to 1995—one more vessel than fished red king crab 10 days earlier.

INSIGHTS FROM NXO. An identical analysis was conducted for all NXO vessels at the request of an Industry Advisory Panel member. Figures 3, 4, 6-9 were replicated for NXO vessels. Little additional policy insight was gleaned from this exercise, so, the additional 15 figures are not appended to this report. Not surprisingly, NXO vessels derive a much greater portion of their income from all crab species. Three noteworthy issues were uncovered, however. First, the NXO vessel list contains at least two vessels that either purchased latent licenses or that may not qualify under LLP-Alternative 9. Second, 10 of the remaining 256 vessels (excluding exempt vessels under 60 feet) typically earn more income from fish than from crab. This observation is not surprising given that the NXO classification is defined as: a) NOT a section 208 vessel and b) LLP-Alternative 9 qualified. NXO vessels are not necessarily "true" crab vessels, though the vast majority are. Third, participation rates across crab fisheries differ dramatically between the NXO and XO fleets. This one comparison could be of sufficient policy merit that it warrants discussion.

A comparison of Figures 7-9 with their NXO counterparts is summarized in Figures 10-13 because each NXO figure requires six pages to enumerate all 258 vessels. The most notable contrast is the absence of fishing-for-rights among most of the NXO fleet. The frequency of NXO fleet participation is much more consistent, regardless of fishery. Nearly 80% of the NXO fleet fished for red king crab at least six of ten years, more than four times the corresponding participation rate of the XO fleet. The XO participation rate

[6] Expected revenue is not included in Figure 9 because the annual bairdi fishery was split into two seasons for several years.

in red crab fisheries equalizes that of NXO at about four years... exactly the number of qualifying years. This observation further suggests the fishing-for-rights motive dominated XO behavior in red crab. The disparity between NXO and XO is much greater for opilio. Only 5% of the XO fleet fished opilio at least six of 10 years and only 13% fished at least half the ten of years. In contrast, 78% of the NXO fleet fished opilio six of 10 years; 83% fished at least half the number of years. The NXO participation rate in bairdi was more than three times that of XO for vessels that fished at least six years (72% versus 21%) and 2.6 times greater at five or more years (81% versus 31%). Participation by the two sectors equalized at a mere two years. These comparative results are even more dramatic when one realizes that several of the NXO vessels tend to specialize in brown king crab, while 10 of the NXO vessels focus more on fish than crab.

CONCLUSIONS

The question of economic reliance can now be brought into focus. Economic reliance is a composite of three motivational factors: 1) a portfolio effect in which routine/consistent participation occurs either for added income or to lessen risk in a vessel's fishery portfolio: 2) opting to enter a fishery in order to take advantage of high expected returns: and 3) policy-induced entry to secure the opportunity to fish a particular species at a future date, i.e., fishing-for-rights. All of these are legitimate dimensions of economic reliance. Which ones are more important for sideboard policy consideration is a question left open.

The above analysis demonstrates that crossover behavior differs in the two most important crab fisheries, red king crab and opilio. Entry into red king crab fisheries is dominated by what appears to be policy-induced fishing-for-rights, though there is some portfolio effect but little expected revenue-induced entry. Entry into the opilio fishery is less clear cut, though motivations seem less important because of the limited number of crossover participants. At most five crossover vessels can be construed as using opilio as part of a portfolio; a maximum of 14 and a minimum of three vessels fished in a single year.

If the Council is to consider economic reliance in setting sideboards for the various crab fisheries, the most important dimension probably is the portfolio effect. It is this behavioral motivation that identifies the vessels who stand to lose the most, i.e., those who have consistently utilized crab. Most of these vessels derive a substantial portion of their gross earnings from crab, and in some cases, may even use crab as the dominant source of income. However, it is critical to recognize that percentage of income from crab is not the essential litmus test in a portfolio context—participation frequency is. Vessels that consistently fish a particular species of crab may utilize crab more as a risk hedge, even though it may be a relatively minor income source.

Opportunistic behavior, i.e., targeting crab in high expected income years, probably is the second most important consideration in economic reliance, if only because it is a pure economic motive. Policy-induced motives (fishing-for-rights) ranks third. The principal economic interest underlying this behavior would seem to be a desire to preserve future opportunities, including the opportunity to participate in any future IFQ program.

Adherence to any of the three manifestations of economic reliance is likely to eliminate many XO vessels from the future opportunity to crossover into the opilio fishery. If any reliance criterion other than fishing-for-rights is used in sideboard formation, many vessels will be eliminated from red king crab. Few vessels demonstrated any opportunistic use of red crab by targeting high expected income years and few consistently fished for red crab or bairdi in non-qualifying years. Short of looking to specific economic

reliance motivations as a basis for defining sideboard policy, the Council may wish to consider a threshold number of participation years.

How sideboards are implemented will be as important a policy consideration as whether economic reliance should be a basis for sideboards. For example, limiting the XO fleet to its aggregate historical catch could be implemented by limiting each vessel to its historical share of total catch. Alternatively, a fleet-wide cap could be instituted. Both methods limit the XO fleet to its historic aggregate share of crab. The fleet-wide cap, however, could cause severe economic hardship to vessels within the XO fleet, especially in the opilio fishery. Two vessels historically relied on opilio for nearly half their income, year after year. These vessels behaved more like true crabbers than pollock vessels; one fished opilio instead of A-season pollock in each of the 10 years, the other did so in eight of 10 years. Three other vessels landed opilio five of ten years. A fleet-wide cap would allow the remaining 34-37 XO vessels to compete for the aggregate cap that two to five vessels created.[7] Sideboard protection for these few XO vessels may be worthy of consideration if sideboards are implemented with an aggregate cap.

The alternative of individual vessel sideboards has its own set of issues. Non-stackable, vessel-specific caps may make fishing some crab species uneconomic for a subset of the XO fleet with little history in the sideboard qualification years. Vessel-specific sideboard caps also may create a management problem because the caps will serve as a type of individual fishing quota in what otherwise is a license-limited open access fishery. Individual caps may also provide an incentive to highgrade for those vessels that lack sufficient quota to participate the entire season.

One final issue concerning crab sideboards may be worthy of Council consideration. It is apparent that the NXO LLP-Alternative 9 vessel list contains some vessels that never landed either fish or crab, that landed crab infrequently, that mostly landed fish, or that now fish crab in Russia. Each of these situations is a variant of the latent license issue that could manifest an AFA spillover problem if licenses are tradeable from NXO to XO. For example, a crossover vessel that was not endorsed to fish in a particular crab fishery conceivably could purchase a latent NXO license to participate in crab fisheries in excess of either the XO fleet-wide or vessel-specific "historical aggregate share". Similarly, a crossover vessel freed up under AFA fishing cooperatives conceivably could harvest more crab than harvested by the prior NXO license owner. Purchase of latent licenses could impose external costs on the NXO fleet.

[7] To complicate matters, the vessel that fished opilio eight of ten years targeted A-season pollock in 1996 and 1997. This is why "two to five vessels" are responsible for creating the most of the XO opilio history. See Figure 8 for participation detail.

FIGURE 1. 1997
DISTRIBUTION OF TOTAL REVENUE,
NXO, XO36 AND XO3

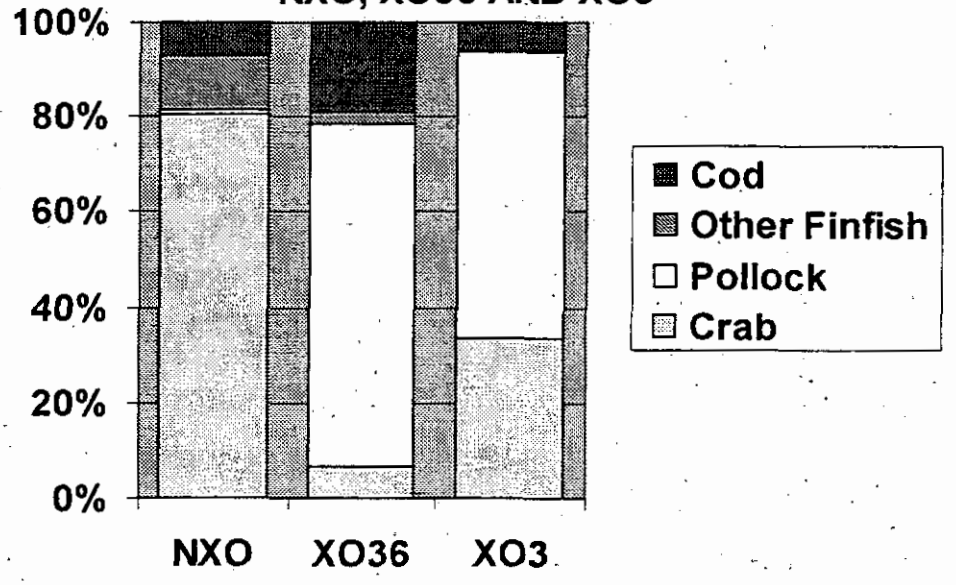


FIGURE 1. 1997
AVERAGE REVENUE BY FISHERY,
NXO, XO36 AND XO3

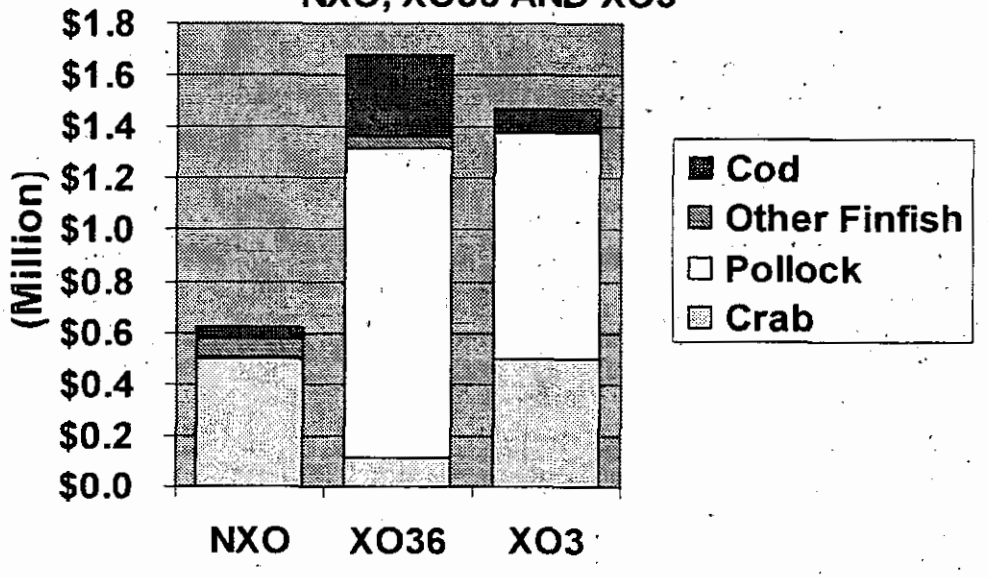


FIGURE 1. 1996-97
DISTRIBUTION OF TOTAL REVENUE,
NXO, XO36 AND XO3

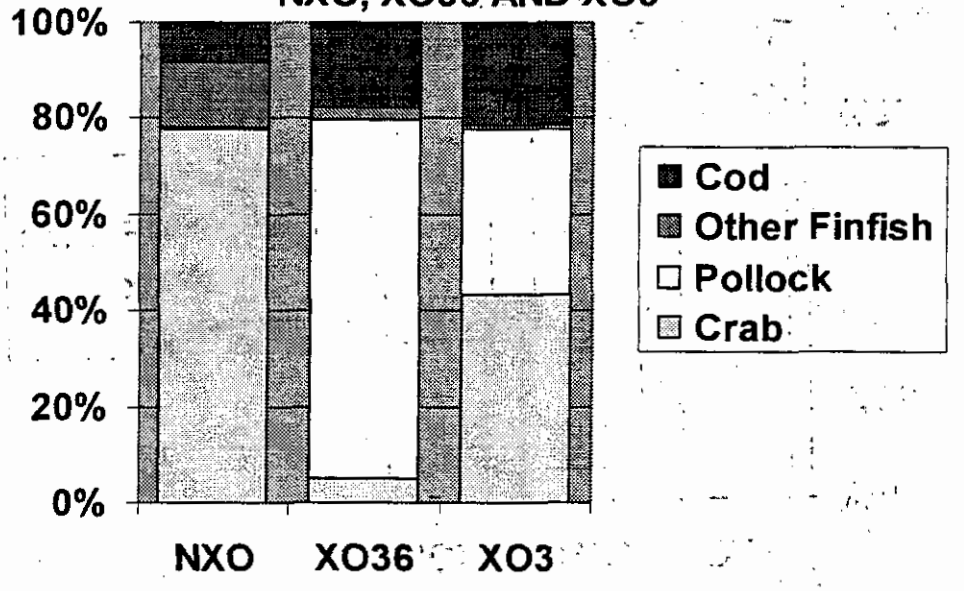


FIGURE 1. 1996-97
AVERAGE REVENUE BY FISHERY,
NXO, XO36 AND XO3

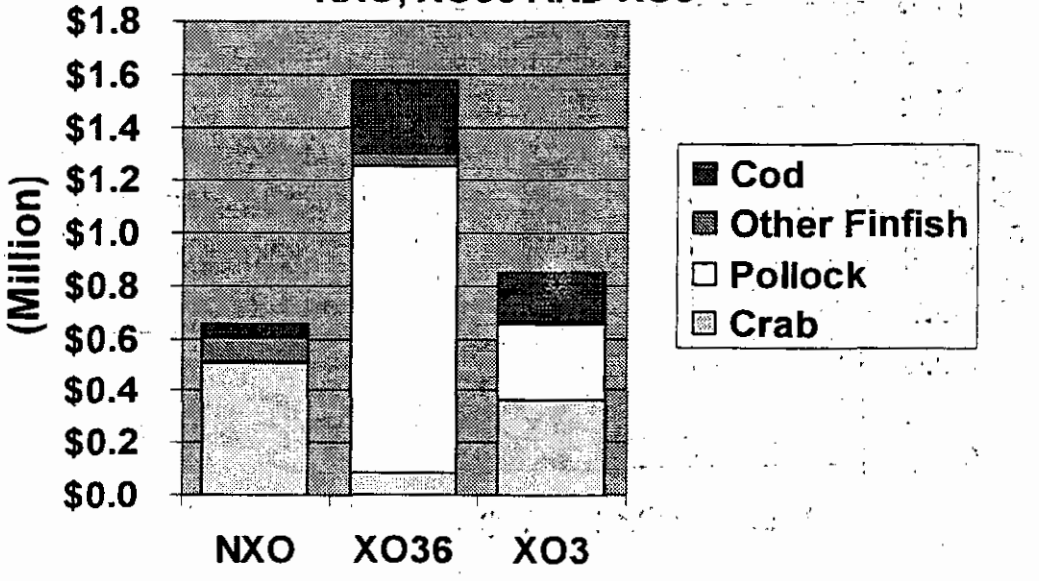


FIGURE 1. 1995-97
DISTRIBUTION OF TOTAL REVENUE,
NXO, XO36 AND XO3

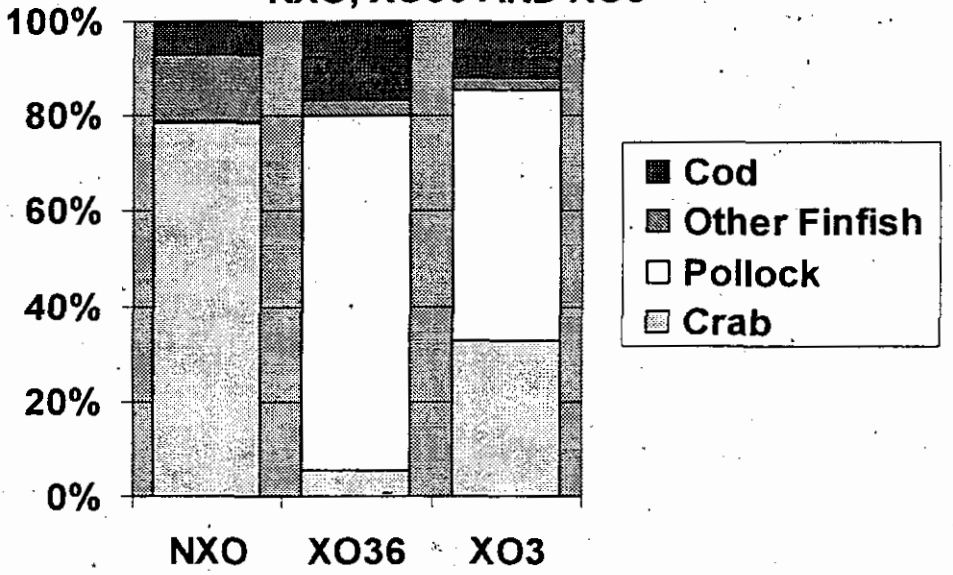


FIGURE 1. 1995-97
AVERAGE REVENUE BY FISHERY,
NXO, XO36 AND XO3

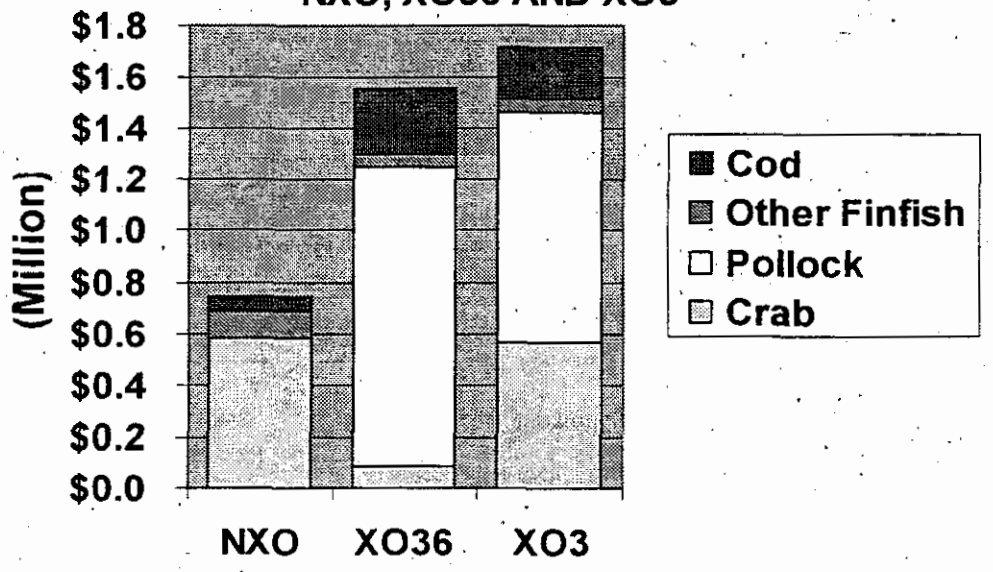


FIGURE 1. 1988-97
DISTRIBUTION OF TOTAL REVENUE,
NXO, XO36 AND XO3

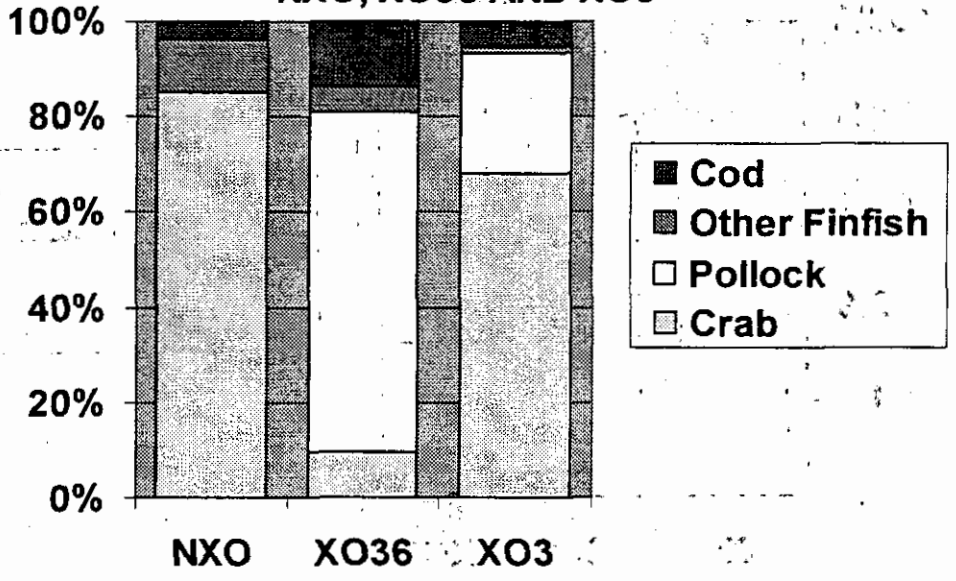


FIGURE 1. 1988-97
AVERAGE REVENUE BY FISHERY,
NXO, XO36 AND XO3

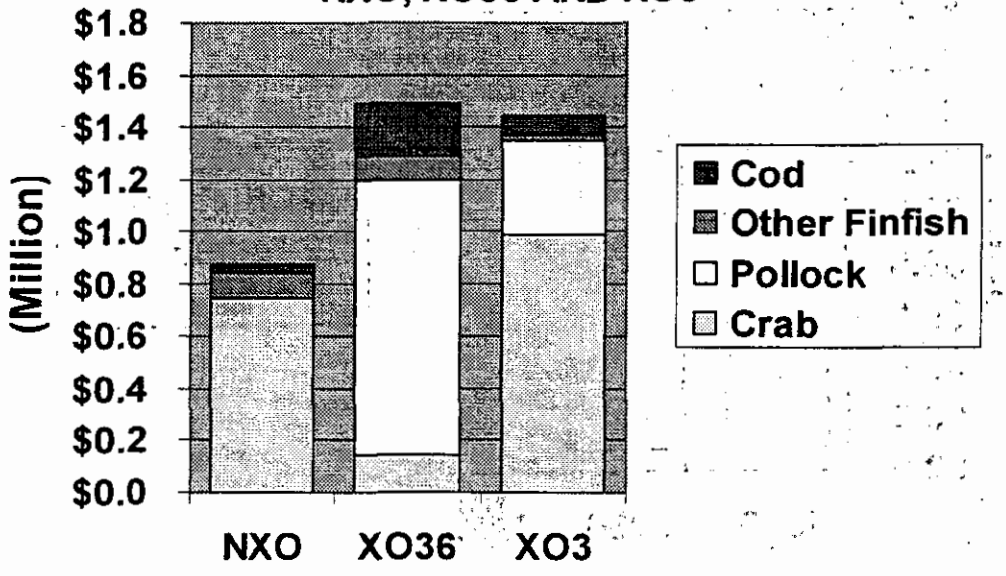


FIGURE 2. 1997
DISTRIBUTION OF CRAB REVENUE, XO

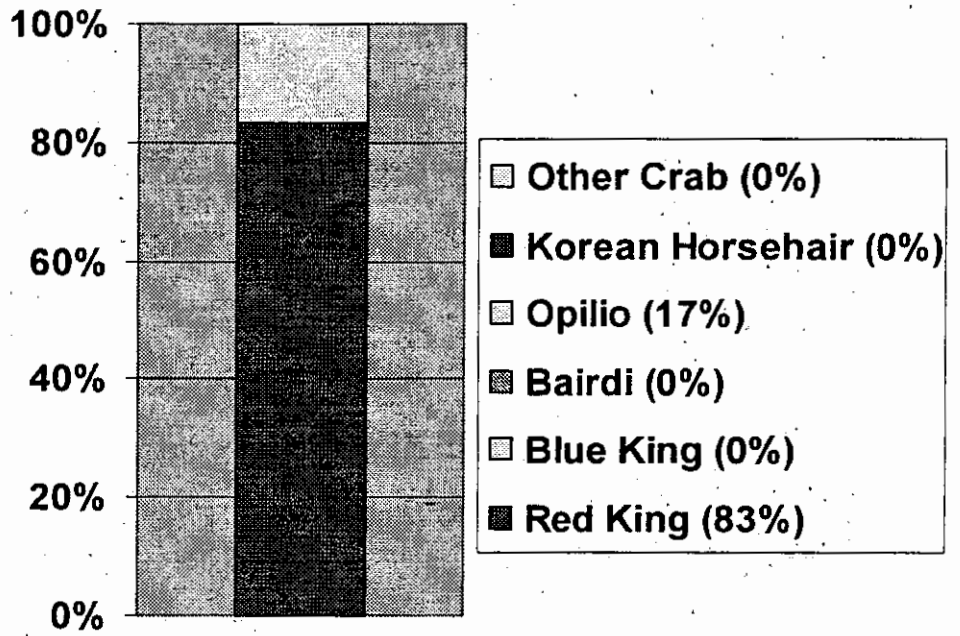


FIGURE 2. 1997
DISTRIBUTION OF CRAB REVENUE, NXO

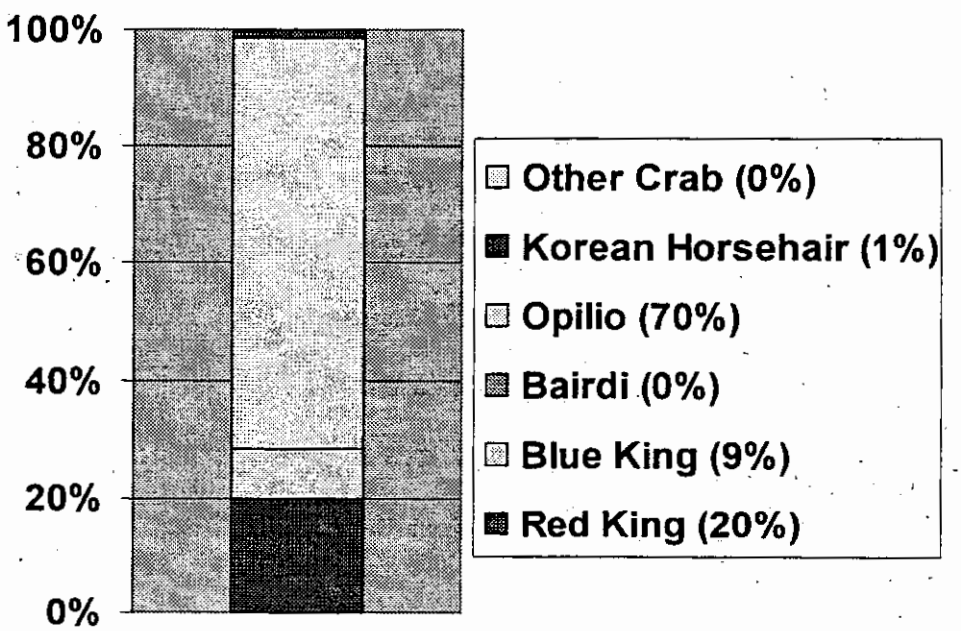


FIGURE 2. 1996-97
DISTRIBUTION OF CRAB REVENUE, XO

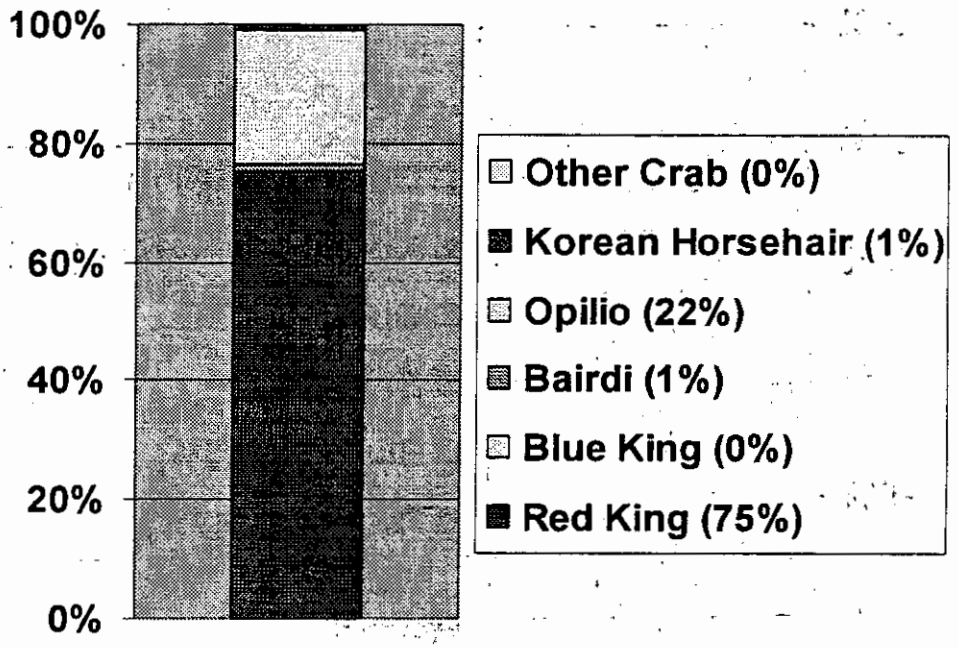


FIGURE 2. 1996-97
DISTRIBUTION OF CRAB REVENUE, NXO

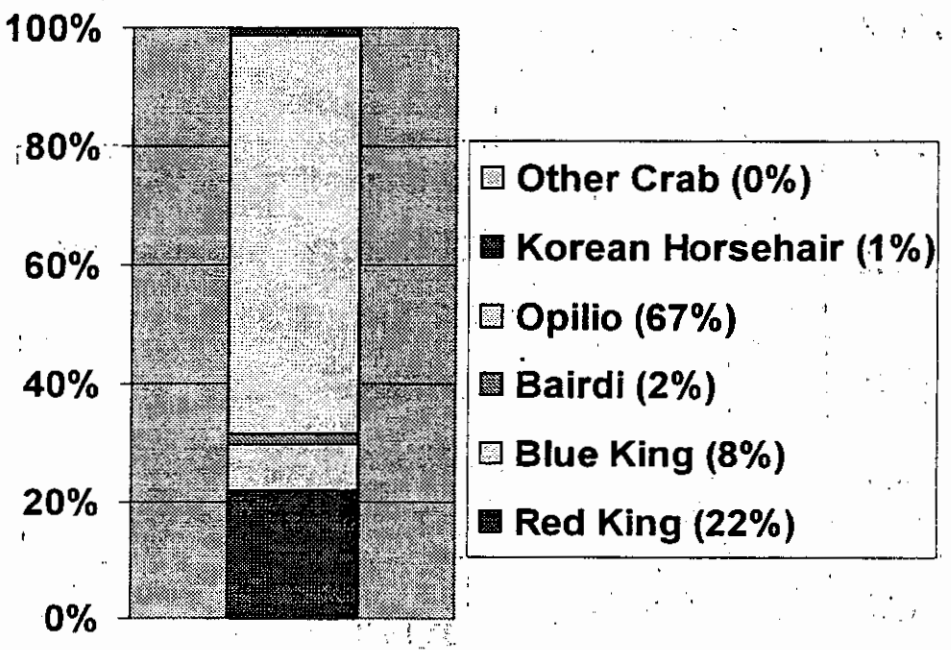


FIGURE 2. 1995-97
DISTRIBUTION OF CRAB REVENUE, XO

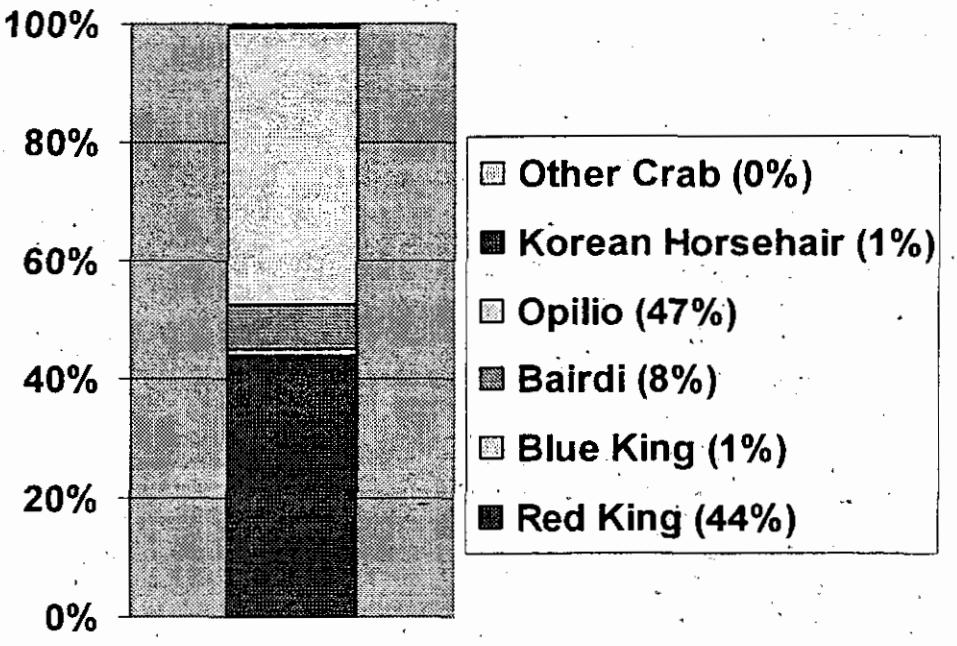


FIGURE 2. 1995-97
DISTRIBUTION OF CRAB REVENUE, NXO

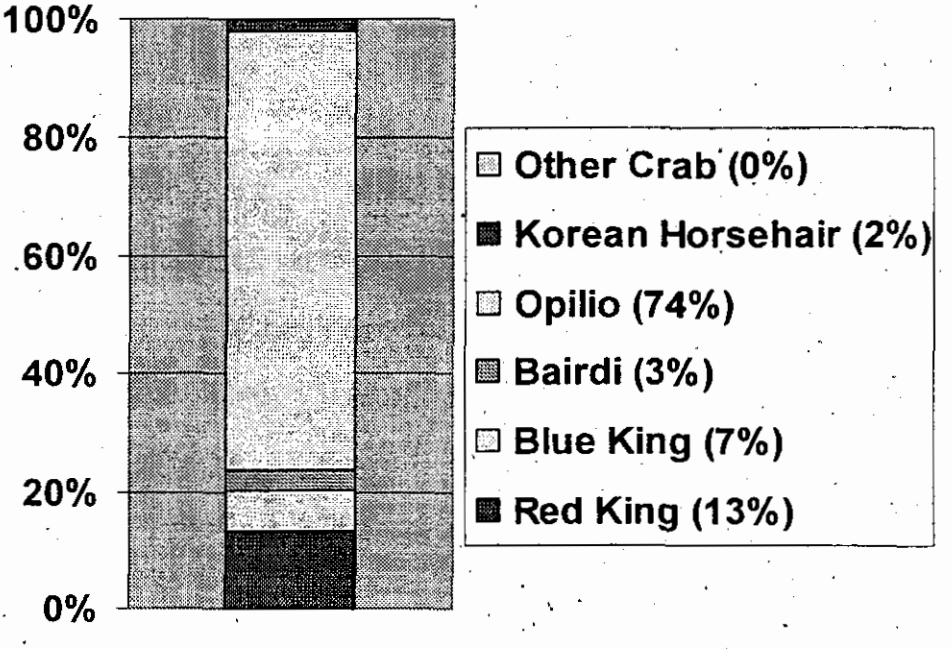


FIGURE 2. 1988-97
DISTRIBUTION OF CRAB REVENUE, XO

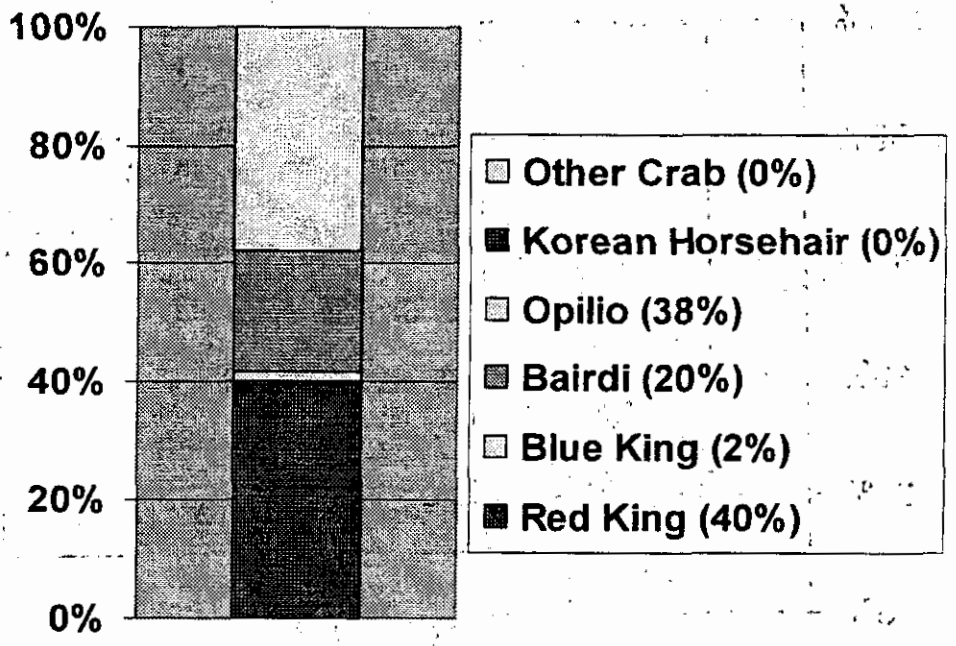


FIGURE 2. 1988-97
DISTRIBUTION OF CRAB REVENUE, NXO

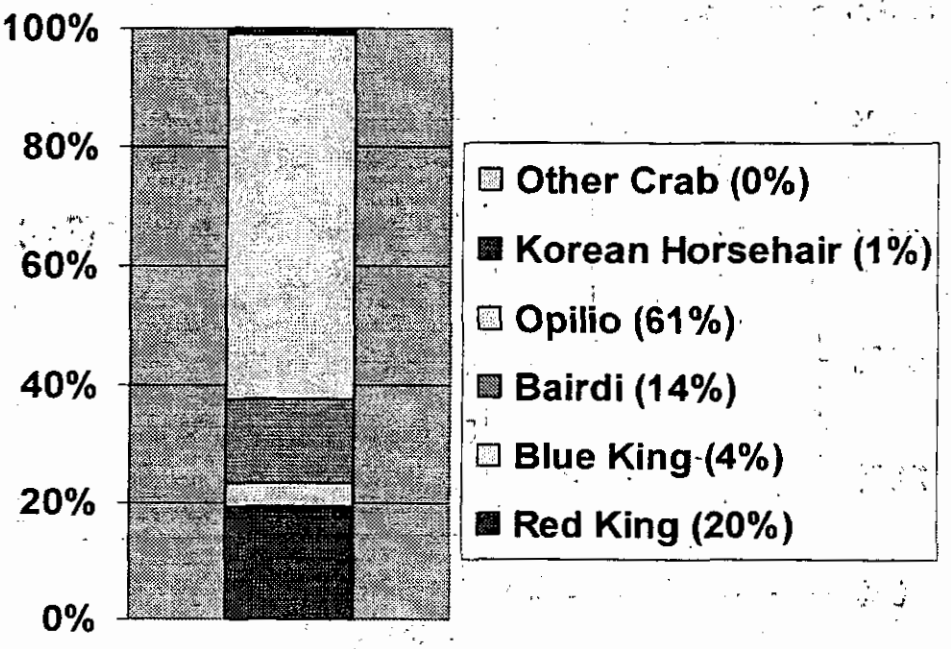


FIGURE 3. 1997
DISTRIBUTION OF TOTAL REVENUE, XO

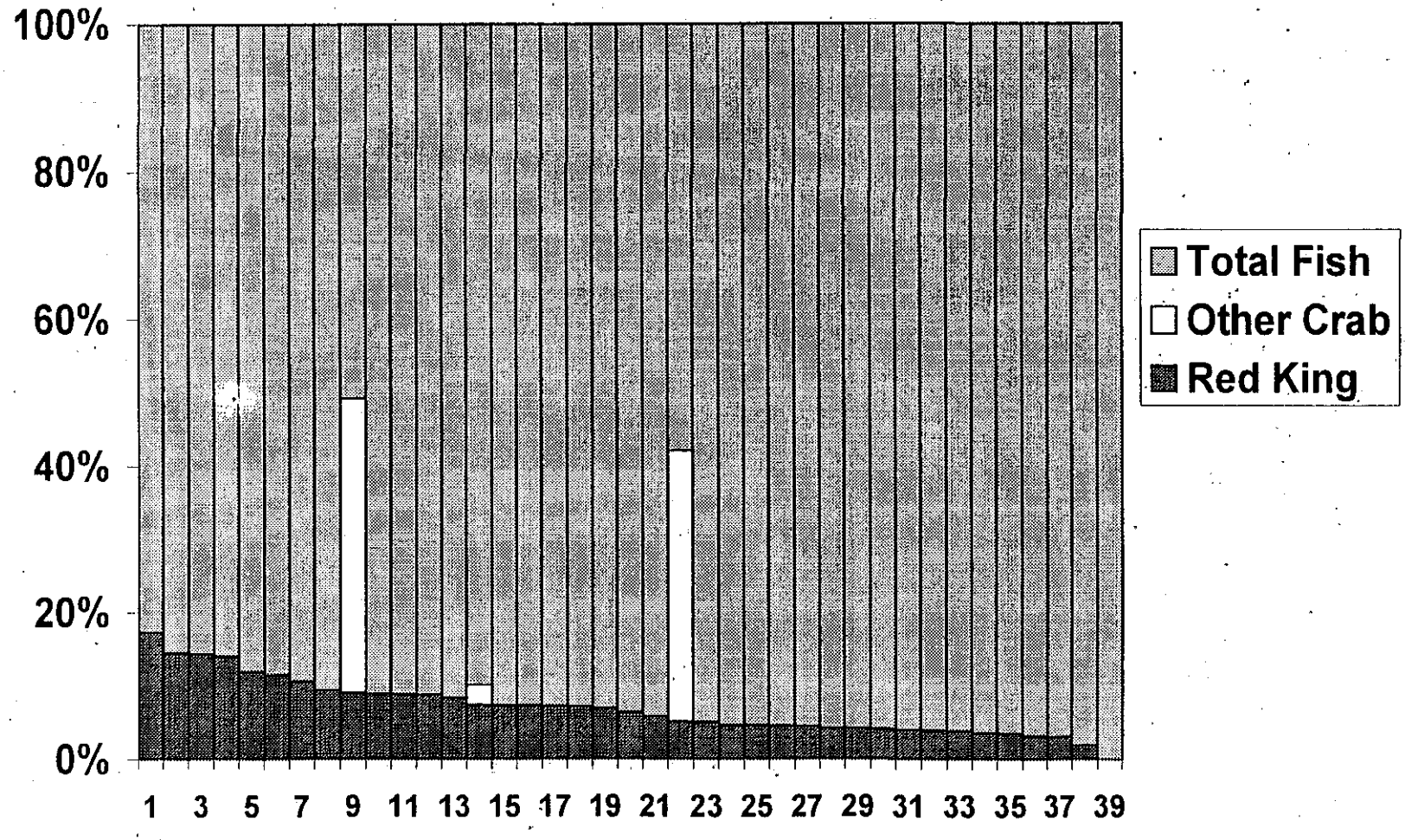


FIGURE 3. 1996-97
DISTRIBUTION OF TOTAL REVENUE, XO

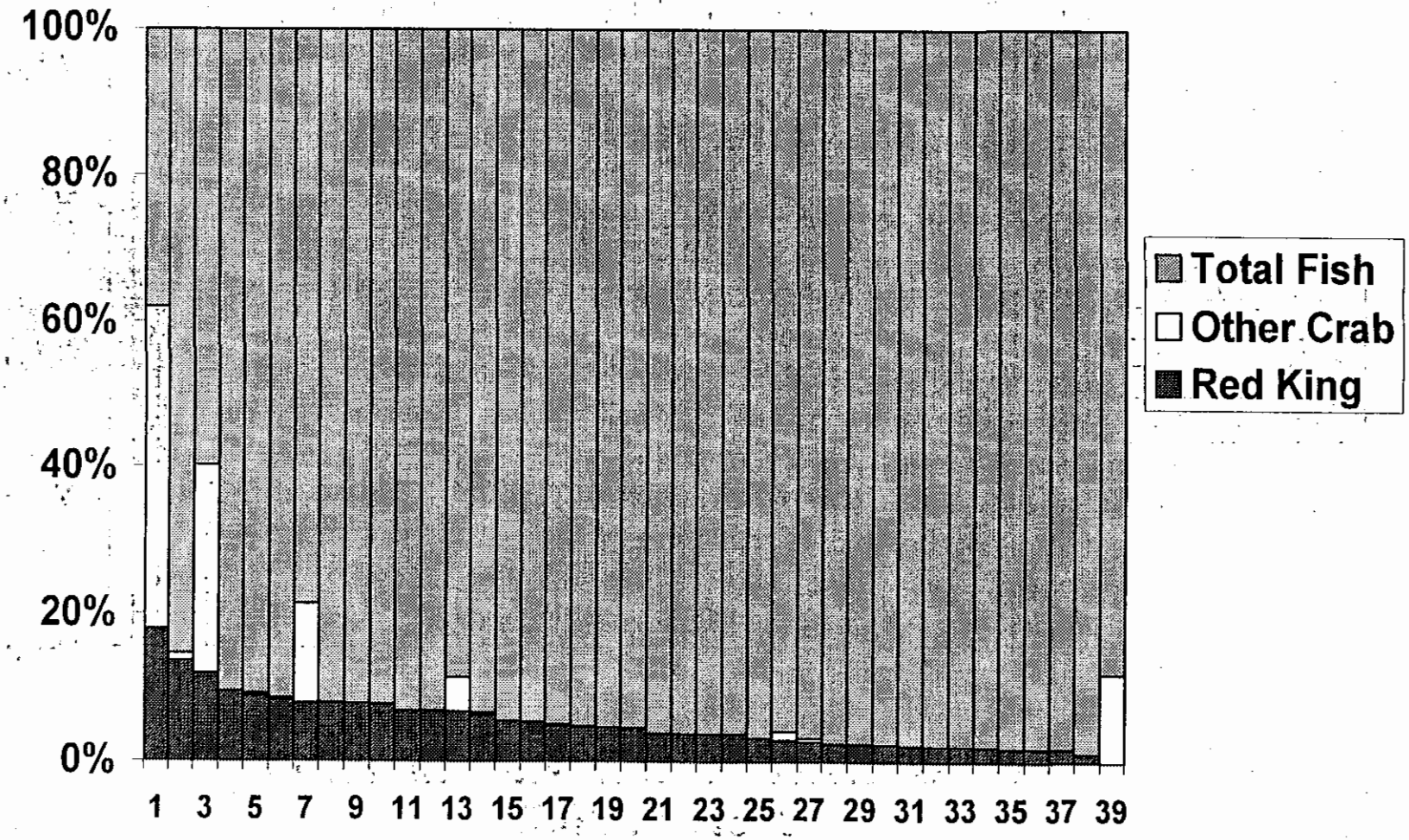


FIGURE 3. 1995-97
DISTRIBUTION OF TOTAL REVENUE, XO

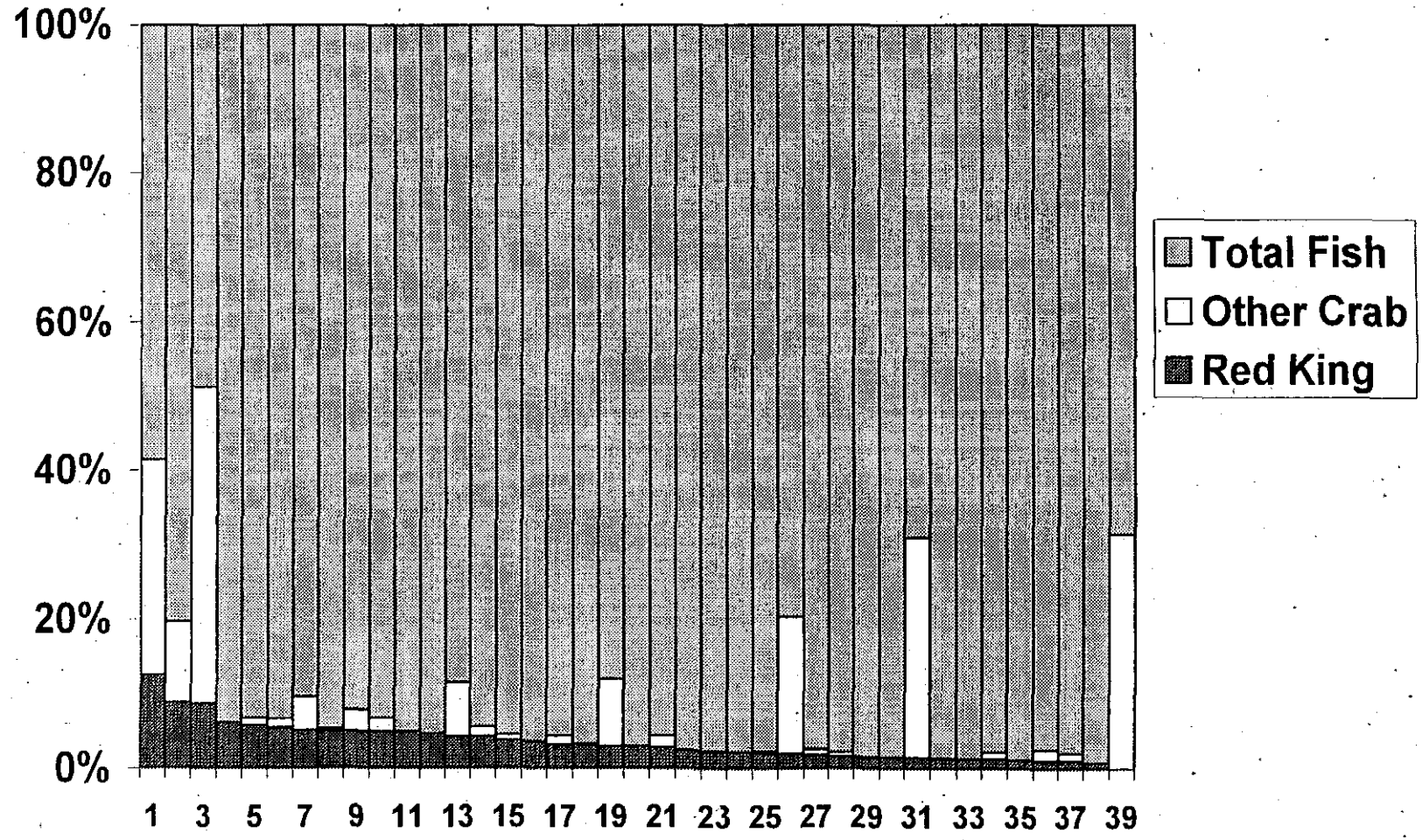


FIGURE 3. 1988-97
DISTRIBUTION OF TOTAL REVENUE, XO

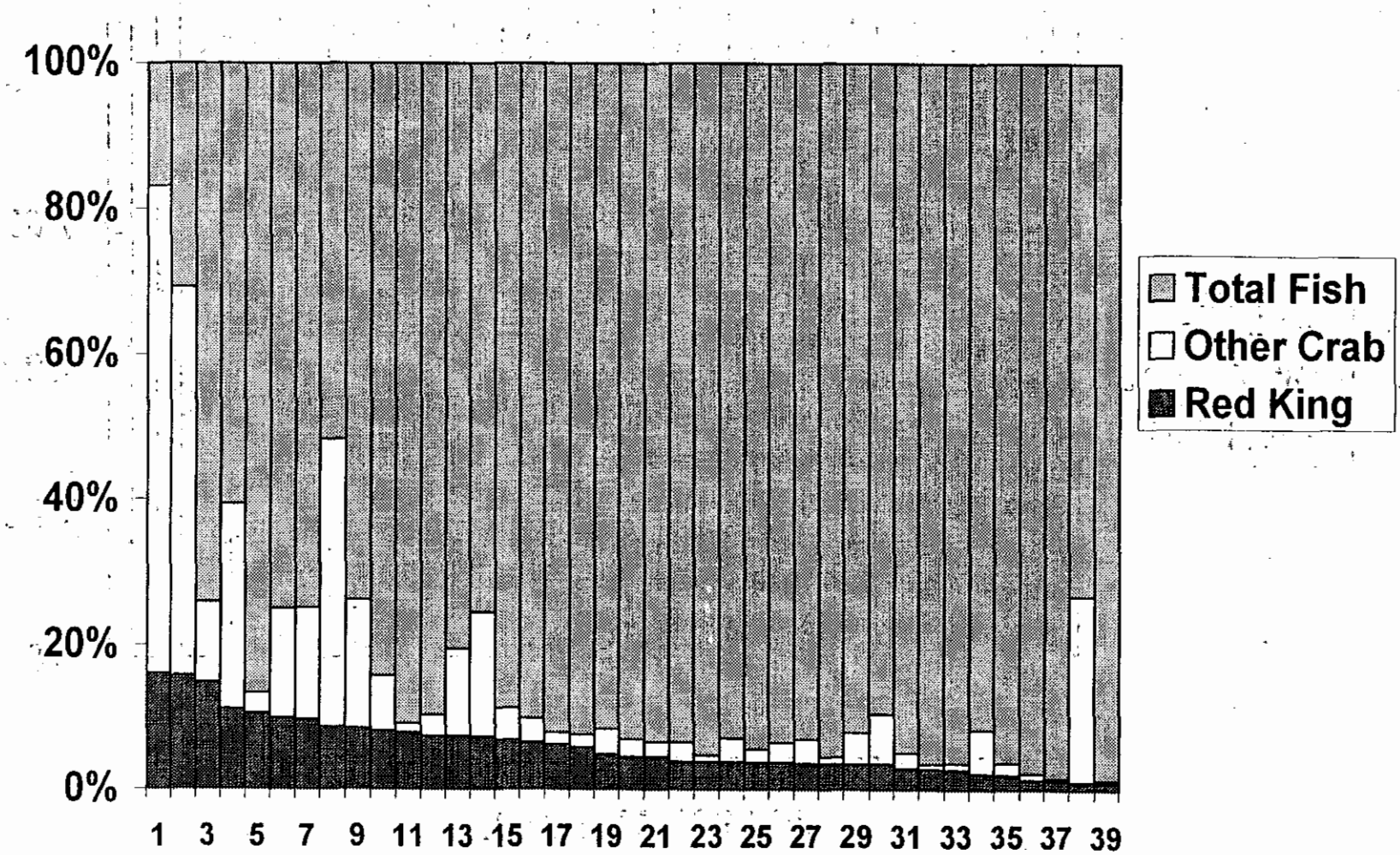


FIGURE 4. 1997
DISTRIBUTION OF CRAB REVENUES, XO

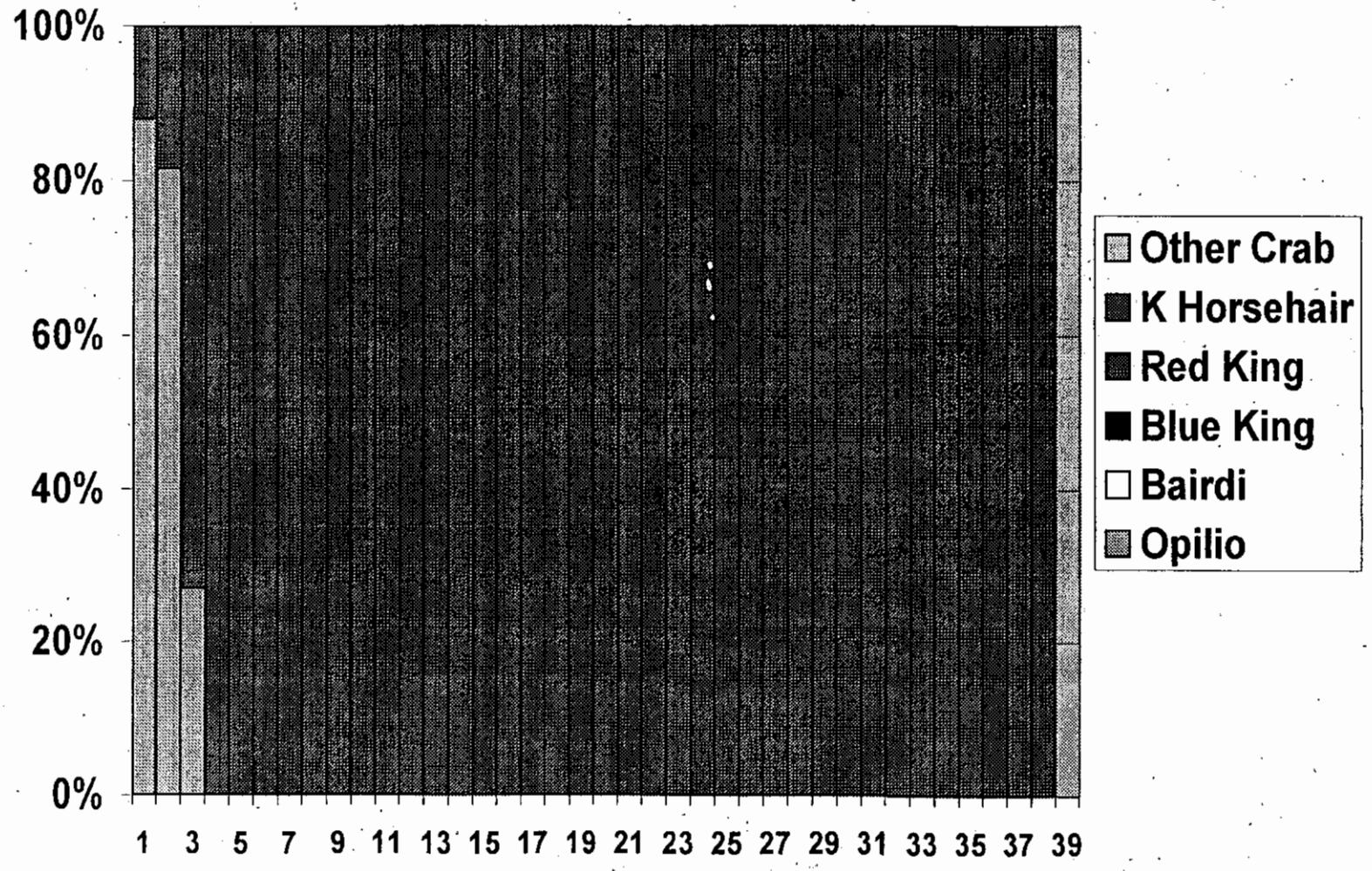


FIGURE 4. 1996-97
DISTRIBUTION OF CRAB REVENUES, XO

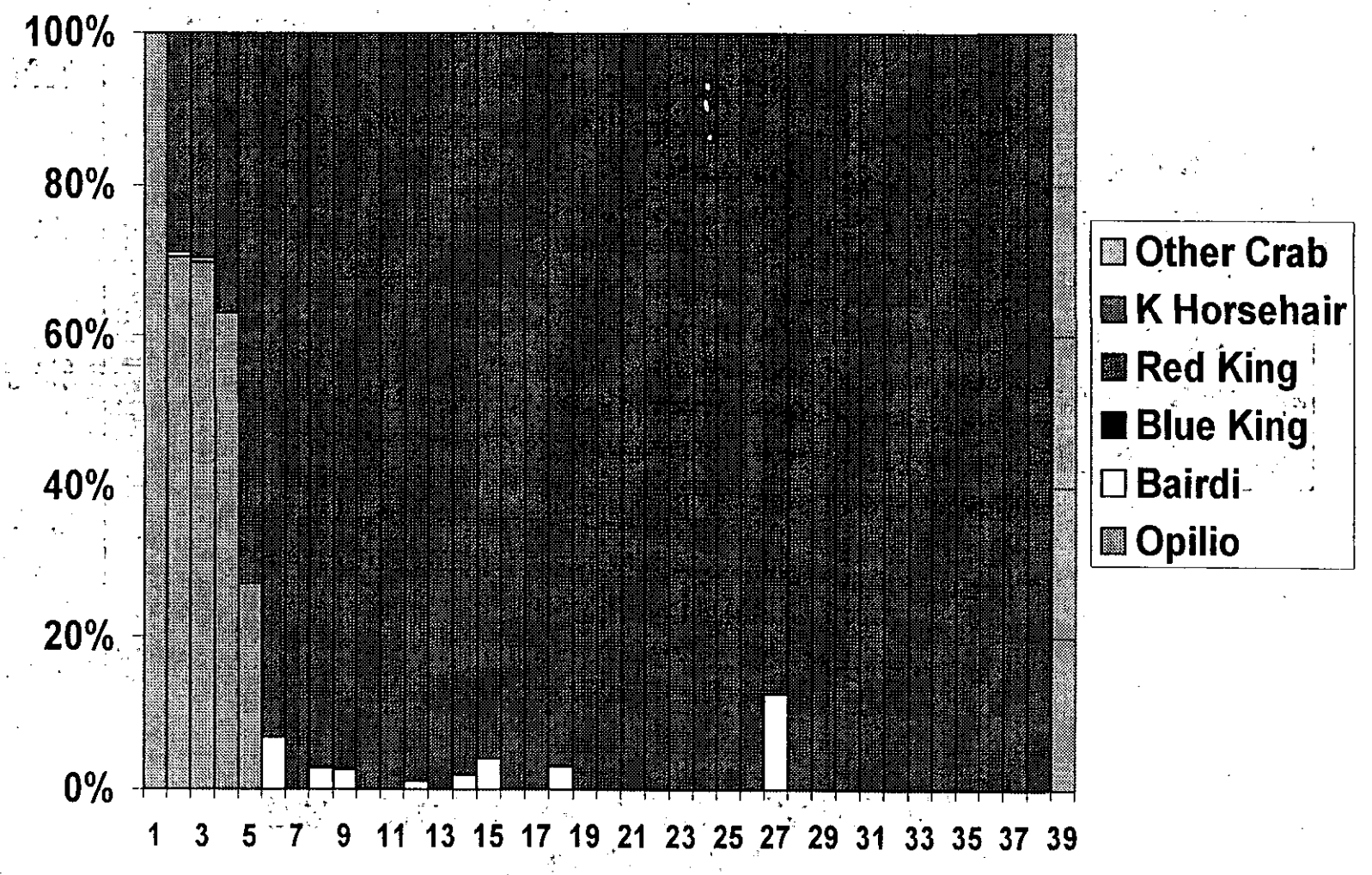


FIGURE 4. 1995-97
DISTRIBUTION OF CRAB REVENUES, XO

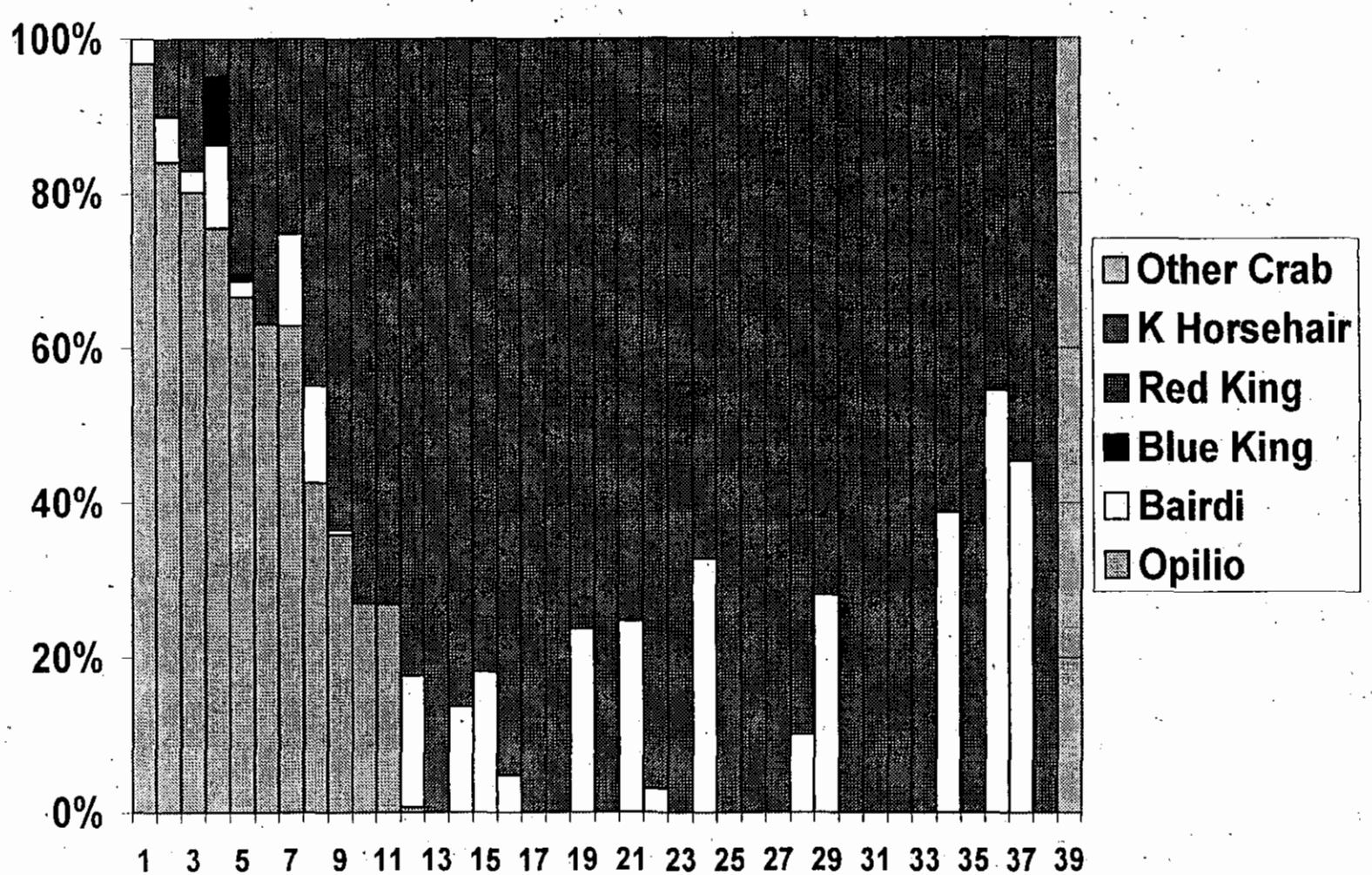


FIGURE 4. 1988-97
DISTRIBUTION OF CRAB REVENUES, XO

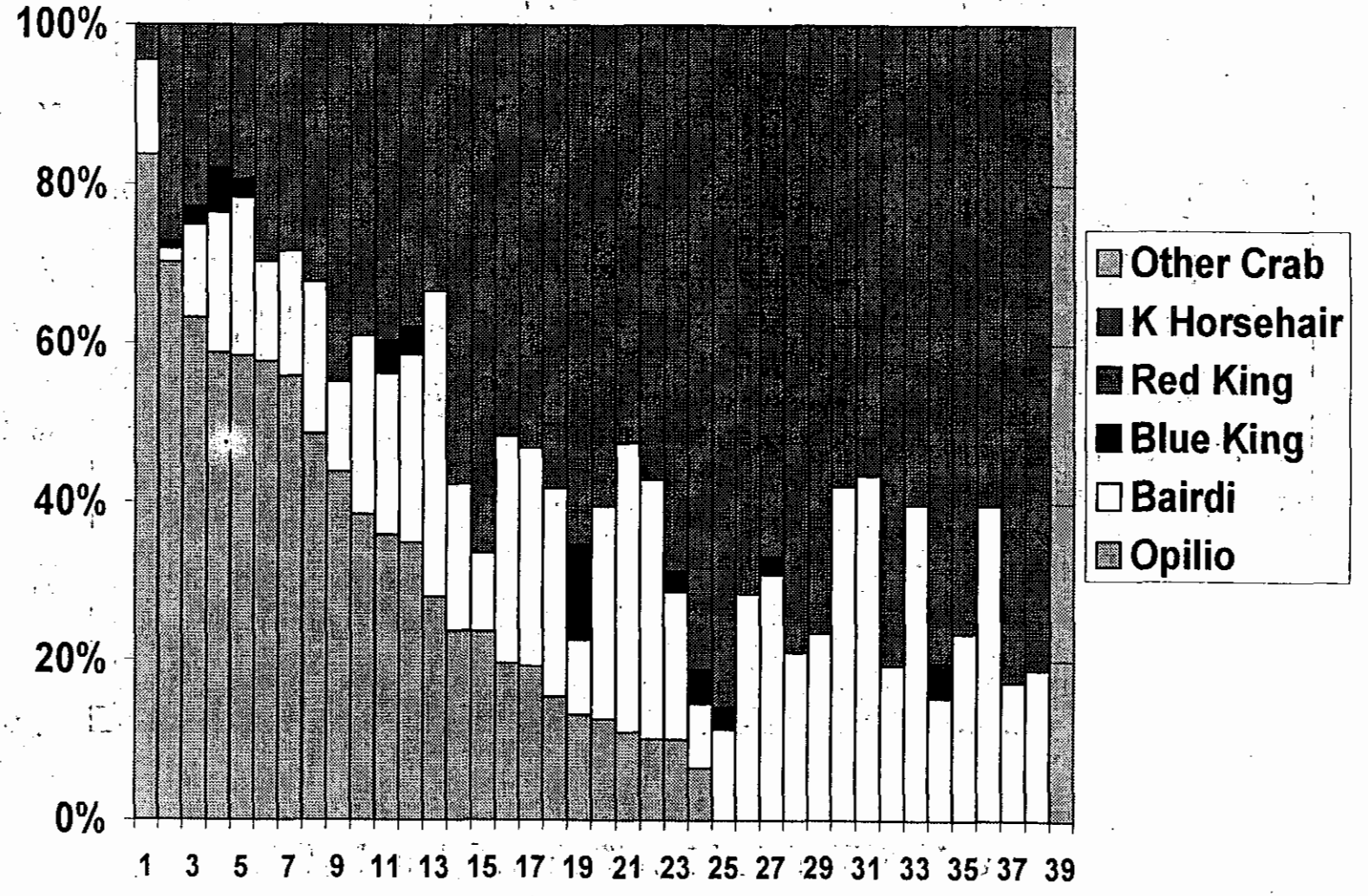


FIGURE 5. 1997
SHARE OF OPILIO REVENUE, XO3 AND XO36

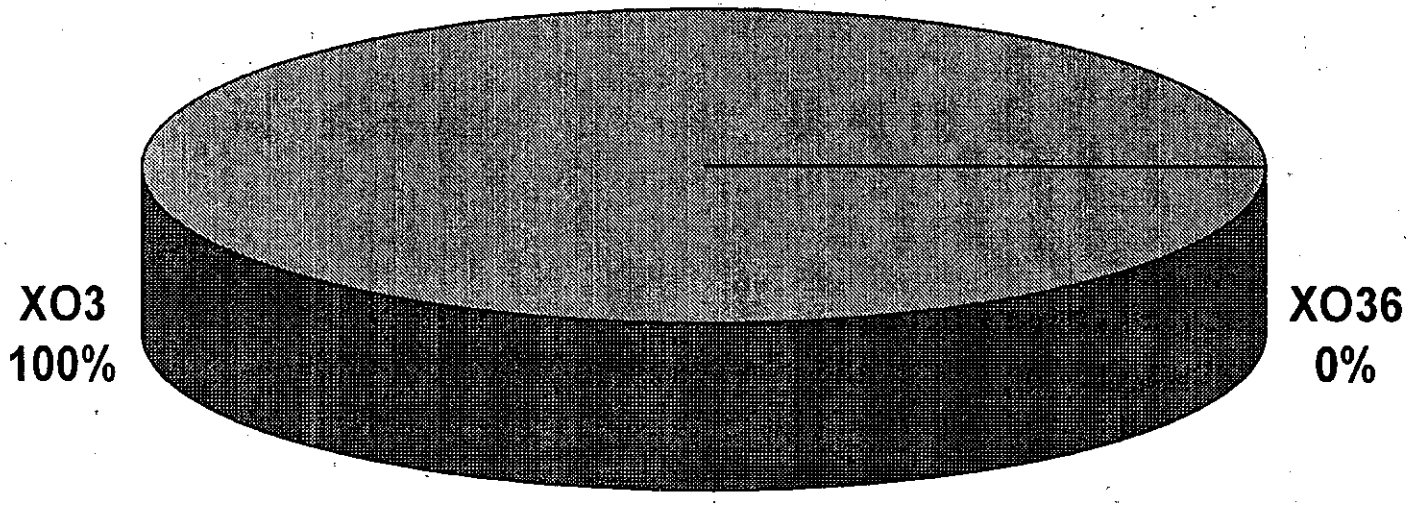


FIGURE 5. 1996-97
SHARE OF OPILIO REVENUE, XO3 AND XO36

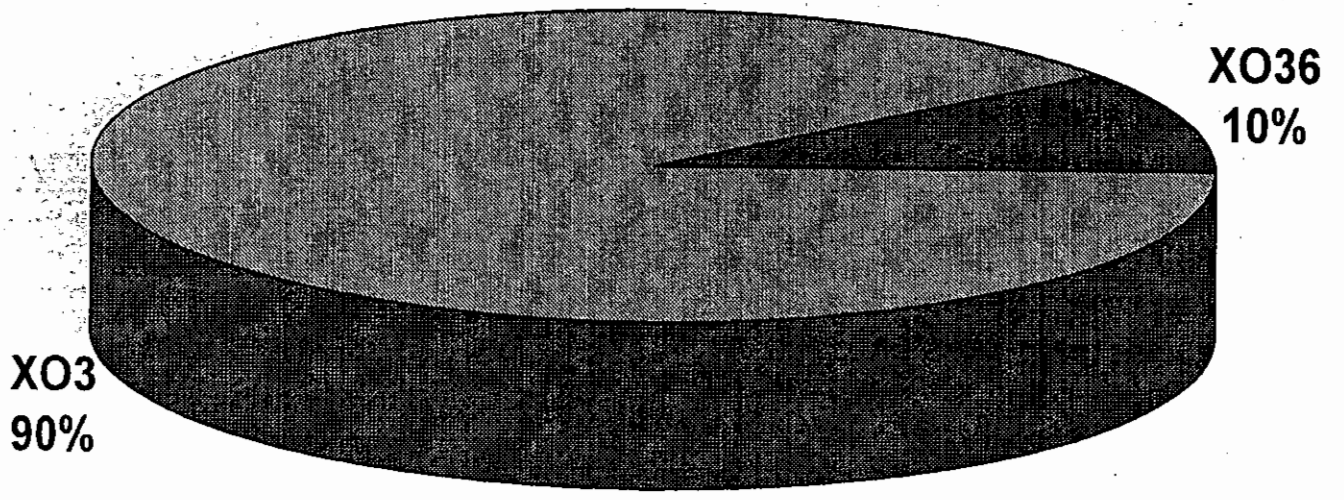


FIGURE 5. 1995-97
SHARE OF OPILIO REVENUE, XO3 AND XO36

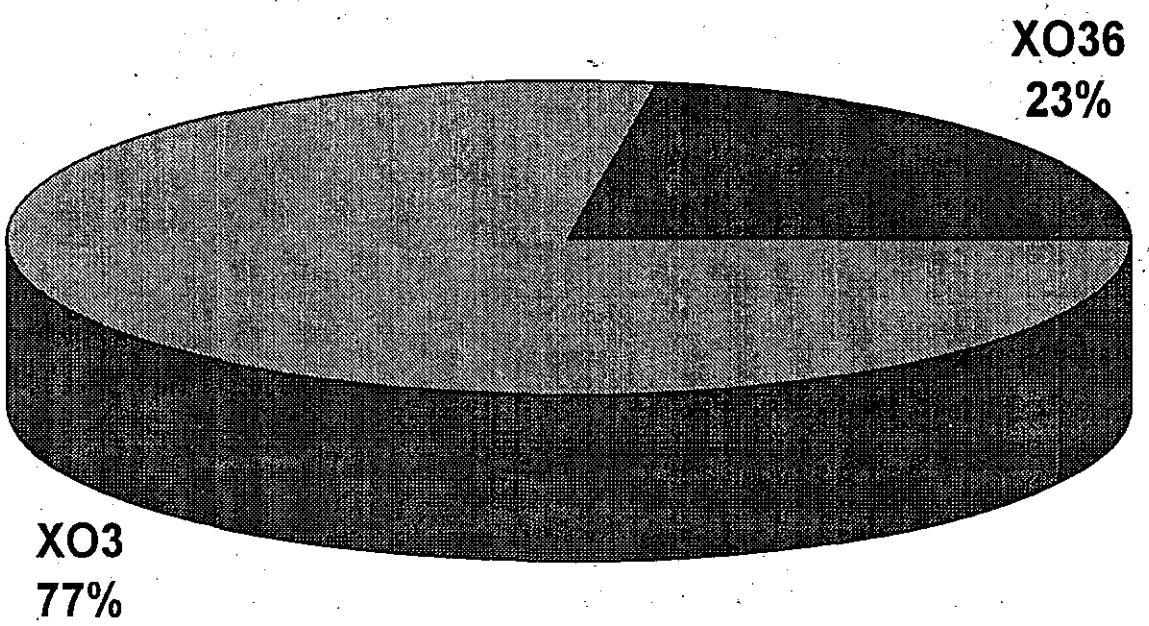


FIGURE 5. 1988-97
SHARE OF OPILIO REVENUE, XO3 AND XO36

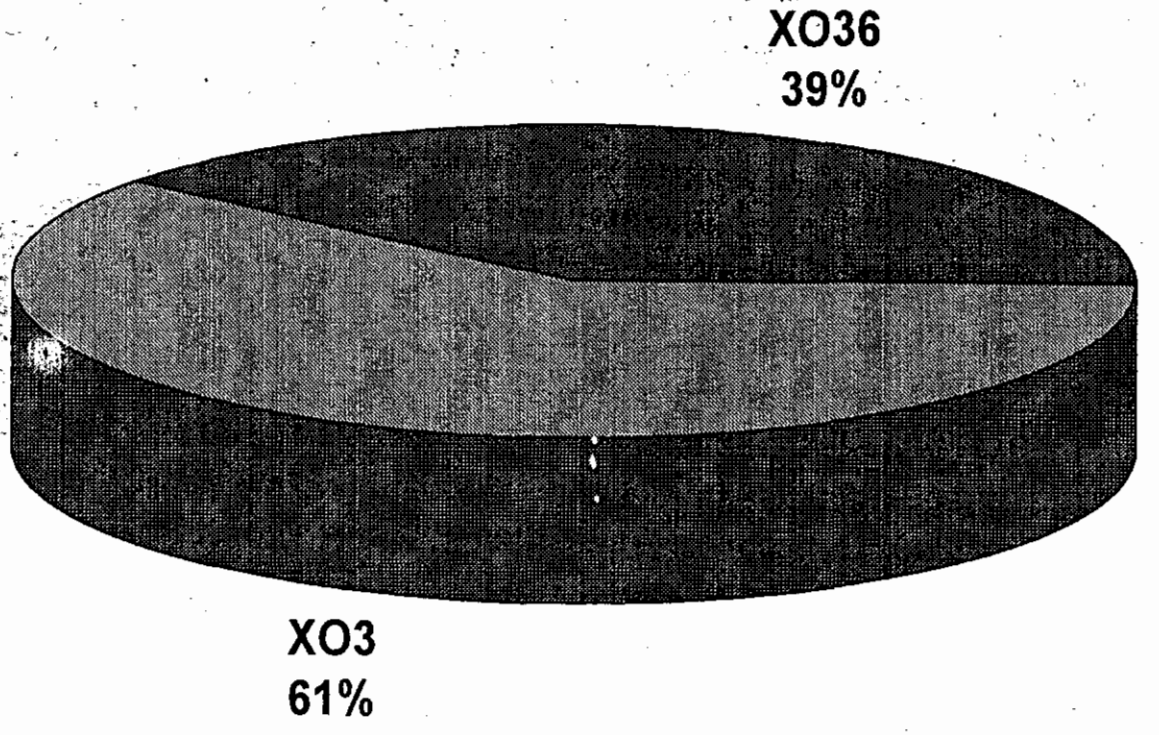


FIGURE 6. 1997
OPILIO AS SHARE OF TOTAL REVENUE, XO

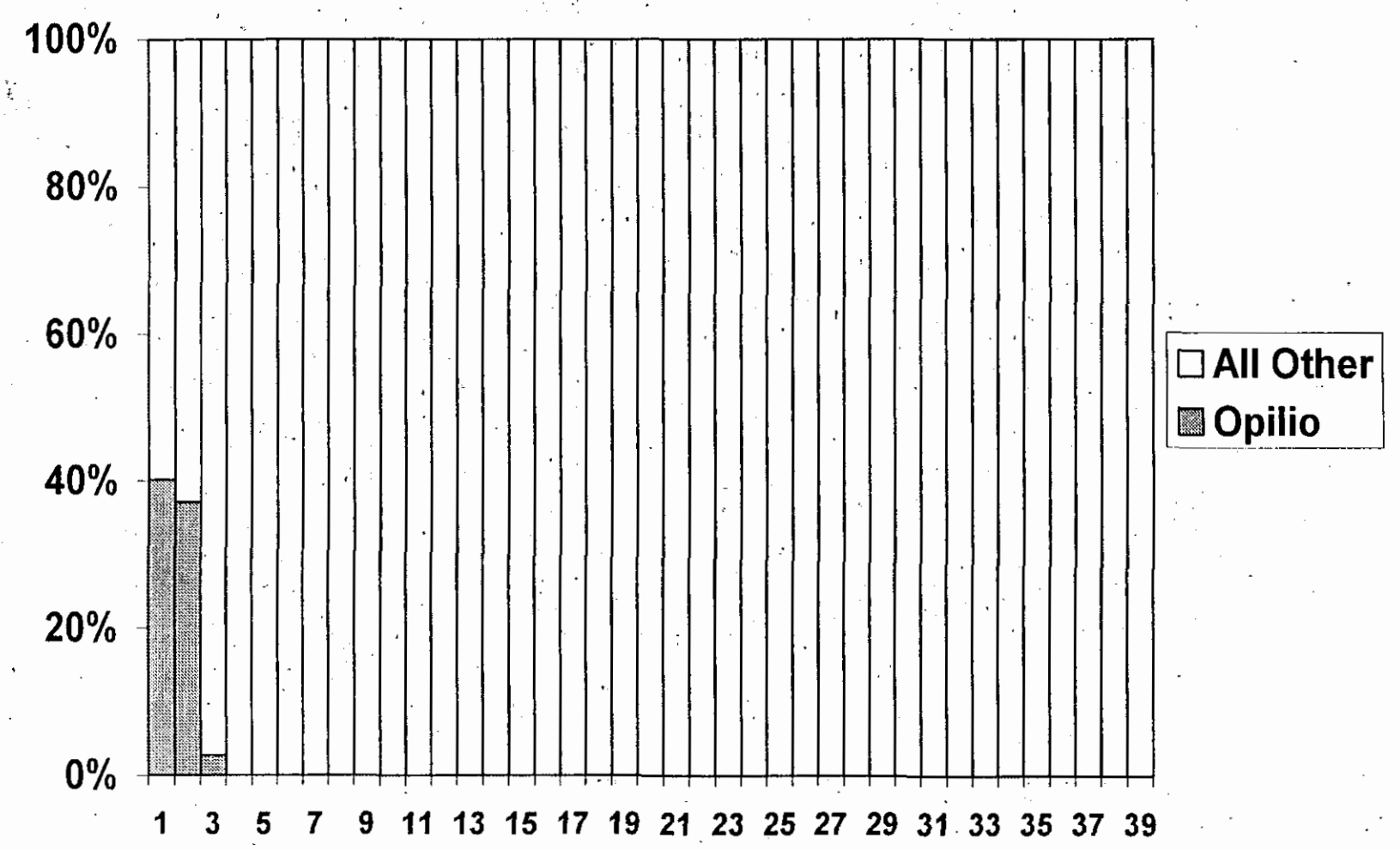


FIGURE 6. 1996-97
OPILIO AS SHARE OF TOTAL REVENUE, XO

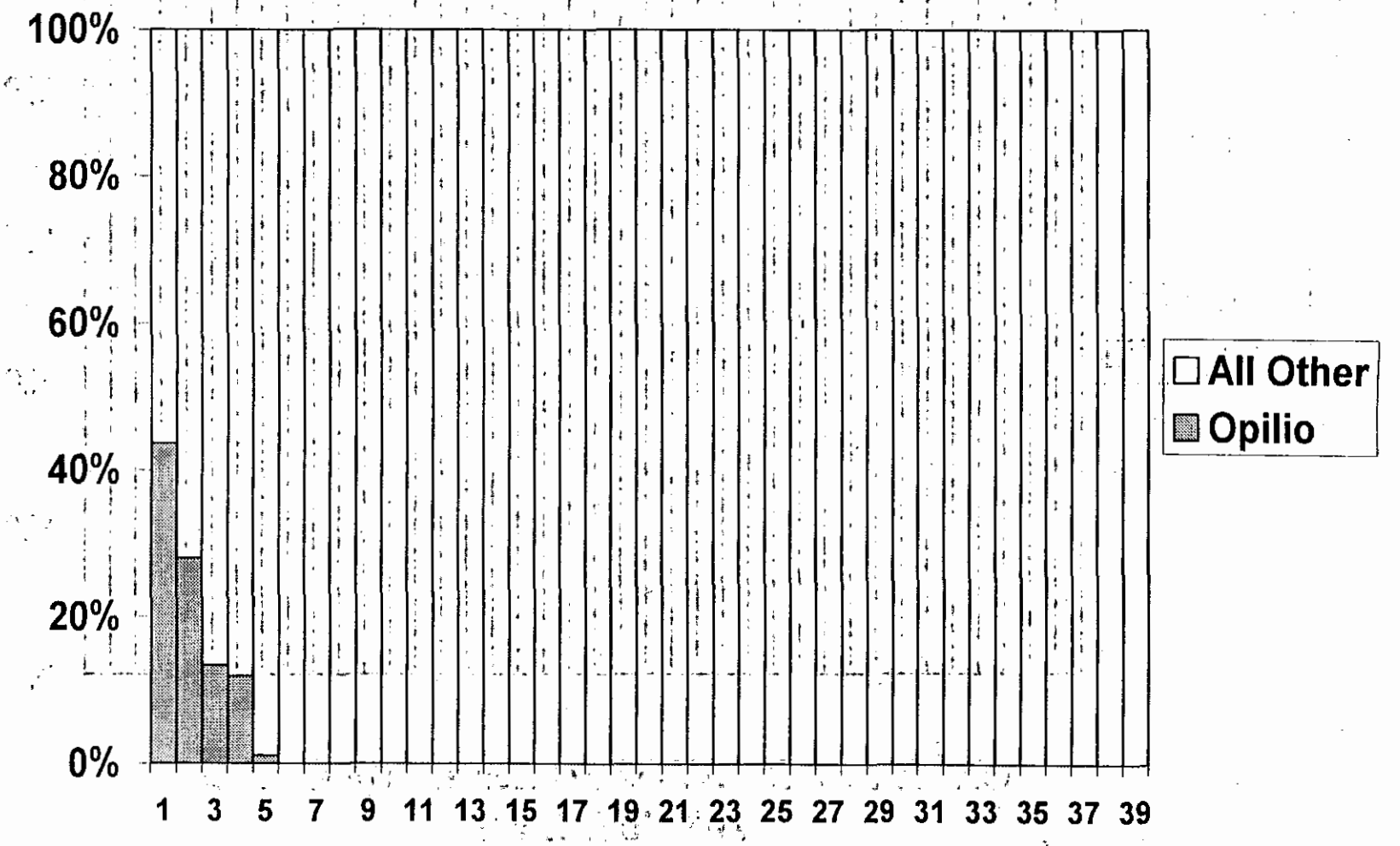


FIGURE 6. 1995-97
OPILIO AS SHARE OF TOTAL REVENUE, XO

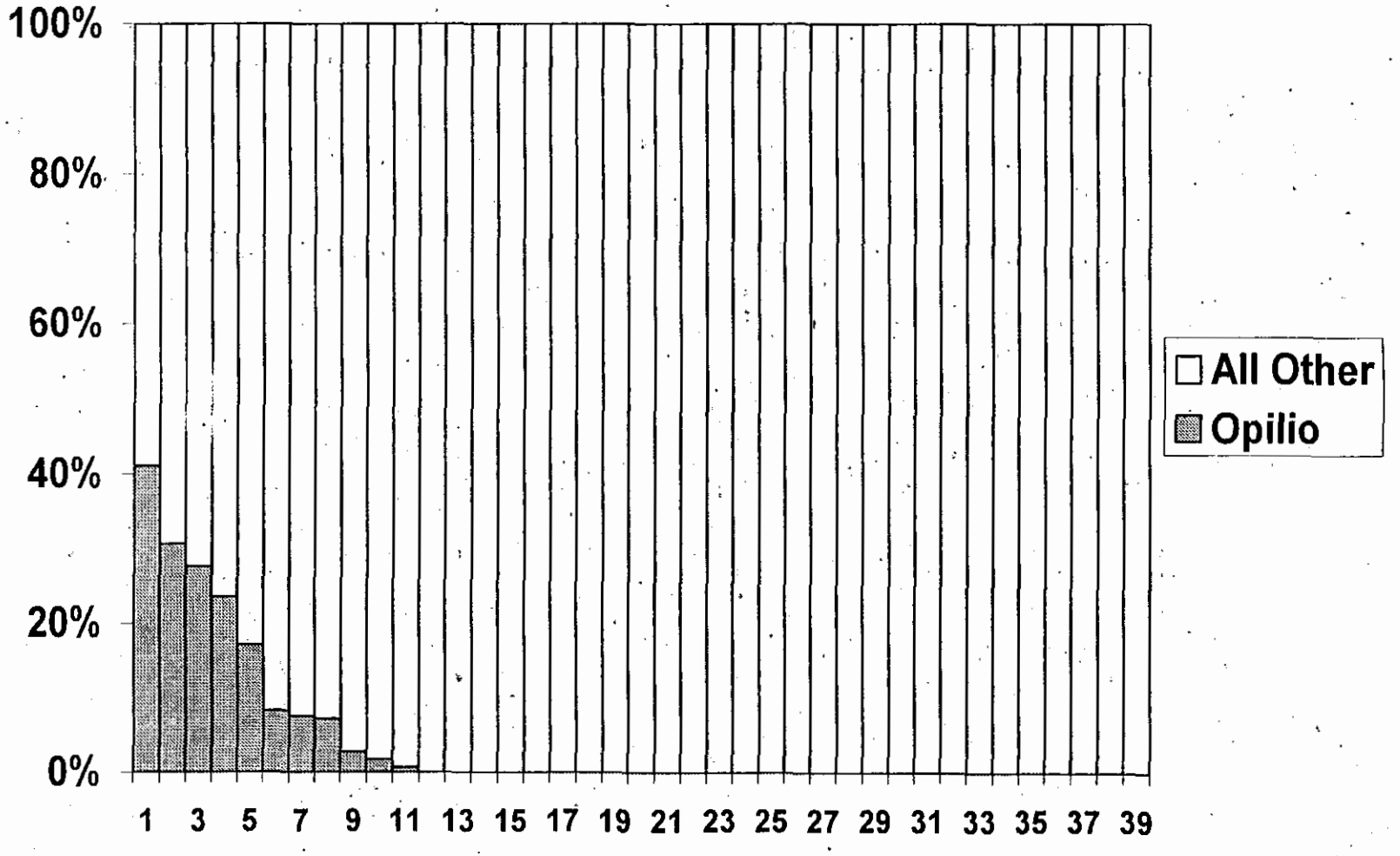


FIGURE 6. 1988-97
OPILIO AS SHARE OF TOTAL REVENUE, XO

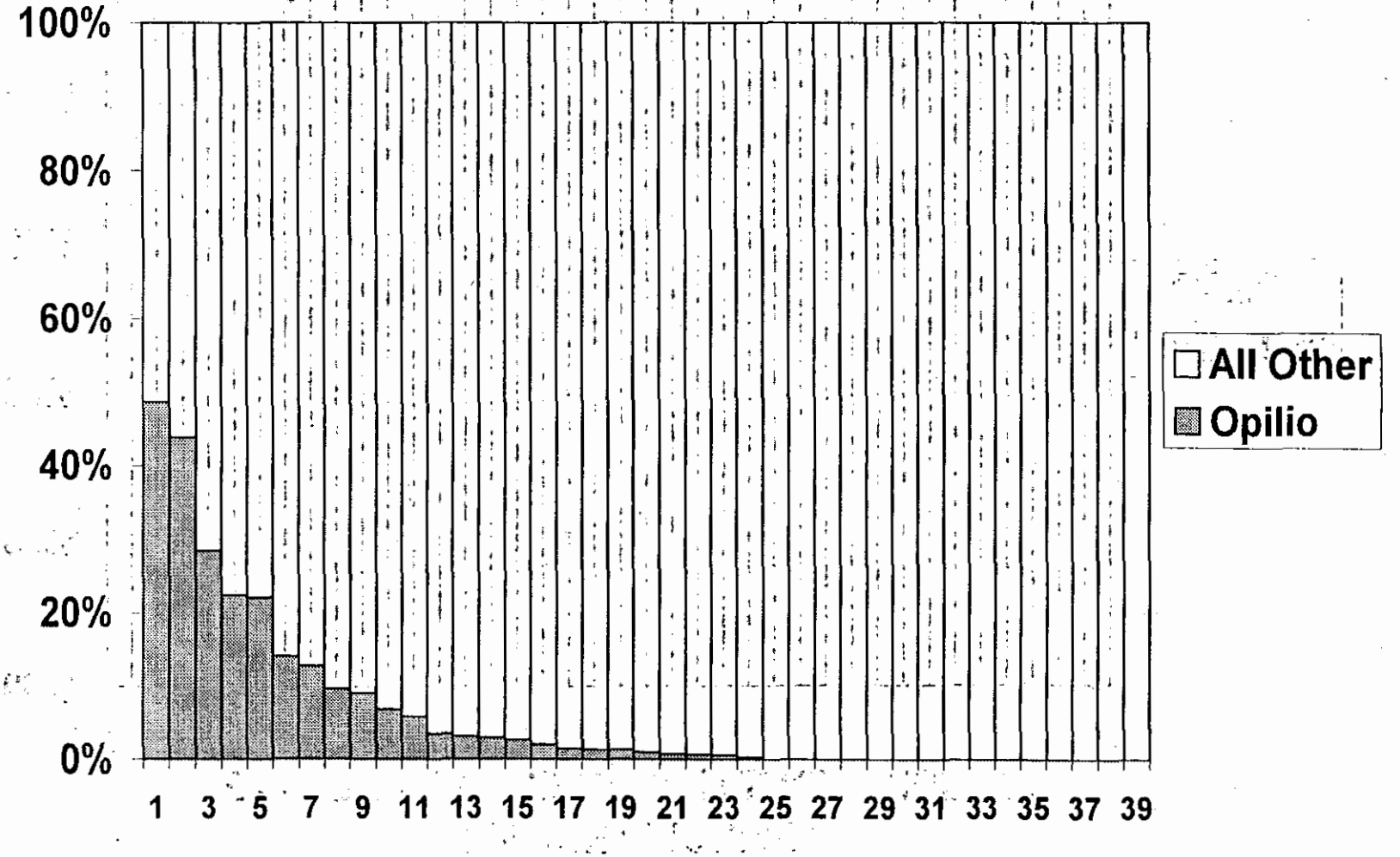


FIGURE 7. 1988-97
ANNUAL PARTICIPATION IN RED KING CRAB FISHERY, XO

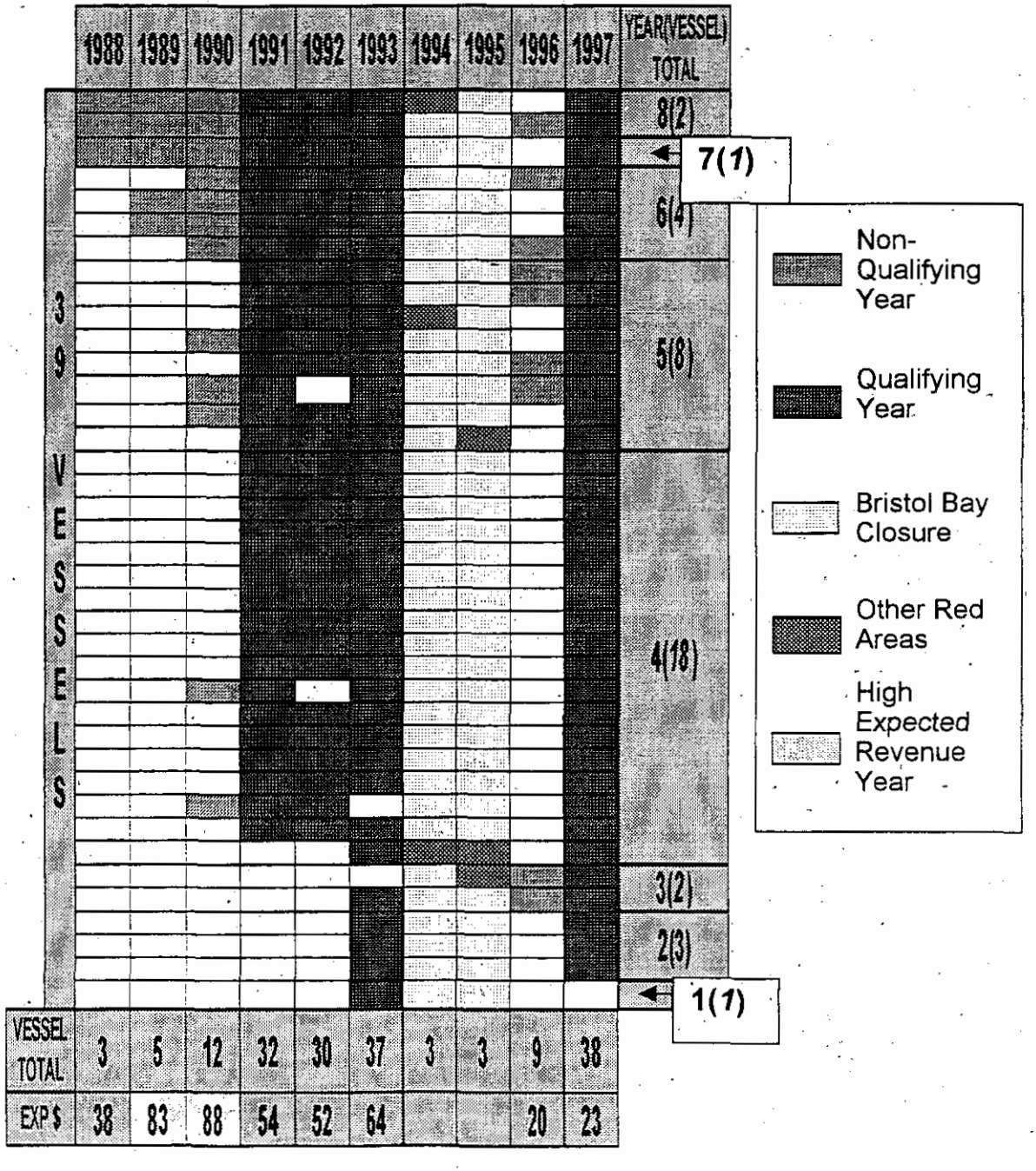


FIGURE 8. 1988-97
ANNUAL PARTICIPATION IN OPILIO FISHERY, XO

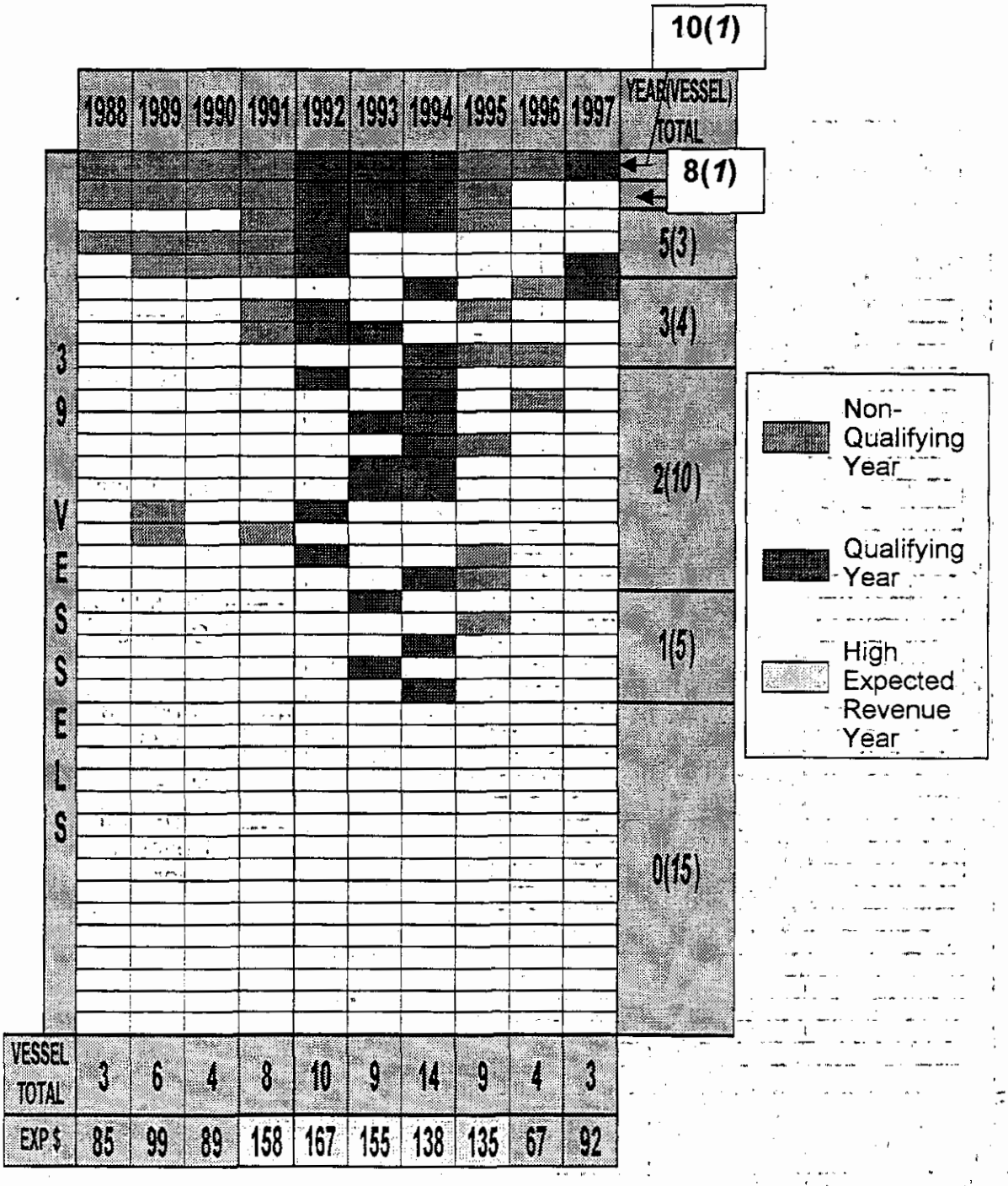


FIGURE 9. 1988-97
ANNUAL PARTICIPATION IN BAIRDI FISHERY, XO

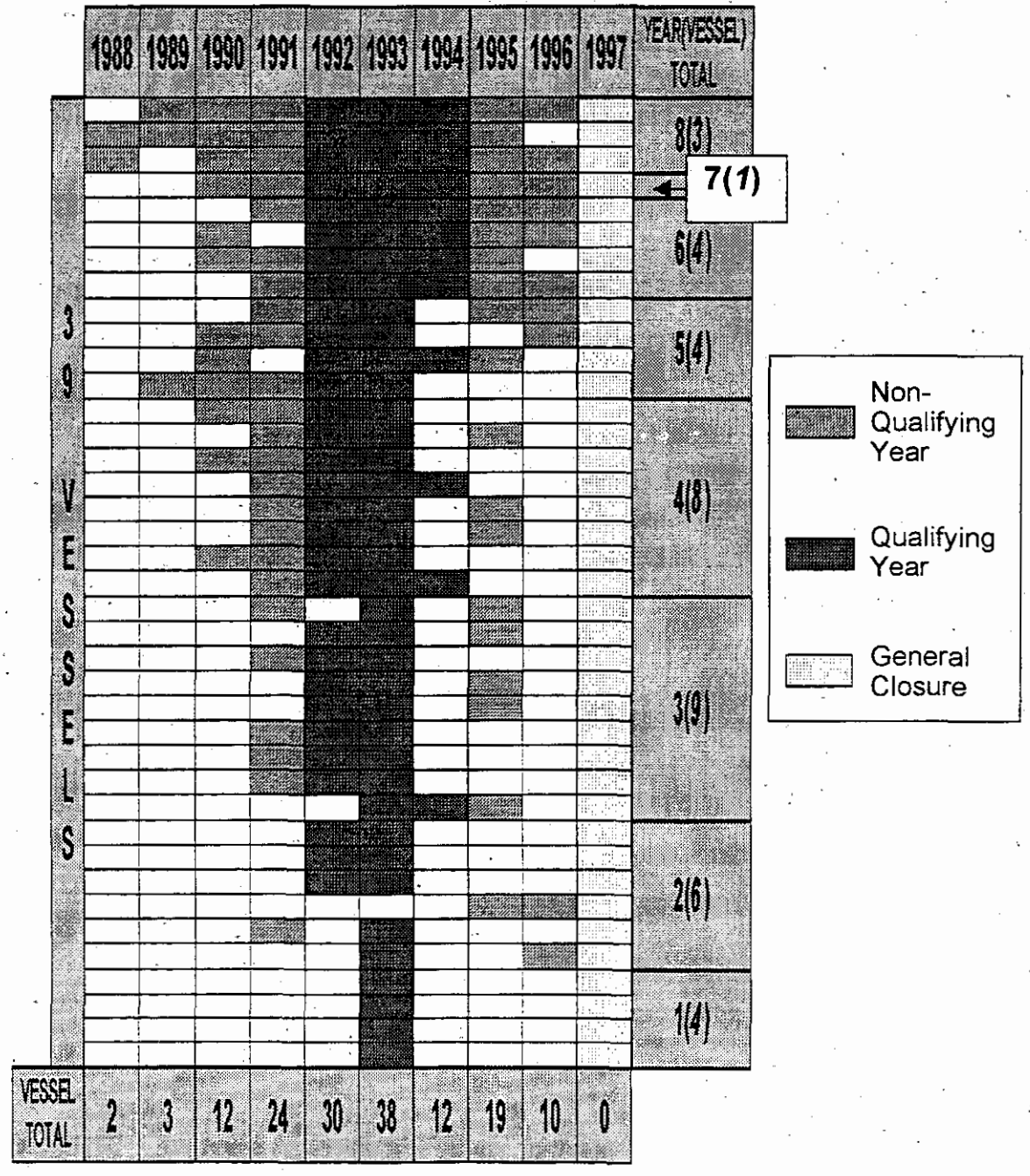


FIGURE 10. 1988-97
PERCENT NXO AND XO FISHING RED KING CRAB 0-10 YEARS

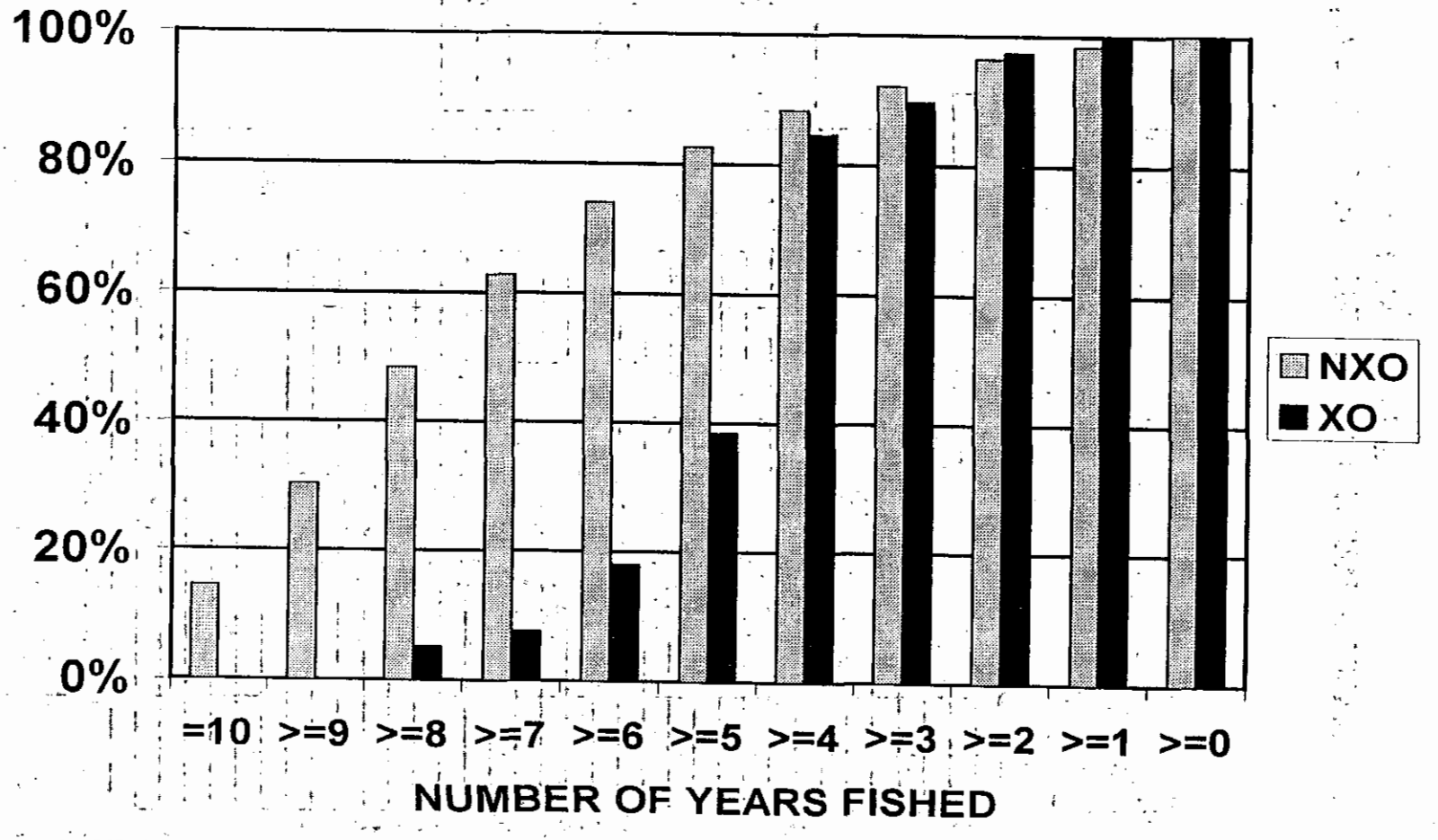


FIGURE 11. 1988-97
PERCENT NXO AND XO FISHING OPILIO CRAB 0-10 YEARS

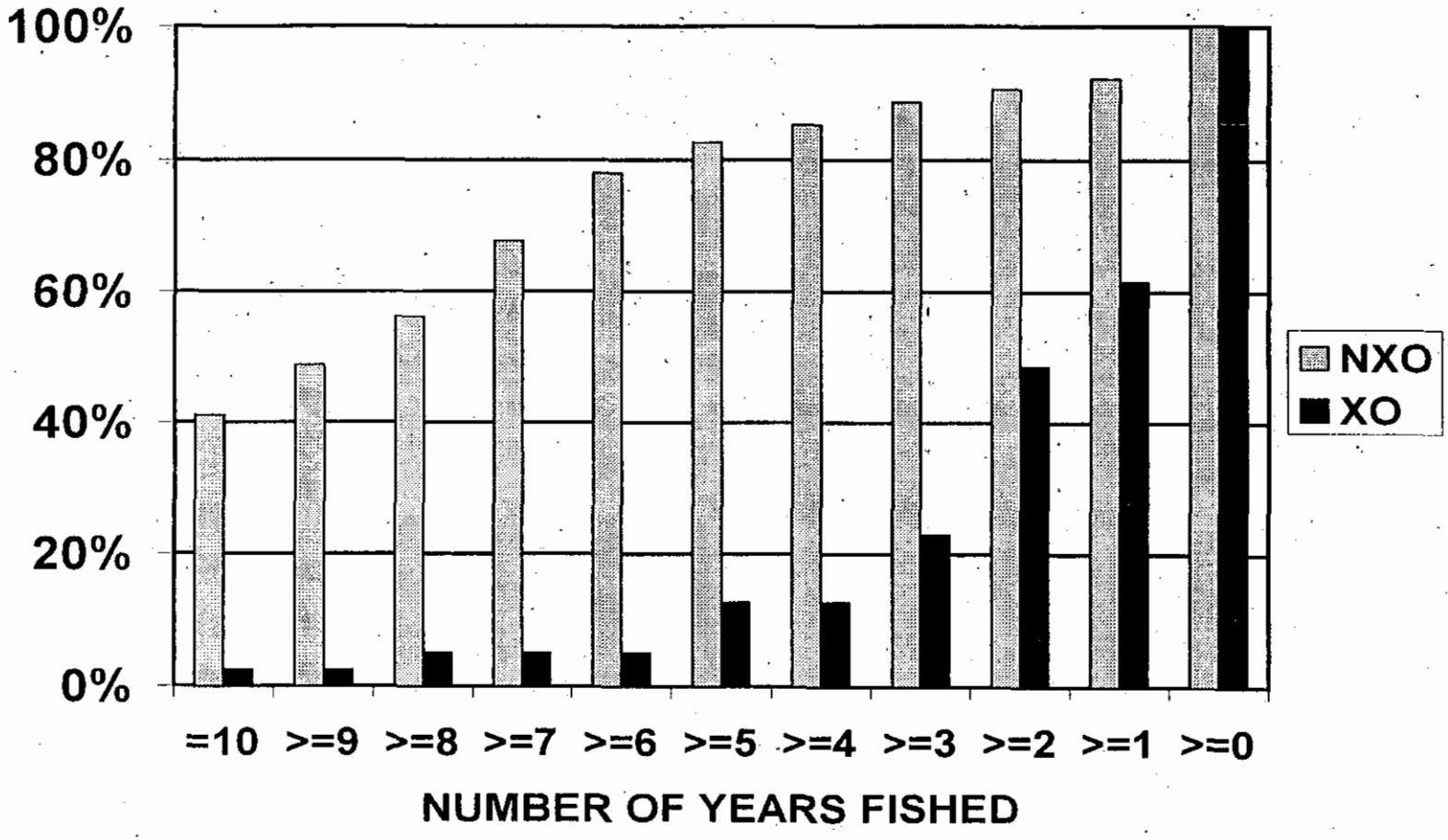
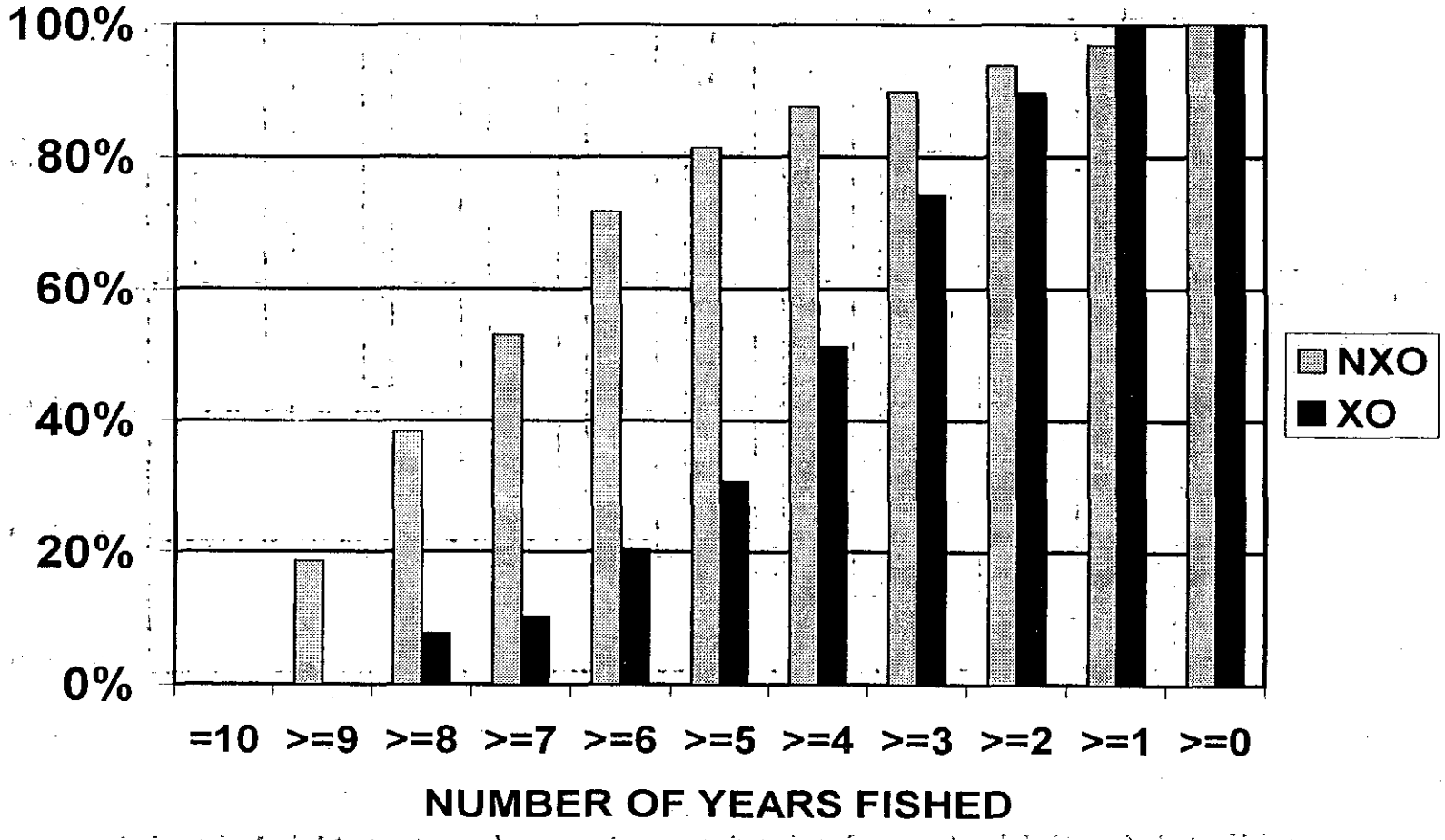


FIGURE 12. 1988-97
PERCENT NXO AND XO FISHING BAIRDI CRAB 0-10 YEARS



GRAPHIC ADDENDUM

TO

ECONOMIC RELIANCE ON CRAB BY AFA SECTION 208 CROSSOVER VESSELS: IMPLICATIONS FOR SIDEBOARDS

North Pacific Fisheries Management Council
Kodiak, AK

June 7-15, 1999

Scott C. Matulich, Ph.D.

Department of Agricultural Economics
Washington State University
Pullman, WA 99164-6210

NOTE: This graphic addendum contains the non-crossover (NXO) counterparts to the *final report* Figures 3, 4, 6, and 7-9. These NXO figures were requested by an AP member during the April NPFMC meeting. They are not included in the final report because they offer no additional policy insight concerning economic reliance and AFA crab sideboards. Be advised that brown crab was inadvertently included as "other fish" in the original CFEC data set. This error persists in theses graphs.

FIGURE 3. 1997
DISTRIBUTION OF TOTAL REVENUE, NXO

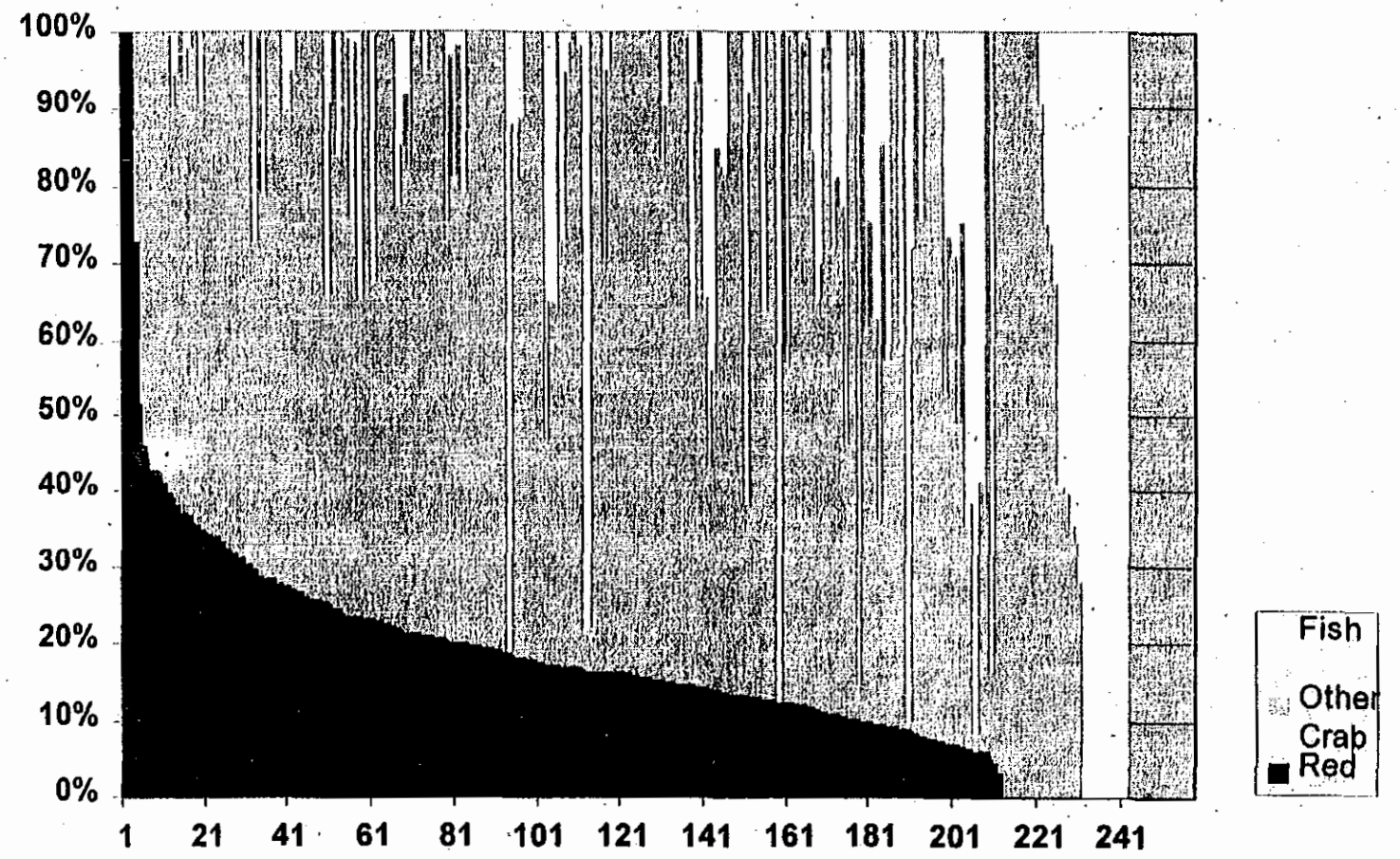


FIGURE 3. 1996-97
DISTRIBUTION OF TOTAL REVENUE, NXO

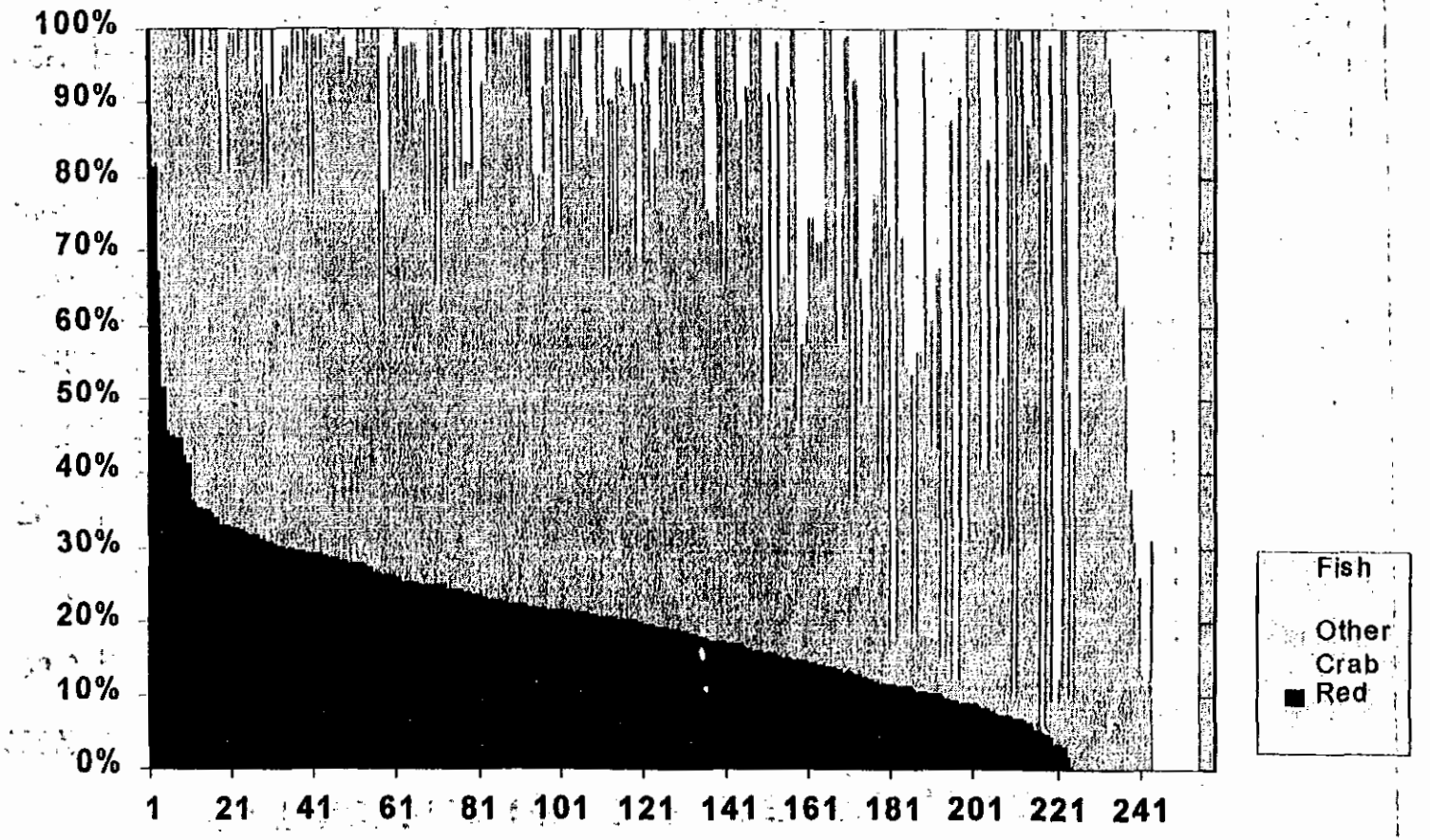


FIGURE 3. 1995-97
DISTRIBUTION OF TOTAL REVENUE, NXO

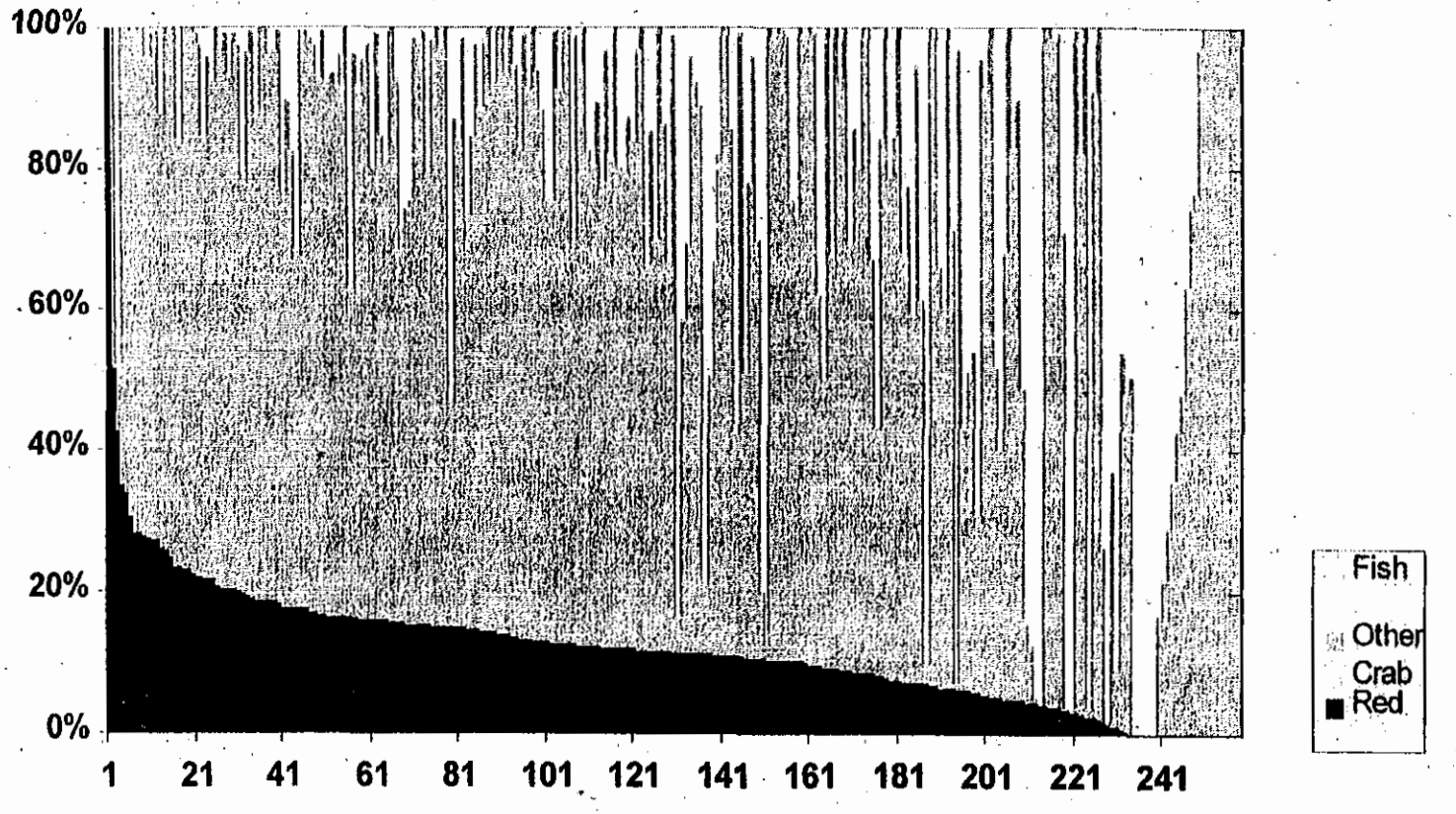


FIGURE 3. 1988-97
DISTRIBUTION OF TOTAL REVENUE, NXO

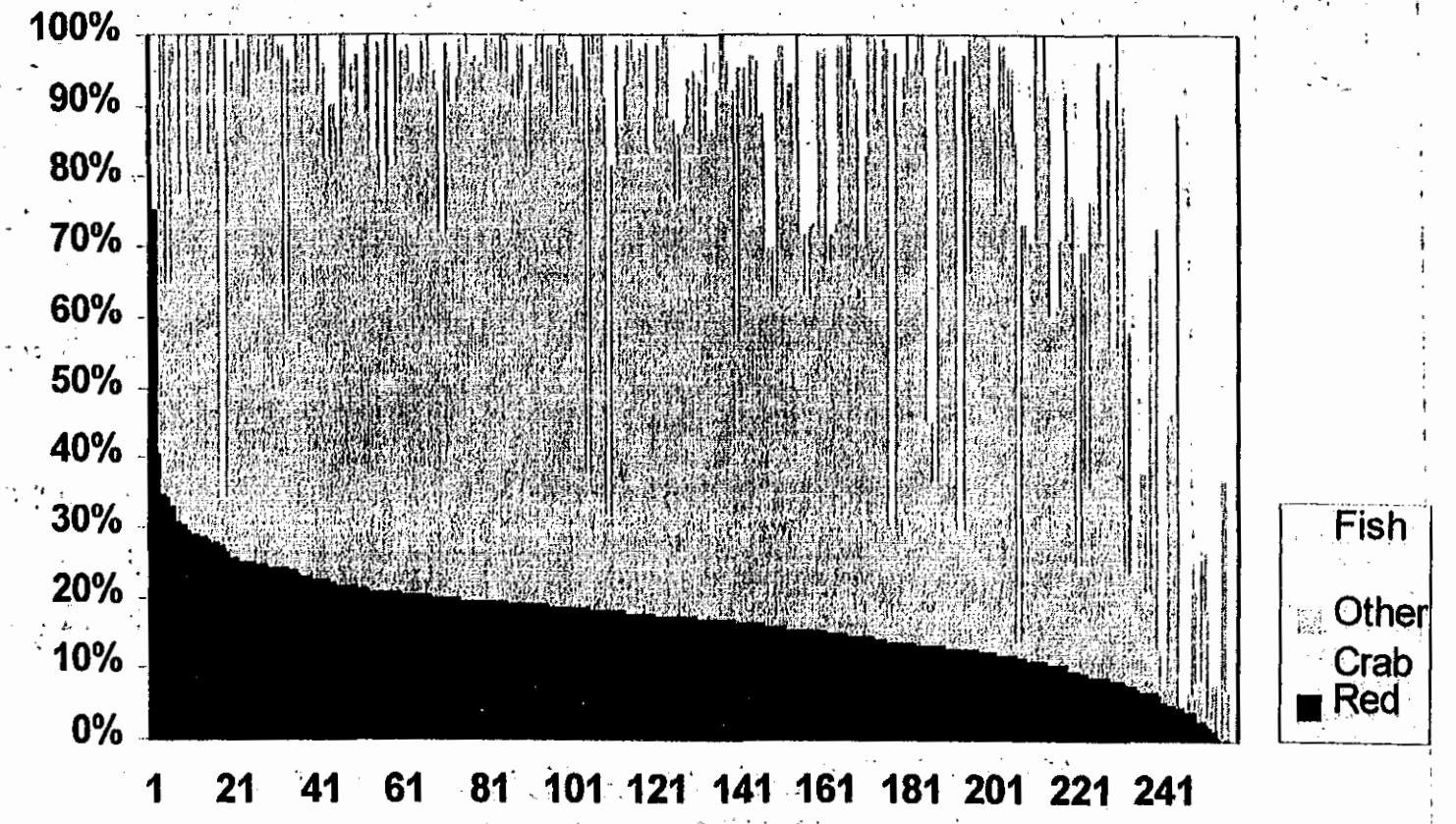


FIGURE 4. 1997
DISTRIBUTION OF CRAB REVENUES, NXO

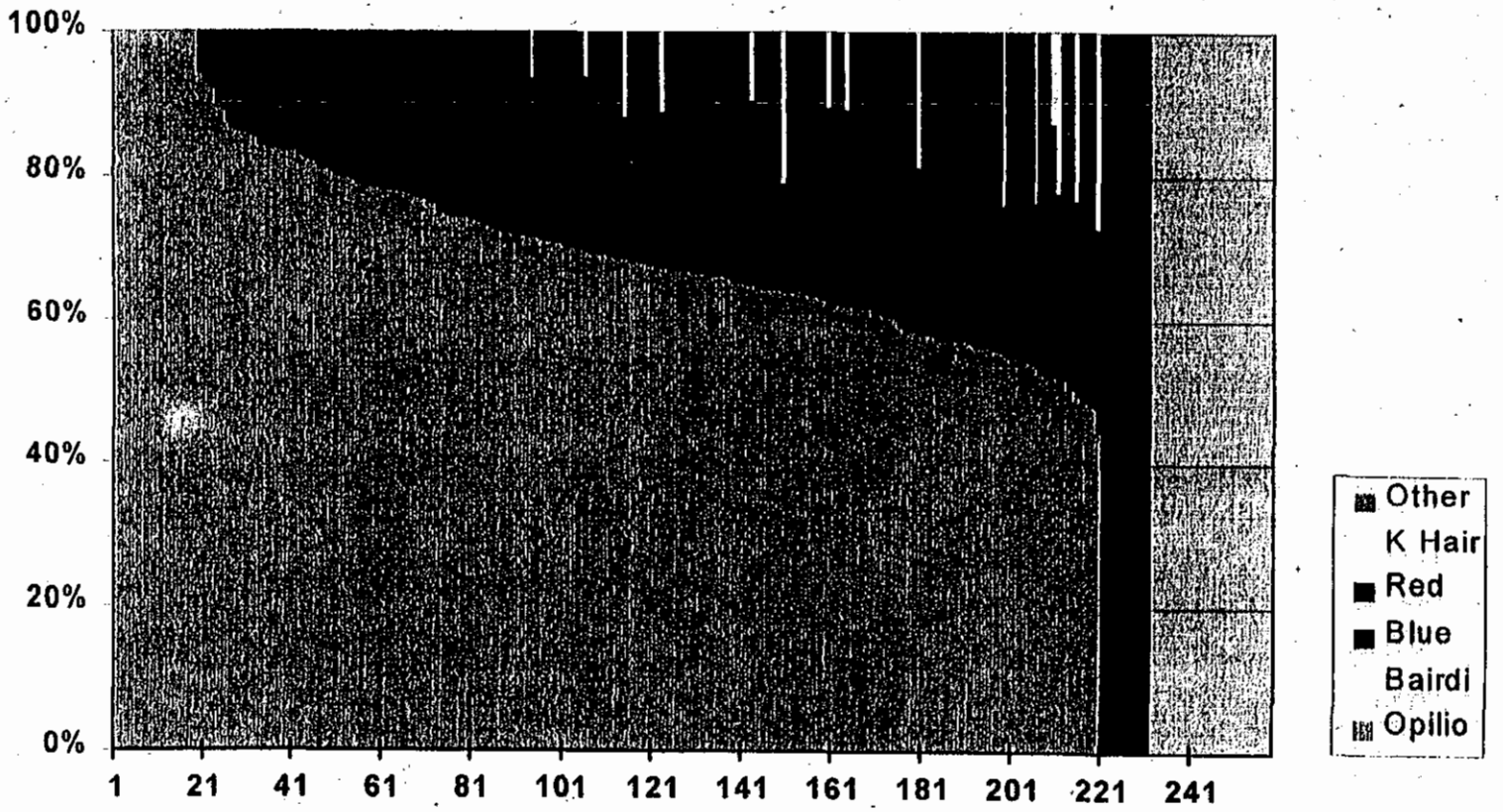


FIGURE 4. 1996-97
DISTRIBUTION OF CRAB REVENUES, NXO

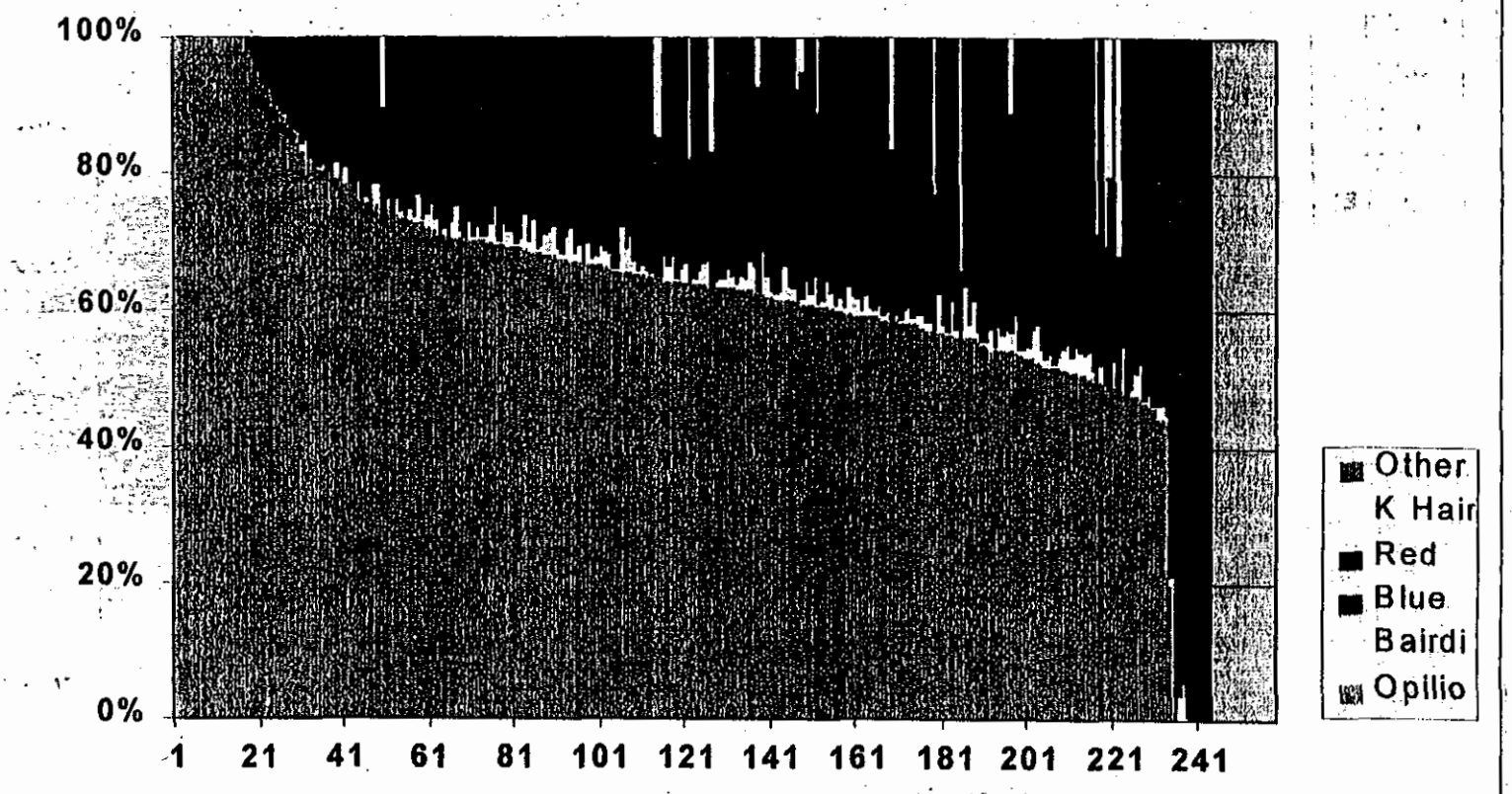


FIGURE 4. 1995-97
DISTRIBUTION OF CRAB REVENUES, NXO

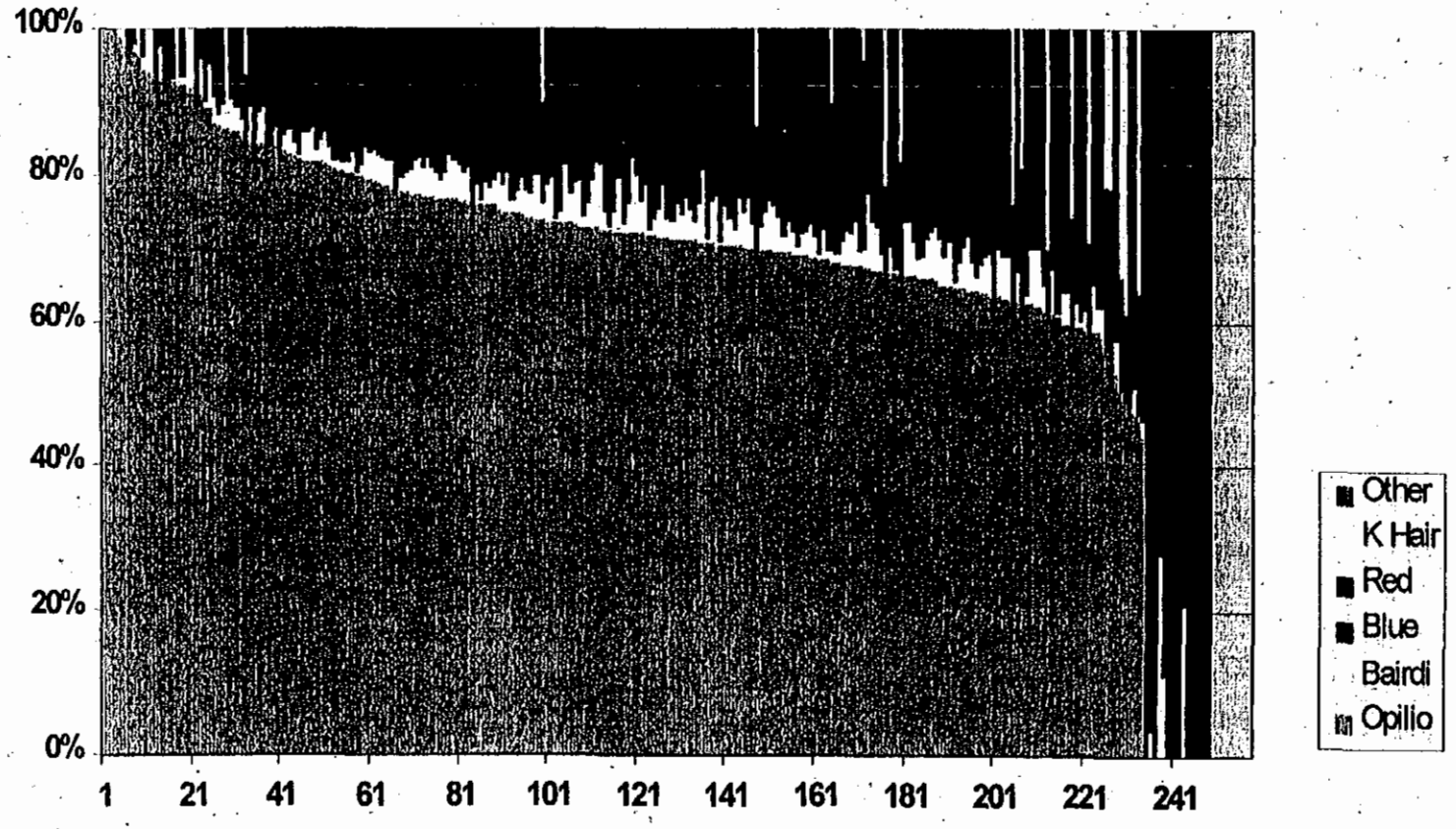


FIGURE 4. 1988-97
DISTRIBUTION OF CRAB REVENUES, NXO

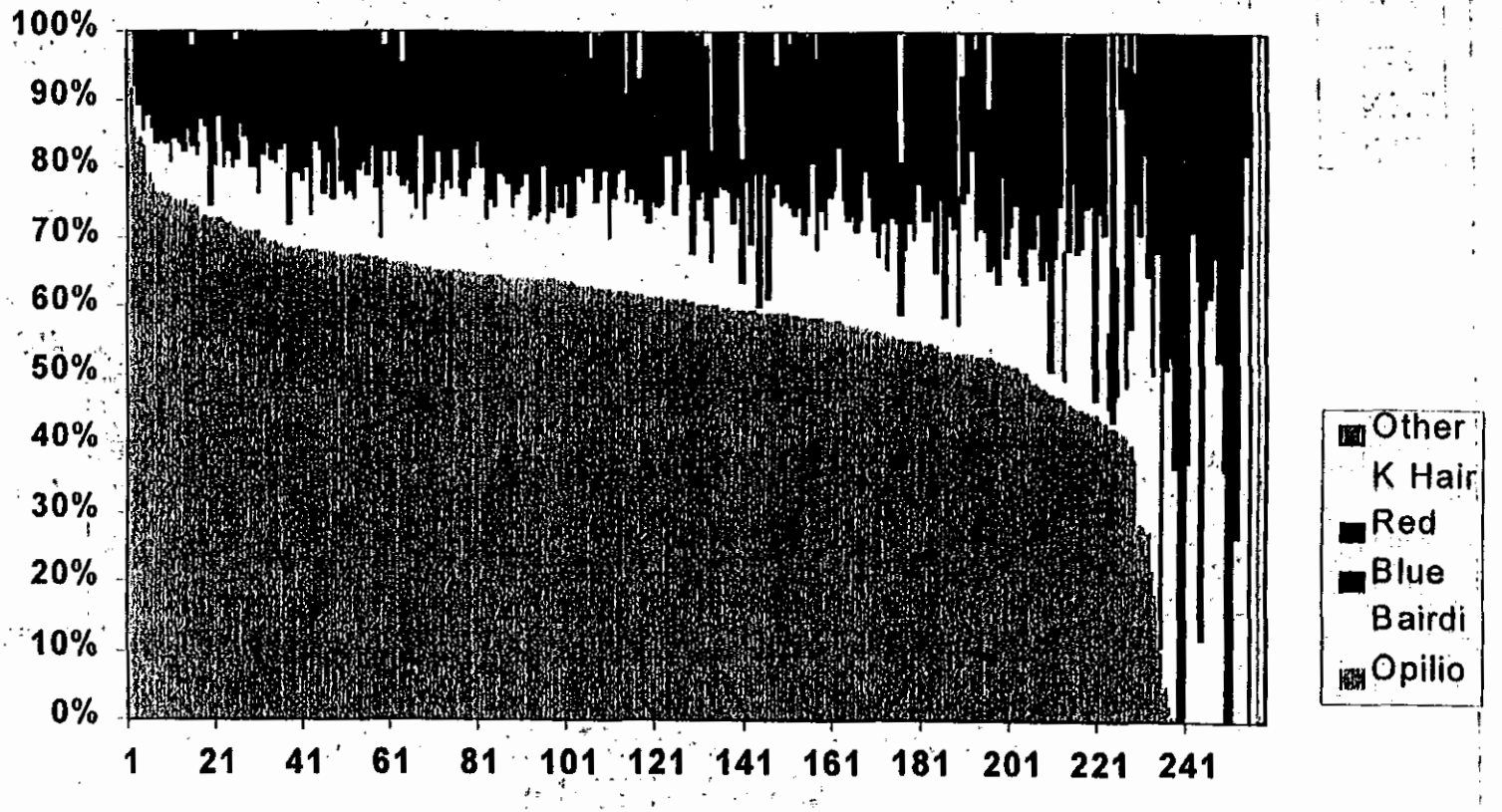


FIGURE 6. 1997
OPILIO VERSUS TOTAL REVENUE, NXO

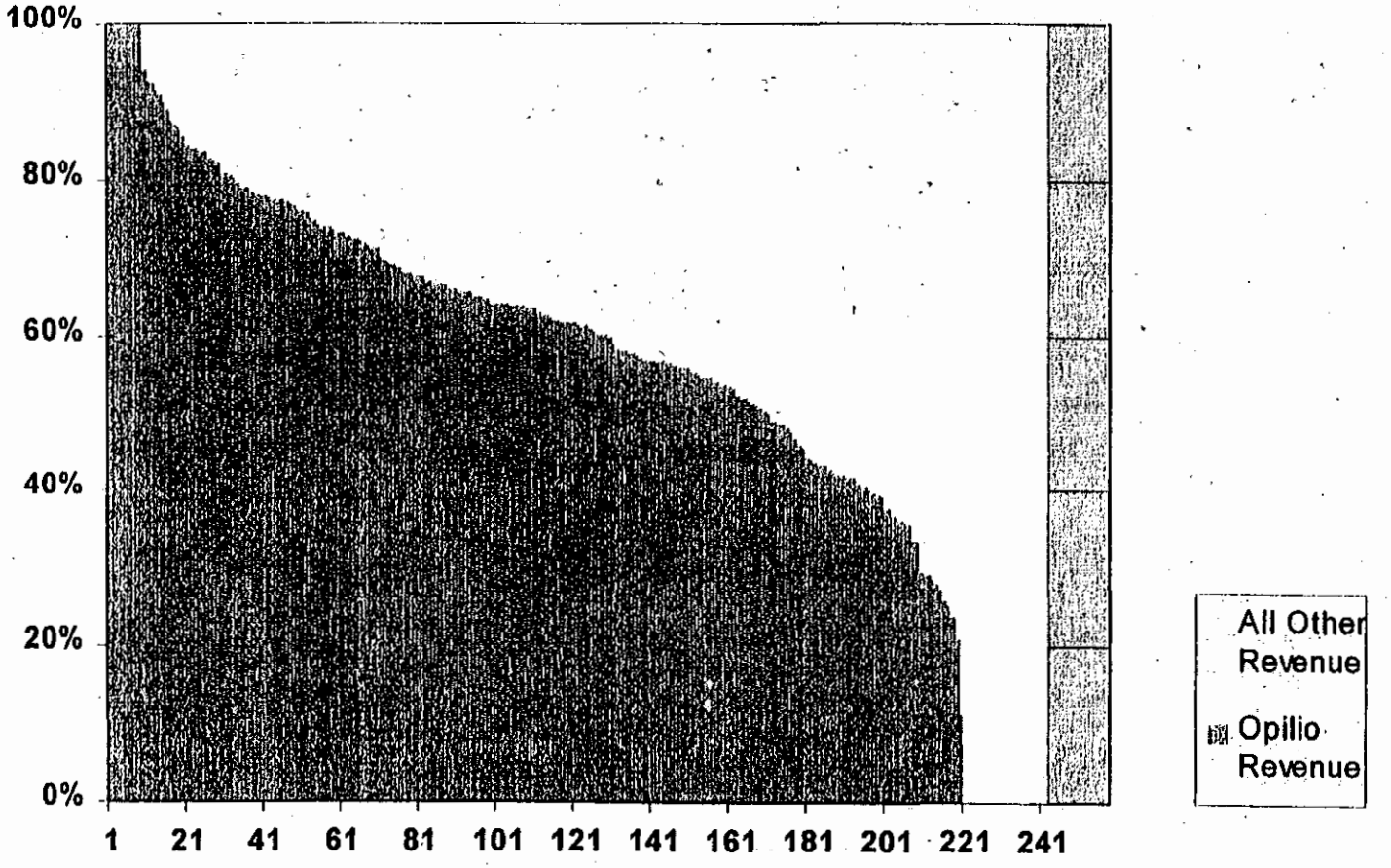


FIGURE 6. 1996-97
OPILIO AS SHARE OF TOTAL REVENUE, NXO

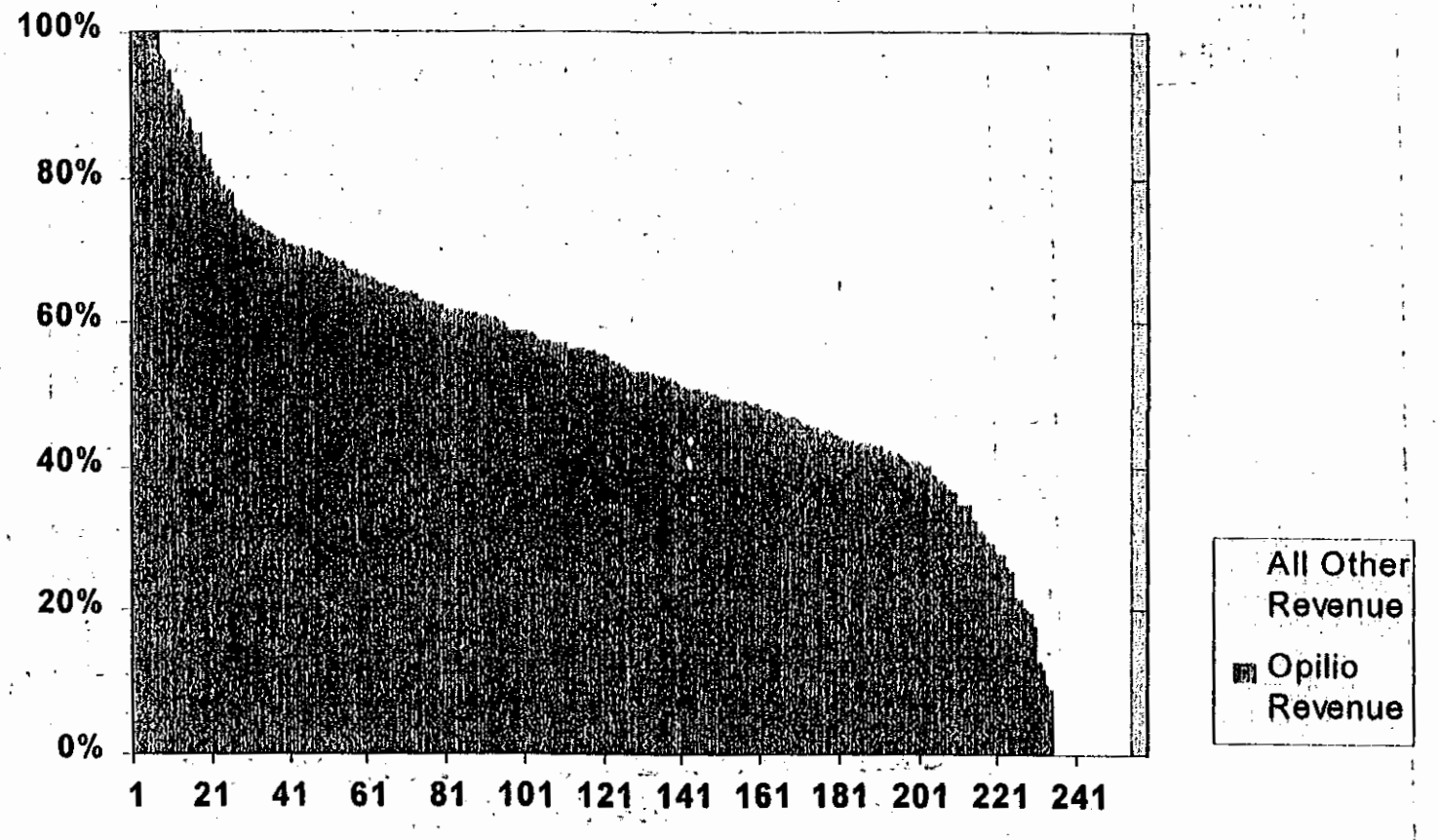


FIGURE 6. 1995-97
OPILIO AS SHARE OF TOTAL REVENUE, NXO

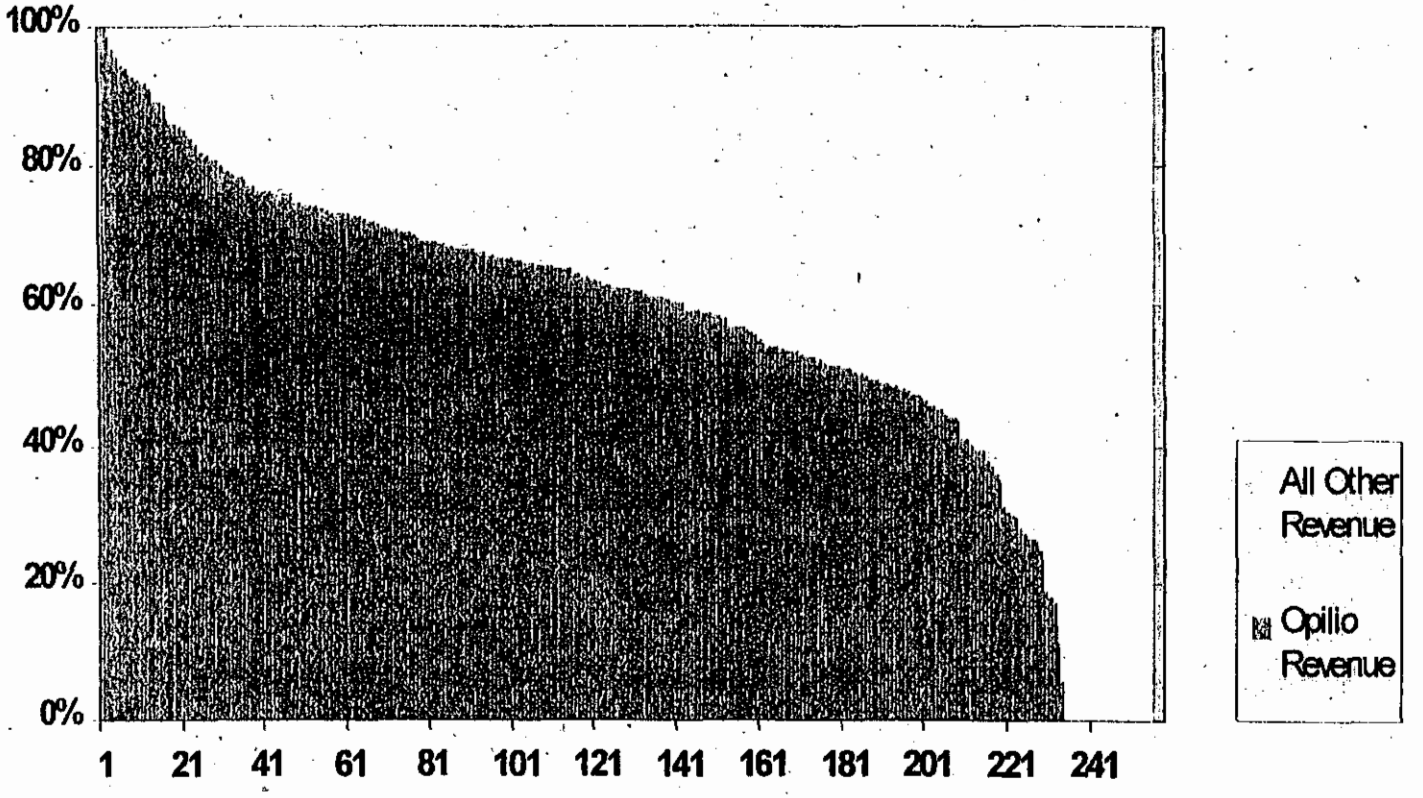


FIGURE 6. 1988-97
OPILIO VERSUS TOTAL REVENUE, NXO

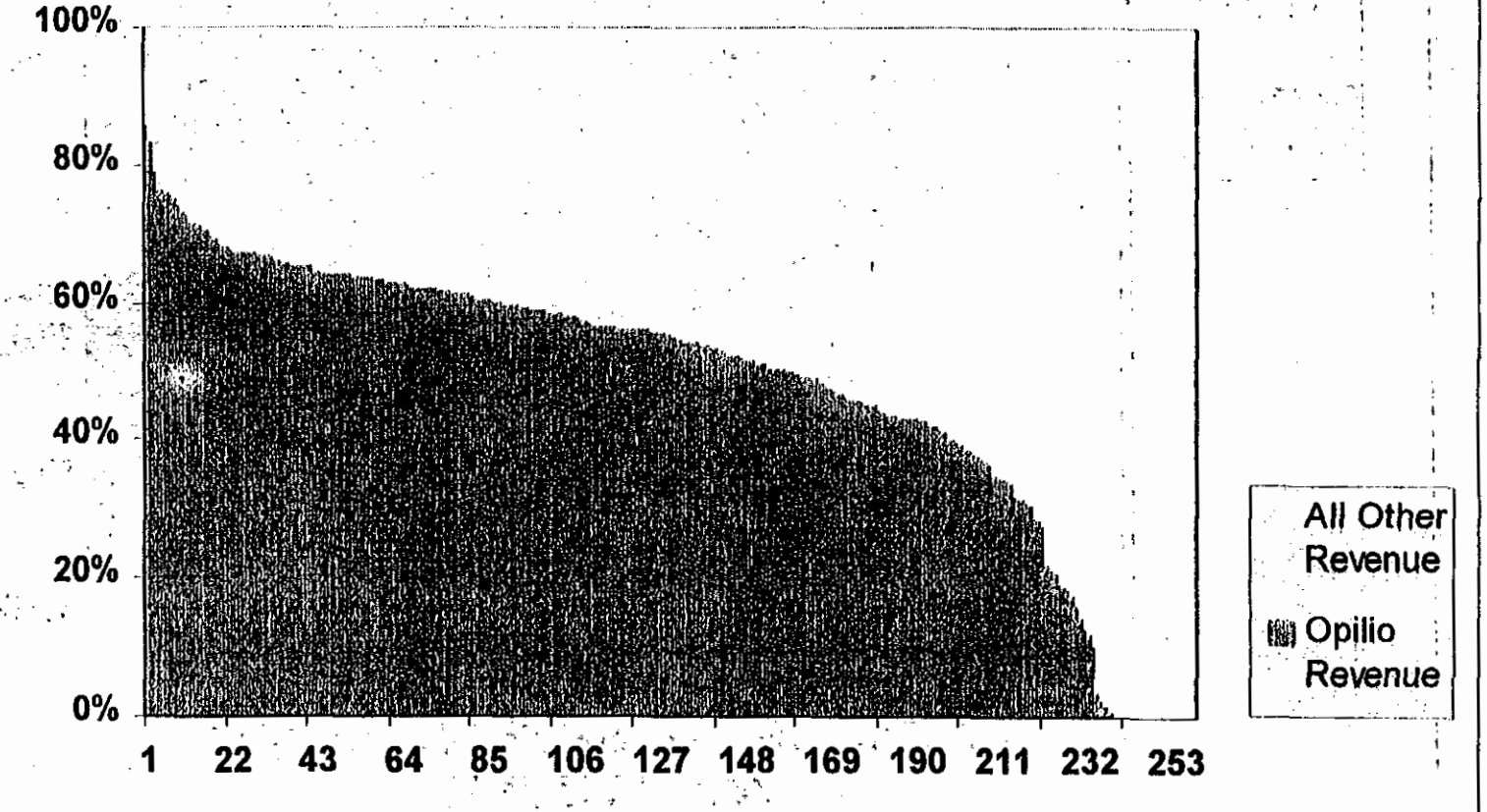


FIGURE 7. 1988-97
ANNUAL PARTICIPATION IN RED FISHERY, NXO

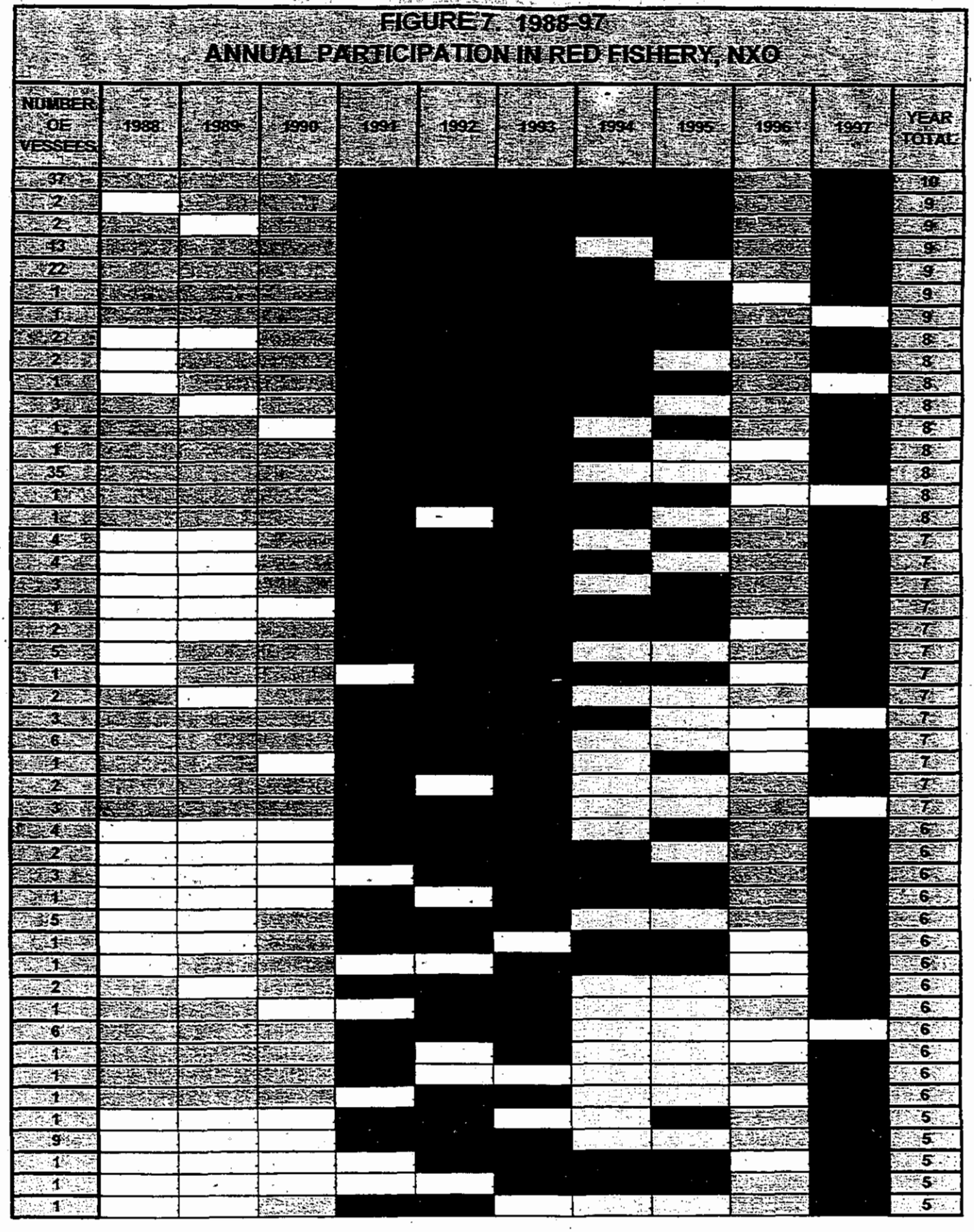
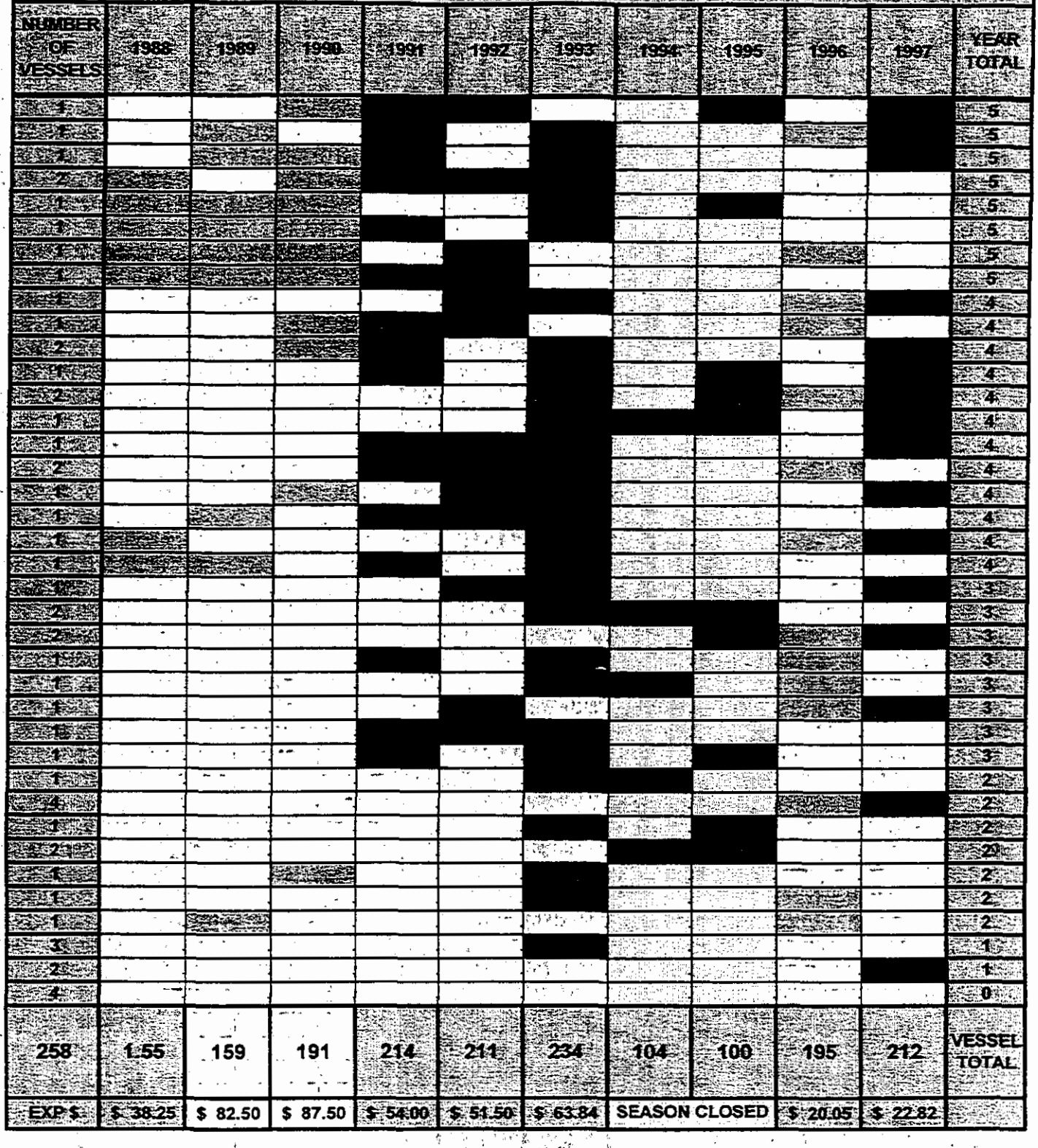


FIGURE 7. 1988-97
ANNUAL PARTICIPATION IN RED FISHERY, NXO



NUMBER OF VESSELS	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	YEAR TOTAL
1											5
1											5
1											5
2											5
1											5
1											5
1											5
1											5
1											4
1											4
2											4
1											4
2											4
1											4
1											4
2											4
1											4
1											4
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1											3
1											3
1											3
1											2
1											2
1											2
2											2
1											2
1											2
1											2
1											1
2											1
4											0
258	155	159	191	214	211	234	104	100	195	212	VESSEL TOTAL
EXP $	$ 38.25	$ 82.50	$ 87.50	$ 54.00	$ 51.50	$ 63.84	SEASON CLOSED		$ 20.05	$ 22.82	

	NON QUALIFYING YEARS		BRISTOL BAY CLOSURE
	LLP QUALIFYING YEARS		NON-BRISTOL BAY RED
	EXPECTED REVENUES ($ MILLION)		

FIGURE 8. 1988-97
ANNUAL PARTICIPATION IN OPILIO FISHERY, NXO

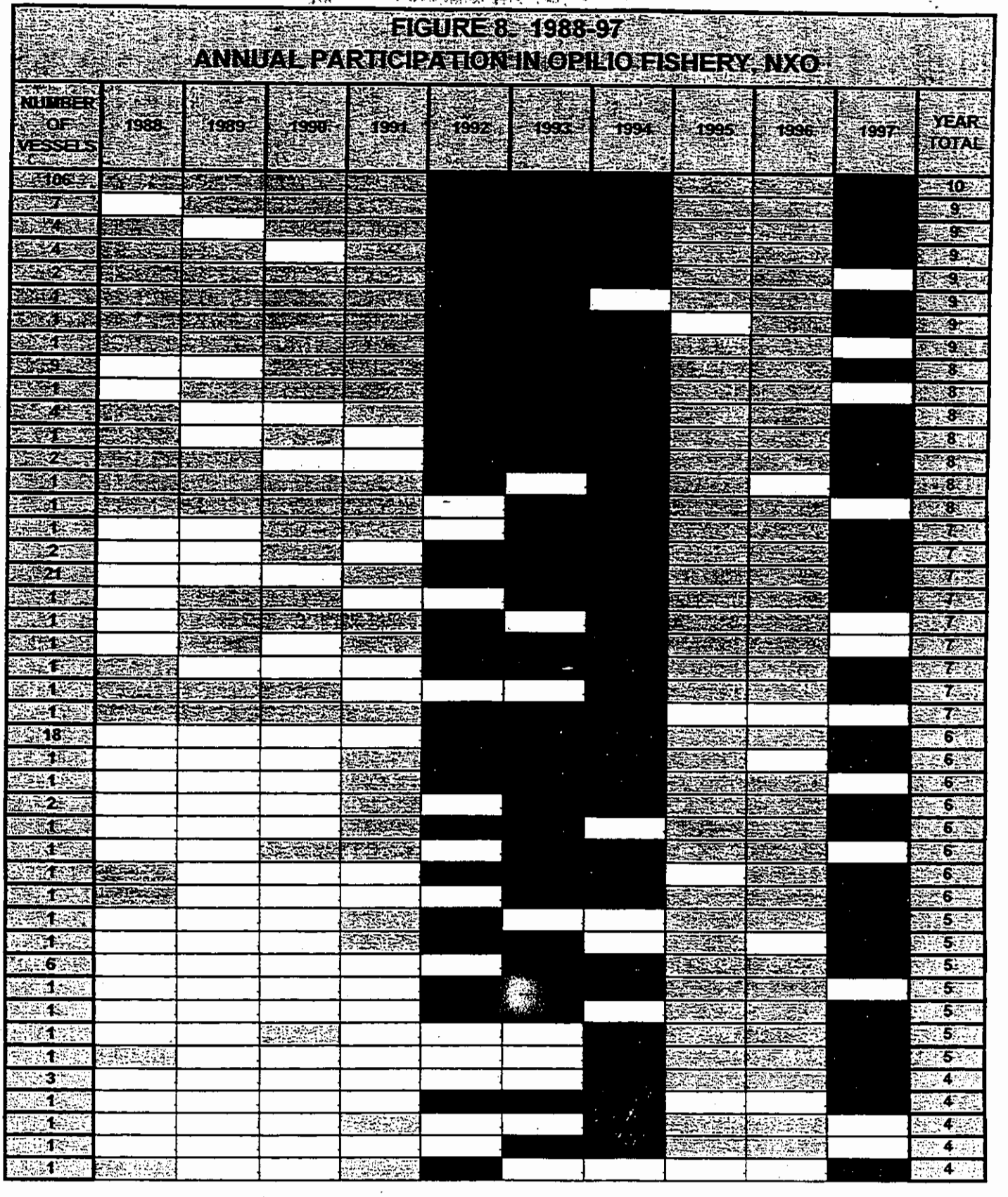


FIGURE 8. 1988-97
ANNUAL PARTICIPATION IN OPILIO FISHERY, NXO

NUMBER OF VESSELS	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	YEAR TOTAL
6										■	3
1							■				3
1							■			■	3
1						■				■	3
2										■	2
1							■				2
1										■	2
1											2
1											1
1							■				1
2										■	1
20											0
258	136	132	146	178	199	210	218	223	225	220	VESSEL TOTAL
EXP $	$ 85.24	$ 99.00	$ 89.47	$ 157.50	$ 166.50	$ 155.40	$ 137.54	$ 135.35	$ 67.43	$ 92.43	

	NON-QUALIFYING YEARS		HIGH EXPECTED REVENUE
■	LLP QUALIFYING YEARS		

FIGURE 9. 1988-97
ANNUAL PARTICIPATION IN BAIRDI FISHERY, NXO

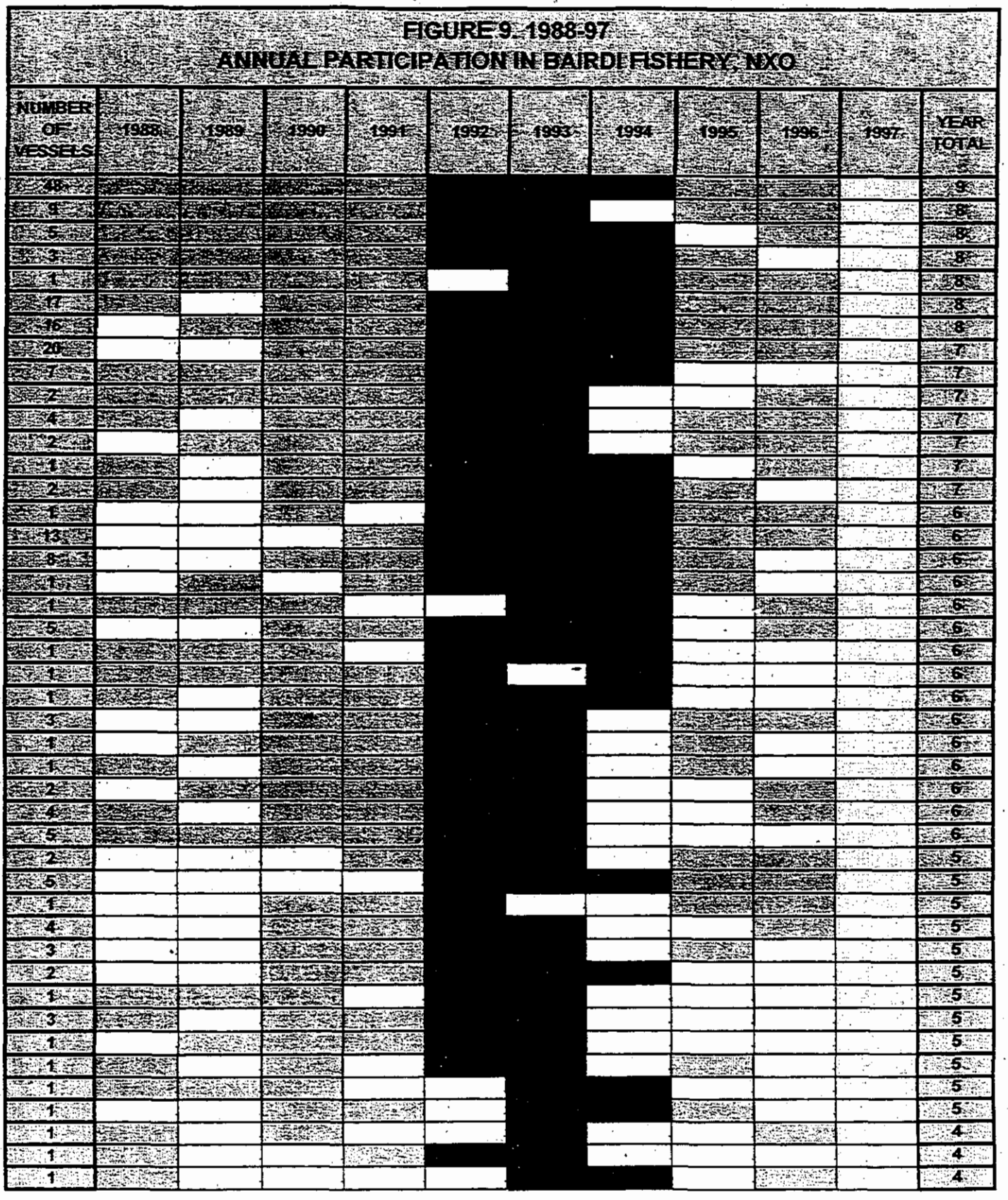
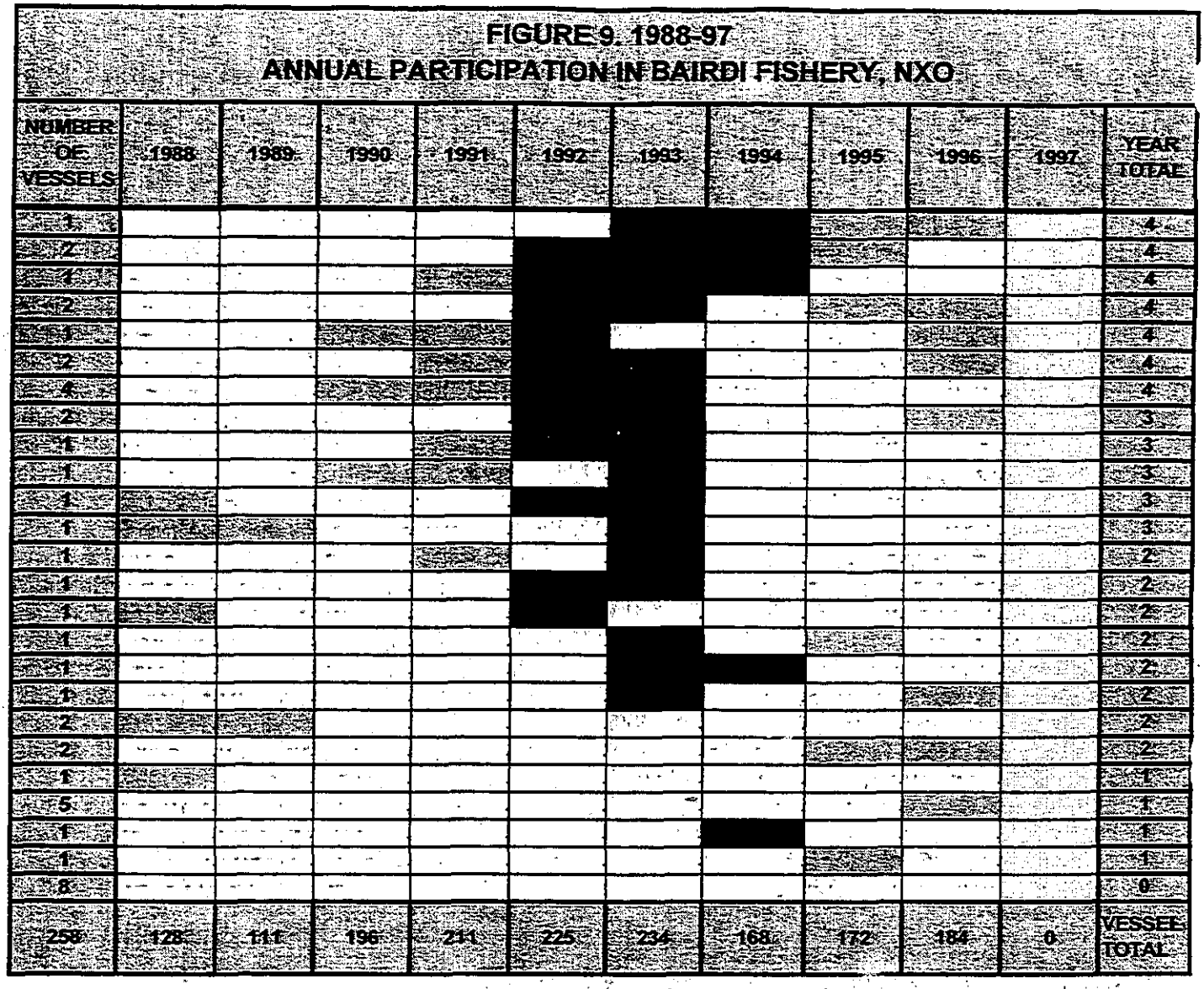


FIGURE 9. 1988-97
ANNUAL PARTICIPATION IN BAIRDI FISHERY, NXO



NUMBER OF VESSELS	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	YEAR TOTAL
1											4
2											4
4											4
2											4
1											4
2											4
4											4
2											3
1											3
1											3
1											3
1											3
1											2
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1											2
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1											2
1											2
2											2
2											2
1											1
5											1
1											1
1											1
8											0
258	128	111	196	211	225	234	168	172	184	0	VESSEL TOTAL

	NON-QUALIFYING YEARS		BAIRDI CLOSURE
	LLP QUALIFYING YEARS		

APPENDIX IV

Discussion Paper on

Inshore Sector Catcher Vessel Cooperatives in the Bering Sea/Aleutian Islands Pollock Fisheries

Prepared for the

North Pacific Fishery Management Council

September 15, 1999

by

Robert Halvorsen
Fahad Khalil
Jacques Lawarrée

Department of Economics
University of Washington

Executive Summary

Our analysis addresses three issues: whether implementation of inshore American Fishery Act (AFA) cooperatives will have beneficial or adverse effects on independent vessel owners, which features of the AFA rules or characteristics of the inshore sector increase the probability of adverse results, and the effects of three alternative proposals on the participants in the inshore sector.

The first thing to note is that this fishery is unsuitable for analysis using a model of perfect competition. Three companies dominate the processing sector, while the harvesting sector can legally negotiate under the umbrella of a bargaining association. These participants are keenly aware of their strategic interdependence, and that necessitates the use of tools from game theory. Our analysis is based on the implications of bargaining theory, which deals with the division of rent between game players. We define three types of players: independent catcher vessels (ICVs), processor-controlled catcher vessels (PCVs), and processors.

The benchmark we have been instructed to use in assessing the effects of AFA cooperatives on ICVs is the inshore sector with all provisions of the AFA in place except those concerning the implementation of cooperatives. This benchmark does not correspond to any year's actual conditions. It differs from pre-AFA conditions with respect, for example, to allowable catch, and it differs from 1999 conditions because under the benchmark there would be no prospect of cooperatives being formed next year. Therefore, outcomes under the benchmark can only be evaluated qualitatively

The total rents in the inshore sector under the benchmark would be larger than pre-AFA conditions, because the increase of almost one-third in the sector's share of total allowable catch is only partially offset by the associated tax of 0.6 cents per pound of deliveries. It is unlikely that the increase in allowable catch would alter the players' relative bargaining strengths significantly, and therefore each type of participant would be expected to do at least as well under the AFA without cooperatives as it had done in the pre-AFA fishery. However, determining what the relative bargaining strengths actually were, and therefore what the distribution of rents under the benchmark would be, is difficult.

Processors have a number of important bargaining advantages. Their ownership of catching vessels reduces their reliance on supply from ICVs, while also providing them an informational advantage given that ICVs do not own processing plants. Because the processing sector is highly concentrated, entry is prohibited, and the situation in the fishery is a repeated game, processors are expected to realize that aggressive tactics yielding short-term gains are unlikely to be profitable in the long-run, and capacity constraints under the benchmark would help them refrain from engaging in such tactics. Although the ICVs do have the advantage of being able to legally bargain as a group, we conclude that on balance the processors have substantially more bargaining power than ICVs. Therefore, we expect outcomes under the benchmark to favor processors over ICVs.

Unlike the benchmark, the actual AFA includes provisions for the formation of harvesting cooperatives. To the extent that the cooperatives are implemented, the race for fish will abate. The resulting rationalization will increase both the total rents in the fishery and the effective amount of capacity in harvesting and processing.

The increase in the effective amount of processing capacity will provide more opportunities for processors to engage in aggressive competition, but the long-term incentives for refraining from doing so will remain. The existence of PCVs will continue to provide the same bargaining advantages as under the benchmark, and in addition will now provide the processor influence over its cooperative's decisions. If an ICV does not join a cooperative, or chooses to change the processor it is assigned by the AFA rules, it has to compete for the fish not allocated to cooperatives. The term "open-access fishery" will be used to refer to this part of the inshore pollock fishery, with the understanding that access of catcher vessels and processors will be limited by the AFA. The "outside option" for an ICV is the return it can obtain in this open-access fishery.

If the open-access under the AFA were the same as open access under the benchmark, then ICVs could not be adversely affected by the AFA provisions for cooperatives. However, open access would be the same in the two cases only if no cooperatives were in fact formed under the AFA, which would not be an equilibrium outcome. Under most plausible scenarios for open access under the AFA, ICVs would do worse in open access under the AFA than in the benchmark case. Therefore, we conclude that there is a significant probability that ICVs will be adversely affected by the AFA's provisions for cooperatives.

We stress that we are not predicting that ICVs will be adversely affected, only that the possibility that they would be cannot be dismissed. We also note that, whatever the results at the aggregate level, the results for individual ICVs will vary, with some likely to benefit even if the results at the aggregate level are adverse, and vice versa. In particular we expect that, other things equal, an ICV will do better the less influential that PCVs are in its cooperative. Lastly, it should be noted that because the benchmark is not the ICV's outside option under the AFA, the decision to join a cooperative does not imply that an ICV is better off under the AFA than under the benchmark.

Economic characteristics of the inshore sector that substantially increase the probability of adverse effects are the degree of concentration in the harvesting sector, the number and importance of PCVs, the existence of catcher vessels whose share of catch history is substantially less than their relative catching power, and the difficulty of specifying long-term price contracts. The most important features of the AFA cooperative rules are that a catcher vessel can only join the cooperative for which it qualifies based on the prior year's fish deliveries, implying that it must go through open access to change processors, and the restriction that a cooperative can sell no more than 10% of its catch to a processor other than the one for which it is qualified.

One of the alternatives to the AFA that we evaluated, the Dooley-Hall proposal, would remove the qualification requirements, so that a cooperative could deliver to any processor, and any eligible catcher vessel could join any cooperative. Except for the requirement of belonging to a cooperative with at least five members, the Dooley-Hall proposal is equivalent to an individual fishing quota (IFQ) program.

There is little question that ICVs would be better off, and processors worse off, under the Dooley-Hall proposal than under the AFA. ICVs would also be better off relative to the benchmark. Processors might or might not be adversely affected relative to the benchmark. The most critical factor determining the outcome would be how aggressively processors would compete. The presence of excess capacity would provide opportunities for short-term gains from aggressive competition, though the estimates of excess capacity provided to us by NMFS are quite modest. More importantly, the factors that can be expected to cause processors to refrain from aggressive competition would remain.

We doubt that processors would behave so aggressively that the situation would deteriorate, from their perspective, into the equivalent of a perfectly competitive market. Also, whatever degree of competition developed, the negative effects on processors would be offset by two factors, their effective ownership of IFQs through their PCVs, and the relative scarcity of fillet-producing capital. Nevertheless, similar to the case of ICVs under the AFA, there is a significant probability that processors would be adversely affected under the Dooley-Hall proposal. One possible amendment to the Dooley-Hall proposal that would reduce the probability of adverse effects on processors would be to impose restrictions on allowable increases in the share of total deliveries by each facility, or firm.

Another alternative that we evaluated would raise the limit on the amount of its deliveries that a cooperative could sell to a processor other than the one for which it was qualified. Raising this limit would facilitate rationalization under the AFA. Whether or not it would reduce the probability of adverse effects on ICVs would depend in part on whether they could exercise the transfer option without hindrance from processors. Determining the magnitude of the benefits to ICVs of increases in the transfer limit would require more information than currently available on the value of incremental supplies.

The third alternative is the elimination of the qualification requirement for cooperative membership, so that a catcher vessel could change processors without having to go through open access. There are several ambiguities concerning the interpretation of this proposal. The most important is whether it would apply only when a new cooperative agreement was signed, or every year. Under the former interpretation the proposed change would have little effect, whereas under the latter interpretation it could greatly enhance the bargaining power of ICVs, although not as much as the Dooley-Hall proposal. We also discuss two measures that would reduce, but not eliminate, the costs of going through open-access.

I. Introduction

We have been requested to provide the Council a discussion paper that addresses the following objectives concerning the inshore sector catcher vessel cooperatives in the Bering Sea/Aleutian Islands (BSAI) pollock fisheries:

1. Provide information that will help determine if the implementation of inshore sector cooperatives for the BSAI pollock fishery, as provided for in the American Fisheries Act (AFA), is expected in aggregate to have beneficial or adverse effects on the independent vessel owners who, under the AFA, are eligible to participate in the BSAI pollock fishery. An independent vessel owner is an entity that owns fewer than three vessels in the BSAI pollock fishery.

2. Determine which, if any, of either the features of the AFA inshore cooperative rules or the characteristics of the inshore sector of the BSAI pollock fishery substantially increase the probability of adverse effects.

3. Determine the effects of three specific alternatives to mitigate any such adverse effects. In particular, determine the expected effects on the independent vessel owners, other vessel owners and pollock processors who are eligible to participate in the inshore sector of the BSAI pollock fishery.

The three alternatives to the current AFA rules for inshore sector cooperatives for the BSAI pollock fishery are:

1. Implement the Dooley-Hall (Independent Catcher Vessel Owners) proposal.

2. Replace the 10% limit on sales to another eligible inshore processor with a higher limit.

3. Eliminate the requirement that an eligible catcher vessel can only belong to a cooperative that will principally deliver its pollock apportionment to the inshore processor that received more of the pollock delivered by that catcher vessel than any other inshore processor in the previous year.

The current AFA rules for inshore cooperatives and the rules for each of the alternatives are described in Table 1.

Our analysis will use the tools of game theory, and more specifically of bargaining theory. Game theory is a powerful tool for the analysis of situations involving strategic interactions. However, it is important also to note its limitations. In particular, game theory can offer definitive predictions only if the "extensive form" of the game is well-defined (see, e.g., Fudenberg and Tirole 1991). The extensive form spells out all the rules of the game, all the possible moves by all the players, the information structure, and the timing and payoffs of each player for any possible scenario. Even a slight change in the extensive form of the game can lead to dramatic changes in the equilibrium outcome. Therefore, while our analysis should shed light on what *may* happen under various circumstances, it will not be able to offer definitive predictions about what *will* happen.

The first step in any game theoretical analysis is the identification of the participants, or players. In the inshore BSAI pollock fishery the major types of participants are the owners of independent catcher vessels (ICVs), processor-controlled catcher vessels (PCVs), and pollock processors. Because our analysis is restricted to the inshore BSAI pollock fishery, and does not include analysis of sideboard measures, we do not consider players from other fisheries.

Owners of ICVs are defined in the AFA as entities that own fewer than three vessels in the BSAI pollock fishery. However, for most analytical purposes it is more important to specify whether a vessel-owning entity is or is not a processor, rather than whether it owns more than two vessels. Therefore, unless specified otherwise, we will use the more inclusive definition that an ICV is any vessel owned by an entity other than an inshore processor. Similarly, unless specified otherwise, ICVs will be defined to include both those eligible in the inshore sector and those qualified in both the inshore and mothership sectors.

Processor-controlled catcher vessels are defined as vessels that are controlled by an inshore processor. The National Marine Fisheries Service (NMFS) has identified for us those vessels that are wholly or partially owned by processors. We recognize that ownership and control are two different things, but for purposes of data analysis we will necessarily have to use the NMFS list based on ownership as a proxy for the list of PCVs. This will probably result in overestimates of the numbers and aggregate catch shares of PCVs.

Consistent with the definition in the AFA, processors are defined in terms of facilities, rather than the entities owning them. The AFA eligible inshore processors, listed in descending order of deliveries to them in 1998, are Akutan, UniSea, Westward, Alyeska, Arctic Enterprise, Northern Victor, Sand Point, and Peter Pan. In addition, reference will sometimes be made to the entities owning the processing facilities. The three largest ownership entities are Trident Seafoods, which owns the Akutan, Arctic Enterprise, and Sand Point facilities, Maruha, which owns Westward and a majority interest in Alyeska, and Nippon Suisan, which owns UniSea.

There is heterogeneity among all three types of participants, with some being more efficient than others. Among both the ICVs and PCVs there are significant differences in catch histories, capacities, catching power, etc. Among processors there are plants of different ages, locations, product mix, etc.

The processing sector is concentrated, with the facilities currently belonging to Trident, Maruha, and Nippon Suisan processing over 90% of the pollock delivered in the inshore sector in 1998. In addition, Maruha and Nippon Suisan are Japanese firms with dominant positions in the Japanese surimi products market (NMFS 1999). In the harvesting sector, the vessels delivering to the Westward, Alyeska, and UniSea facilities have traditionally negotiated under the umbrella of the Bering Sea Marketing Association (BSMA), rather than as individuals. Therefore, we conclude that the perfectly competitive model, in which each participant takes price as given by the market, and does not pay attention to what others in the industry are doing, does not apply to this fishery. Rather, the participants are keenly aware of their mutual interdependence and therefore the relevant tools to use are taken from game theory. In particular, we will rely on insights developed by bargaining theory.

Bargaining theory deals with division of rent between game players. This is, in general, a complex issue, but there are some simple and key predictions that can be fruitfully applied. There is an axiomatic or cooperative bargaining theory developed by Nash (1953). The theory predicts that if all players are fully informed, they will negotiate an allocation that does not involve the waste of economic resources and that is biased towards the party with the better or stronger "outside option." The outside option, or "threat point,"

is defined as the outcome that a participant can obtain if negotiation breaks down. This theory does not spell out the exact game played by players that leads to the predicted outcome. There is also a non-cooperative theory of bargaining (e.g., Osborne and Rubinstein 1990) that pays detailed attention to the exact game form and tries to predict choices by players. This theory also predicts that economic resources will not be wasted and the outcome will be biased towards the player with the better outside option.

However, if there is asymmetric information between players, so that not all players have the same information available to them, then both cooperative and non-cooperative bargaining theory predicts some waste of economic resources. For example, if everyone knows the size of the rent to be divided, as well as each other's outside options, then no one can gain by prolonging negotiations. On the other hand, if outside options are only known privately by each party, a party may reject offers repeatedly in order to signal that it has a strong outside option and this is wasteful because delay is costly.

Delay is just one example of wasting economic resources; the key point is that resources have to be used to signal, which is a cost incurred due to asymmetric information. Since parties with private information have incentives to mislead those who do not have this information, only actions that are costly can credibly convey information. Everyone will want to claim the strongest outside option, so less informed parties will start with a low offer to force better informed parties to reveal their outside option by rejecting offers. The stronger the outside option, the more they are able and willing to wait. Private information will also bias the final outcome towards the better-informed players.

The presence of asymmetric information also implies that the economic efficiency of the outcome will be determined by the rules of the game. In other words, the choice of specific economic institutions can influence not only the distribution of the rent but also the total amount of rent that is created. This means that the AFA, and the final choice of rules governing the cooperatives, will influence the efficiency of the BSAI fishery as well as the distribution of its rents.

The first objective of our analysis is to examine if the implementation of inshore sector cooperatives for the BSAI pollock fishery under the AFA rules is expected in aggregate to have beneficial or adverse effects on independent vessel owners. We have been instructed that the benchmark to use in evaluating this issue is the AFA without provision for cooperatives. This corresponds to an open-access fishery in which the other provisions of the AFA would apply. This is different from what may be observed under the AFA in 1999, even though there are currently no cooperatives, because the anticipation of cooperatives beginning next year affects incentives this year. For example, given the AFA rules for qualification for a cooperative, deliveries this year affect cooperative membership next year, and this would be expected to affect the distribution of deliveries this year.

Currently, fishing occurs under conditions of a race. If the race for fish stops as a result of the creation of cooperatives, rents will be created whose division among the players is to be analyzed. Briefly, anticipated benefits in processing include improved product quality and product mix, ability to respond to changes in demand, higher recovery rates, and lower cost due to rationalization through the retirement of less efficient capacity. In the harvesting sector, benefits include the ability of vessels to wait for the best periods to harvest fish, search out optimally sized fish, enhance the scheduling of deliveries, and reduce costs by idling less efficient vessels.

While the AFA without cooperatives is the benchmark, it is generally not the outside option for the players. That is, if bargaining over the formation of a cooperative collapses, the result would be equivalent to the benchmark only if not a single cooperative could be formed with processors. Defining the outside

option is not an easy task. To illustrate, suppose for simplicity there were only two processors with qualified fleets. Each fleet is supposed to form a cooperative, with the ICVs individually or collectively negotiating terms with its processor. If this negotiation breaks down, an ICV's outside option is to go to open access for a year. The payoff from open access depends upon who else is in open access. If only a single ICV decided to go into open access, its AFA allocation based on its catch history would effectively give it a quota for that year. At the other extreme, if both cooperatives failed to form, all vessels would be in open access and fishing under conditions of a race.

Thus the payoff for an ICV is very different depending on the particular configuration of vessels in open access in a given year, and therefore its outside option depends upon what is happening in the entire industry. This makes our overall task difficult. The outcome of bargaining mainly depends upon the value of one's outside option, and this is difficult to determine in this case. We will devote a considerable amount of the analysis to trying to determine plausible scenarios under open access and evaluate their effects on the ICVs. This analysis will also shed light on the outside options for the processors.

As discussed above, the presence of asymmetric information is also an important determinant of the outcomes of bargaining. Because it is common for processors to own vessels, but not for ICVs to own processing capacity, it can be assumed that processors negotiate from an advantage with respect to asymmetric information. That is, processors can be expected to know more about the costs and other conditions of harvesting than ICVs know about the costs and other conditions of processing. Also, the ownership of catcher vessels by processors may imply that ICVs need processors more than the processors need ICVs. On the other hand, because ICVs can legally negotiate price jointly through marketing associations such as the BSMA, while the processors cannot, ICVs enjoy an advantage as well.

Our initial task is to compare plausible scenarios under the AFA provisions for cooperatives with the expected outcomes under the benchmark, which is defined as the AFA with no cooperatives, in order to explore potential adverse effects of the AFA cooperatives on ICVs. Section II evaluates plausible outcomes in the benchmark case, and Section III evaluates outcomes under the AFA cooperatives.

Section III also addresses our second task of investigating the effects on the outcomes of specific features of the AFA cooperative rules and economic characteristics of the fishery. Issues considered include the cost of open-access, the negotiating framework, the role of processor-controlled catcher vessels, the requirement that 80% of qualified catcher vessels join the cooperative, the 10% transfer of harvest rule, and the timeframe of the AFA. Section IV evaluates the expected effects on the participants in the fishery of the three proposed alternatives to AFA cooperatives. In both Sections III and IV our analysis attempts to determine situations that are particularly problematic, and to assist the identification of policy options to mitigate adverse effects.

Professor Steven T. Buccola of Oregon State University has served as a consultant to this project concerning the lessons to be learned from the experience of agricultural cooperatives. In addition to being a valuable resource for us, he is the author of the report on agricultural marketing and bargaining cooperatives in Appendix A.

We have benefitted greatly from discussions with participants in the inshore fishery and other interested parties. Appendix B lists the individuals with whom we have discussed our research, usually at length, and sometimes on more than one occasion. We are very grateful for their help, while retaining full responsibility for the analysis and conclusions contained in this paper.

II. Benchmark: The AFA without Cooperatives

In the, hypothetical, benchmark case of the AFA without provision for cooperatives, the race for fish would continue and therefore the potential benefits from rationalizing the fishery would not be obtained. However, the inshore sector would benefit from the AFA because of the increase in its share of TAC from 32.375% to 42.5%. For a given amount of TAC, this corresponds to an increase of almost one-third in the inshore sector's allowable catch. The NMFS has informed us that the total BSAI TAC is expected to be about one million metric tons for the next few years. Therefore, the increase in the inshore sector's allowable catch as a result of the AFA amounts to about 100,000 metric tons per year.

The benefits from the increase in allowable catch is partially offset by the requirement to repay a loan of $70 million through a tax of 0.6 cents per pound of fish harvested. This can be thought of as the cost at which the inshore sector acquired pollock quota from the offshore sector. With a TAC of one million metric tons, the inshore sector's allowable catch would be 425,000 metric tons. The tax per metric ton is $13.23, so the total annual amount paid would be $5.6 million. Dividing this by 100,000 metric tons yields an effective annual cost per ton of $56 per ton. We have been told that the rental prices for CDQs and offshore catcher vessel allocations suggest market values of $250-$300 per ton per year. If these reported values are even approximately comparable to values in the inshore sector, the benefit to the inshore sector of the increase in total allowable catch was much greater than the cost imposed in the form of the tax. The distribution of this net gain between individual participants in the fishery will depend on their relative bargaining power.

In the benchmark case, no restrictions would be placed on ICVs moving between processors. However, little actual movement would be expected compared to the situation at the beginning of the 1999 season, because the existing distribution of vessels among processors represents an equilibrium reached after a long term relationship between processors and catcher vessels. Consistent with the economic principle that opportunities for large gains will not be left unexploited, if catcher vessels could have made large gains by switching between processors, they would presumably already have done so.

This conclusion is strengthened by considering the available information on actual behavior in 1999. As noted earlier, the actual situation this year is different from the benchmark, because in the benchmark there is no expectation of cooperatives whereas in the actual situation this year the players expect cooperatives to be available beginning next year. Because the distribution of ICVs among processor cooperatives in the future will depend on deliveries this year, there is more incentive in the actual situation than in the benchmark for changes in fleet composition. However, the limited information available indicates that there has in fact been relatively little movement.

One reason that the distribution of vessels among processors has been quite stable historically is that processing capacity constraints under the race for fish have made it difficult for one processor to compete away a boat from another processor, even if it wanted to. In addition, there may be self-imposed constraints on the degree of competition among processors. Recognizing the effects of increasing capacity on each other and the race, oligopoly theory implies that processors will not expand capacity as much as in a fully competitive environment.

The processing sector is very concentrated, with the top three companies processing more than 90% of the total inshore harvest, and entry in the inshore sector is legally blocked by the AFA. The situation in the inshore fishery is a classic example of a repeated game. Processors should anticipate that aggressive tactics that give them short-term gains might not be profitable in the long run as each can

engage in such tactics. Therefore, the bidding for ICVs to switch processors might not be very aggressive. The processors would not have to be colluding, merely behaving non-myopically. They would just have to recognize that in the long run aggressive strategies would not be likely to pay. Their desire to behave this way would be enhanced by the restrictions that capacity constraints place on their available opportunities in the short run. The capacity constraints, in turn, would be more severe in the benchmark case than in the case of cooperatives.

Aggressive bidding over CVs may occur if a processor thinks it can eliminate a rival by bidding CVs away from it. Such a tactic will be profitable only if a processor believes it has significant advantage over a rival that it has targeted. There are at least two reasons why such tactics may not be pursued in the current AFA. The big three companies do not seem to have significant advantages over each other. One of them could target one of the smaller companies, but given their relative size, outright purchase should be the preferred tactic, rather than risk destabilizing the industry by aggressive bidding over CVs. The big three will also be concerned about "excessive market shares" and the temporal nature of AFA. Current expansion can backfire in the future if the Council perceives that any single entity has "over expanded". Therefore, we do not expect much aggressive bidding over ICVs

The ex-vessel price in the benchmark case would depend on the bargaining power of the processors and the catcher vessels, which would be essentially the same as in the pre-AFA fishery. It is not easy to determine with confidence the actual distribution of bargaining power. On the one hand, the processors have better information than the independent catcher vessels because they also own boats and know the costs structure of the harvesting sector. The independent catcher vessels have imperfect information about the cost structure of the processors. This gives a major advantage to the processors.

On the other hand, independent catcher vessels can legally bargain as one group. Currently, many of the ICVs are grouped, together with some PCVs, in the BSMA, which negotiates prices for them. Since the processors are not legally authorized to form a bargaining group, this situation gives an advantage to the ICVs. However, the effectiveness of a main instrument of negotiation for the BSMA, refusing to harvest fish (striking), is undermined by the behavior of processing facilities whose fleets do not negotiate through the BSMA. In particular, Trident's fleet includes a large proportion of PCVs, and Trident was able to convince its fleet to fish during the 1999 A-Season strike, making prolongation of the strike prohibitively costly to the members of the BSMA.

More importantly, the same factors that would be expected to reduce competition among processors for ICVs would be expected to affect the processors' bargaining power with respect to price. That is, given the race for fish, which would continue under the benchmark case, competition between processors is limited by their capacity. Processors can generally take substantially more fish from a particular ICV only if they waive fish from other catcher vessels, which severely limits the ability of the ICVs to play processors against each other. In addition, non-myopic behavior among processors would attenuate the aggressiveness with which they compete.

Some analysts have gone further to argue that the processing sector is effectively a monopsonist, with one important component of the argument being the dominant position of Maruha and Nippon Suisan in the main market for surimi products (e.g., Wilen 1998). If this view is correct, the rents in the fishery before AFA, as well as in the benchmark case, would essentially all accrue to the processors

Another view accepts the conclusion that the processing sector is monopsonistic, but concludes in addition that the BSMA represents a countervailing monopolistic harvesting sector, resulting in the fishery

being a bilateral monopoly (Matulich and Sever 1999). Unlike the pure monopsony case, the bilateral monopoly case does not lead directly to any specific conclusions concerning the relative distribution of rents in the benchmark case. Instead, it implies that the distribution of rents would be determined by the two sides' relative bargaining power.

For the reasons discussed in the introduction, we take a more modest view concerning our ability to determine the actual degrees of market and bargaining power. We do believe that the capacity constraints under a race for fish, as in the benchmark case, give the processors a substantial amount of bargaining power. In combination with non-myopic behavior by the processors in what is a repeated game, the result may be a non-cooperative equilibrium that gives them a result close to what they could have obtained in an equilibrium involving cooperation. In other words, in the benchmark case processors might be able to do almost as well as if they were in fact a monopsony.

We stress that we are not predicting that this would be the outcome in the benchmark case, only that it is one possibility. The amount of competition among processors could in fact fall anywhere along a continuum from very little to very much. In our discussion of the possible outcomes under the AFA cooperatives, as well as under cooperatives operating under alternative sets of rules, we will take as our base case the existence of moderate competition among processors. However, we will also indicate how our conclusions would be altered under other degrees of competition.

A final point to be made about the benchmark case is that it is of limited usefulness in evaluating the effects of the proposed AFA cooperatives on ICVs. The benchmark case is counterfactual in that it allows for the effects of the AFA on allowable catch but not on the race for fish. The, hypothetical, continuation of the race for fish implies both that none of the rationalization benefits of the AFA are obtained, nor that the processors' bargaining power due to capacity constraints is reduced. Therefore, if it were concluded that ICVs were no worse off under AFA co-operatives than under the benchmark, this would be consistent with a situation in which the ICVs got no share of the benefits to be created by the AFA inshore cooperatives.

III. AFA Cooperatives

The AFA allows for the formation of inshore catcher vessel cooperatives according to the rules summarized in Table 1. The membership in the cooperative for each processor is limited to the vessels that are qualified for that processor, where qualification is determined on the basis of the processor to which the vessel delivered the largest share of its total catch in the prior year. Vessels that are eligible to participate in the inshore sector and do not belong to a cooperative can fish under open access conditions for the share of the total inshore allocation not apportioned to the cooperatives.

A vessel fishing in the open-access inshore fishery will qualify for membership the following year in the cooperative, if any, associated with the processor to which it delivers the largest share of its fish. Under the AFA rules, it will not be possible for a vessel to leave one cooperative to join another without first spending a year in open-access to qualify for the new cooperative.

Thus open access is the outside option, or threat point, for an ICV qualified for a particular cooperative. Accordingly, it is a potentially crucial element of its bargaining power. Therefore, before examining other aspects of the AFA cooperative rules, we will first investigate the possible outcomes under open access. We will do this by considering several alternative open-access scenarios, including some that are unlikely to be equilibrium outcomes.

A. Open Access

Two issues relevant to each scenario, although not equally important in all, are the aggregate amount of fish available to catcher vessels (CVs) in open access relative to their aggregate catch histories, and the catch history of individual CVs relative to their catching power.

The aggregate amount of fish available under open access conditions will equal the share of the total inshore allocation not apportioned to the cooperatives. Therefore it will include the shares of the allowable catch assigned to each CV in open access on the basis of its catch history plus some additional amounts. One source of additional allowable catch in the open-access fishery is the share of non-eligible CVs. NMFS informs us that this would amount to about 2000 metric tons. In addition, there could be up to another 2000 metric tons from the shares of CVs that are eligible but do not participate or could be eligible but do not apply.

The AFA's estimated catch history shares for individual CVs are based on their best two years' history during the three years 1995 to 1997. In some cases, CVs' catch histories are not commensurate with their catching power. For example, a large CV (Alaska Command, ADFG# 57321) began operating in the BSAI inshore sector only in mid-1997 and therefore its catch history calculation is based on one partial year's catch. The following year its share of the total catch was more than six times as large as its catch history share. Therefore this vessel is under-vested, in the sense that its relative allocation of catch under the AFA is substantially less than its relative catching power. For under-vested CVs, the quantity of fish that could be caught in open access would exceed the quantity that it would bring into a cooperative's allocation.

The first scenario we consider is the extreme case in which every eligible CV is in open access. This is unlikely to be an equilibrium outcome, but is one possible outcome for next year if all cooperative negotiations broke down. The situation would be similar to the 1999 conditions. All CVs would be free to choose their processors, subject to the processor's willingness to accept their deliveries and subject to

existing delivery contracts. Strategic movement between processors might take place, to the extent that they had not already occurred in 1999. Most CVs would be expected to harvest an amount of fish similar to their catch history. The additional amounts of allowable catch available in open access would be too small to have any significant positive effect at the aggregate level. The adverse effects on fully-vested CVs of having under-vested CVs harvest more than their catch histories would be more substantial in aggregate, but the effect on any one CV would not be large with all CVs in open access. The ex-vessel price would most likely be determined by a process similar to that in 1999.

In short, except for the possibility of strategic movements between processors because of the prospect that cooperatives might be formed in the subsequent year, the situation would be very similar to the benchmark case. ICVs would essentially be no better or worse off in aggregate than in the benchmark. The inshore sector as a whole would benefit from the larger allocation of TAC than in the pre-AFA fishery, but would fail to realize the potential benefits from rationalization under the AFA.

Consider now the opposite extreme, with every eligible CV in a cooperative. In this case, if one, and only one, fully-vested CV went into open access it would do very well. It would bring its own catch history with it, and in addition have access to the additional amounts that were not apportioned to the cooperatives. Because it would be the only CV there would be no race. It would be as if this one CV had been granted an individual vessel quota (IVQ) for the year in an amount some 4000 metric tons greater than its catch history. Furthermore, because it would be the only source of incremental fish to the processors, it could probably negotiate a higher price for its fish than it would receive as a member of a cooperative. Not only would there be no cost to having to go through open access to change cooperatives, open access would be so desirable there would be no incentive to join a cooperative.

Of course, the very fact that this situation would be so attractive implies that it would not be an equilibrium solution, because other CVs would enter open access. Therefore we next consider intermediate scenarios in which some CVs are in cooperatives while others are in open access.

If all CVs in open access were fully-vested, they would generally be able to harvest amounts of fish similar to their catch histories because they would be in a race only against others whose catch histories were commensurate with their catching power. However, they would not benefit from the rationalization gains possible from avoiding having to race. Their relative position with respect to ex-vessel price is unclear. Their ability to supply fish when most valued by the processors would be constrained by the need to race, but they might benefit from being the incremental suppliers.

However, an open access fishery comprising only fully-vested CVs is unlikely to be an equilibrium solution, because under-vested CVs would find entry to be attractive in order to exploit the catch history of the fully vested CVs. The magnitude of the adverse effects on individual fully-vested CVs would increase with the ratio of under-vested CVs to fully-vested CVs in open access. If this ratio were high, the cost to a fully-vested CV of switching processors by going through open-access could be very high.

Now, suppose that the CVs in open access were all qualified for the same processor. This would be the case if all other CVs joined the cooperatives for which they were qualified, but the cooperative for the one processor in question failed to form because of a breakdown of negotiations. If one or more of the CVs that were qualified for that processor were substantially under-vested, the other CVs qualified for that processor could find the open-access situation to be very costly. In fact, the cost could be great enough for them to be willing to make large concessions so that the cooperative could form and they could avoid being forced into open access. Similarly, if all cooperatives were formed, with almost all CVs in them, an

individual ICV might find it tempting to switch to another processor by going through open access. But if its current processor controlled one or more substantially under-vested CVs, it could threaten to send them into open access as well in order to make open-access prohibitively costly to the would be switcher.

We know of one study that estimated the cost of open access for a particular ICV whose owner feared that he might find himself in a situation similar to this scenario. The results indicated that the cost would in fact be prohibitive, with the ICV able to harvest only about one-half of its catch history. We do not rely on these specific results in our analysis, because some of the assumptions used in the study now appear incorrect. For example, current estimates of the amount of extra catch history in open access are much smaller than assumed in the study. However, the study does illustrate the possibility of obtaining quantitative estimates of the costs of open access under specified scenarios, and further research of this type would be worthwhile.

A difficult question to answer is which equilibrium is most likely. There are two principal candidates. Either a large number of CVs are in open access so that under-vested CVs cannot hurt the fully-vested CVs too much, or only under-vested CVs are in open access. The first case seems unlikely. Indeed, if the co-ops are designed effectively, fully-vested CVs should find it profitable to join them. The second case is more likely, but it is still difficult to determine how many under-vested CVs would be in open access. In theory, their number should be such that the last CV to join should be indifferent between joining a cooperative or staying in open access. We conclude that the most likely open access would consist of under-vested CVs, and in such an equilibrium a fully-vested CV spending a year in open access in order to change processors could incur a severe penalty in terms of not being able to catch an amount of fish similar to its catch history.

While investigation of these various open-access scenarios has been necessarily speculative, it does indicate that an ICV could get seriously hurt in an open-access year. This is a crucial consideration in evaluating the bargaining power of an ICV inside an AFA cooperative, because the open-access year represents its threat point. In other words, if an independent CV can get hurt in open-access, it can also get hurt in a cooperative.

B. Negotiations

Implementation of cooperatives under the AFA will require, for each processing facility, negotiation among the qualified CVs over the formation of a cooperative, an agreement with the processor to process the cooperative's pollock, and a mechanism for negotiating ex-vessel prices.

Formation of a cooperative requires the approval of 80% of the qualified CVs ("the 80% rule"). The potential members of a cooperative would have to agree concerning both the governance structure of the cooperative, as contained in its bylaws, and its operational procedures, as contained in a membership agreement. We will not discuss governance issues, other than to note that the choice of rules concerning voting is an important issue. Professor Buccola's report, Appendix A, discusses the choice of voting rules in agricultural cooperatives.

Issues to be negotiated concerning the membership agreement include the initial distribution of the cooperative's pollock harvest allocation among individual members, rules for subsequent transfers of pollock harvest allocation among members, allocations and rules concerning other species, monitoring and enforcement procedures, and, most importantly, the duration of the cooperative and rules governing the withdrawal of individual members.

The membership agreement will have to meet NMFS requirements for monitoring and other provisions related to satisfaction of regulations concerning sideboards, PSC, etc. In order to avoid contention, and to satisfy the AFA's requirements with respect to "same terms and conditions," the initial distribution of the cooperative's annual pollock allocation among individual members is expected to be proportional to their annual catch histories, with the catch histories being determined according to NMFS regulations. However, it is not clear whether the intra-year distribution of allocation, e.g., between A-Season and B-Season, would be proportional to the intra-year distribution of each member's catch history, or have the same percentages apply for all members. The latter approach would be simpler, but would involve a reallocation of the value of catch history among members to the extent that they had harvested differing proportions of their catch histories in different seasons.

Implementation of a cooperative would make possible the redistribution of pollock harvest allocations among its members. We expect that a cooperative's membership agreement will allow its members to transfer harvest allocations among themselves as they wish, subject to operational requirements for the processors, which could influence the transfers made. The resulting rationalization in the harvesting sector, with harvest allocations moving from less efficient to more efficient vessels within a cooperative, is a major economic benefit of the cooperative structure. Further rationalization benefits could be obtained if harvest allocations could be transferred between cooperatives, as well as within them. However, under the AFA rules this would be difficult once the cooperatives are implemented, because it would require that the vessel holding the allocation to be transferred go through open access in order to qualify for the new cooperative.

The duration of a cooperative under the AFA could be a specified amount of time, from one to five years, with five years being the remaining duration of the AFA, or it could be for an indefinite period, remaining valid until terminated by its members or by an event such as the termination of specific portions of the AFA. There are significant potential advantages to both processors and CVs from having the planned duration of a cooperative be substantially more than one year in length. Moreover, the expectation of a multiple-year duration for a cooperative is consistent with our understanding of on-going negotiations in the inshore pollock fishery.

However, multiple-year cooperative agreements could be difficult in the case of AFA. A crucial feature of AFA cooperatives is that they are tightly linked to a single processor. It is true that the membership agreement is a contract between the members of the cooperative, and the processor is not formally a party to the negotiations. However, because the processor must agree to process the cooperative's pollock in order for the cooperative to be formed, it will presumably be consulted to ensure that the terms and conditions of the agreement, such as its duration, are acceptable. The agreement to process is therefore closely related to the membership agreement and will contain clauses concerning issues such as quality and adherence to harvesting schedules. Moreover, if PCVs are allowed to be part of the cooperatives, as we have been instructed to assume, processors could influence the membership agreements directly, with the potential influence increasing with the relative importance of PCVs in the qualified fleet.

This close dependence of the cooperative and the processor makes it difficult to sustain a multiple-year cooperative agreement. From the point of view of an ICV, a multiple-year cooperative agreement would be unsuitable without a corresponding multiple-year price agreement. Joining an AFA cooperative would commit its fish to a single processor (we ignore for the moment the 10% rule), and without a corresponding agreement on the price to be received, it could be placing itself in a difficult bargaining position by signing the cooperative contract. Similarly, a processor would be reluctant to commit to a long-

term purchasing agreement without a corresponding agreement on price, because doing so might make it vulnerable to supply disruptions. Other things equal, a processor's vulnerability to supply disruptions would be greater the smaller the role of PCVs in its cooperative.

Unfortunately, the large variability in production and demand conditions appear to make long-term fixed price agreements impracticable, and our interviews with participants in the fishery indicate that this is the general consensus among them as well. Several participants have expressed the view that some form of profit or revenue sharing mechanism might make longer-term price agreements possible, but others have expressed serious reservations as to their practicability. As discussed in Appendix A, most agricultural bargaining associations negotiate prices for a single harvest season, including many that had previously experimented with price formulas but found them to be impracticable. As in the case of agricultural cooperatives, the two main reasons that profit or revenue sharing formulas are likely to be impracticable in AFA cooperatives are the asymmetric information between the processors and the ICVs regarding the processors' costs, and the possible use of "creative accounting" by the processors. This second problem can be particularly serious when a processor is vertically integrated with the downstream market, as some pollock processors are.

One possible approach to mitigating the problems from having cooperative agreements that are longer term than price agreements is to allow for members to withdraw from the cooperative agreement. We expect that the cooperative agreements will include withdrawal clauses, but that members will not be able to withdraw more frequently than annually. If a cooperative member could withdraw annually without any penalty, the multiple-year cooperative contract would not be much more than an annual contract. But it is conceivable that restrictive conditions could be imposed on a CV contemplating withdrawal, making it too costly. Also, under the AFA, withdrawal to transfer to a different cooperative would involve the cost of going through open access.

If such costs did not exist, withdrawal might occur easily, but then a different problem might arise that requires legal clarification. If withdrawals resulted in less than 80% of a processor's qualified CVs remaining in its cooperative, would the cooperative continue to legally exist? This is an important issue. If it turns out that a cooperative continues to legally exist even if more than 20% of qualified vessels leave after the first year, the ICVs would lose a considerable amount of market power after that first year.

If the membership agreement allowed for withdrawal on an annual basis, and if the deadline for withdrawal were later than the date at which the results of the price negotiation were known, then a CV might go into open access in the coming year in order to qualify for a different processor in the following year. As discussed in the previous section, the costs of being in open access for a year can be expected to be substantial for a fully-vested CV. Therefore the feasibility of this approach will depend on how much better an ICV could do by switching processors, which in turn depends on how aggressively processors are willing to bid for ICVs. Given the existence of excess capacity with the ending of the race for fish, we expect processors to behave more competitively than in the benchmark case, but long-term considerations in what is a repeated game might still restrain them from competing very aggressively for market share.

If withdrawing from a cooperative were not a practical option for ICVs that were unhappy about the results of a price negotiation, the possible actions available to them may not be effective in improving their position. One possibility would be to go on strike. However, if the processor obtains a large share of its deliveries from its own PCVs, it could keep them fishing and simply reschedule deliveries from the striking ICVs until later in the season, so that the striking vessels would incur costs beginning immediately but the processor would not.

Another possibility for the owner of an ICV who found himself involved in a long-term supply commitment with unfavorable ex-vessel prices would be to sell the vessel and its associated harvest allocation. But, unless the vessel went through an open-access year, it would have to remain with the cooperative for which it was already qualified. Since the annual value of a unit of harvest allocation to an ICV in a cooperative is the ex-vessel price net of catching cost, an unfavorable ex-vessel price would imply an unfavorable price for the vessel's harvest allocation. Therefore only a processor might find it profitable to buy such a vessel. An additional benefit to a processor of buying a vessel is that doing so would increase the potential influence of PCVs relative to ICVs in the cooperative.

C. Processor-controlled Catcher Vessels

Two measures of PCV participation in a cooperative are potentially relevant: the percentage of the cooperative's total number of vessels that are PCVs, and the percentage of the cooperative's total deliveries that are accounted for by PCVs. The first measure is relevant to any issues involving voting for which the voting rule assigns one vote to each vessel, as is implicitly the case in the 80% rule, and would also be the case for electoral decisions in a cooperative choosing a one-vessel, one-vote rule. The second measure is relevant to issues such as the effectiveness of strikes, because it indicates the extent to which a processor would have to rely on ICVs for its supplies of fish, and would also be relevant for electoral decisions in a cooperative that based its allocation of votes on relative harvest allocations.

Because the participation of PCVs in cooperatives is important in these and other contexts, we have used 1998 data to try to obtain estimates of what the AFA cooperatives might look like. First we determined which processor each CV would qualify for, if the qualification were to be based on 1998 data. Of course, the actual membership of each cooperative will be based on 1999, not 1998, deliveries, and we are aware of some specific instances in which the processor for which a CV is qualified is different from that implied by the 1998 data. However, without complete data for 1999, the 1998 data provide the most recent, internally consistent, data on this issue.

We then assigned the NMFS allocation share for each CV to the processor for which it would be qualified, in order to determine the share of total assigned allocations for which the, hypothetical, cooperative for each processor would account. The results are shown in the first two columns of Table 3 for both individual facilities ranked in descending order of share, and for the cumulative shares of these facilities. The largest six cooperatives would account for 98.2% of the total assigned allocations. The bottom half of the table aggregates the data to the level of companies, with the cooperatives owned by the four largest companies accounting for 98.6% of the total assigned allocations. Note that the figures shown here are shares of assigned allocation, and therefore differ somewhat from the shares of actual 1998 deliveries that are reported in Section I.

We attempted to identify PCVs by assuming they corresponded to the processor-owned vessels identified by NMFS. As noted in the introduction, we recognize that some vessels identified as involving processor ownership may not be controlled by processors. Although it is also possible that some CVs that are not identified as processor-owned are in fact processor-controlled, we believe that the net effect of using processor ownership as a proxy for processor control is to over-estimate the numbers and aggregate catch shares of PCVs. Also, given the use of proxy data, comparisons across processors may not accurately reflect the relative importance of PCVs to them.

Keeping these caveats in mind, the final two columns of the table show, respectively, PCVs as a percent of each hypothetical cooperative's total catcher vessels, and their share of each cooperative's total

allocation. The data indicate that, except for one company, PCVs would account for a large share both of the total membership of the cooperative and of the total deliveries to the processor. The results with respect to companies are similar. So most processors appear to be in a very good bargaining position, with the one notable exception. Only one cooperative could be formed with PCVs alone.

The bottom line of Table 3 shows the shares of PCVs aggregated to the total industry level. The share of PCVs in the total inshore fleet is of interest because it indicates the extent to which processors would be the direct beneficiaries of rationalization in harvesting. Also, because processors would reallocate harvest allocations among their CVs under conditions of full information, the results would be expected to be fully efficient, whereas ICVs would reallocate harvest allocations under conditions of asymmetric information and therefore full efficiency would not be reached (Myerson and Satterthwaite 1983).

The share of PCVs in the total assigned allocations is of interest in evaluating the aggregate welfare effects of policies affecting the distribution of net benefits between processors and catcher vessels. Other things equal, the greater the share of PCVs in total deliveries, the smaller is the effect on processors' total profits of a redistribution of benefits in favor of catcher vessels.

D. The 80% Rule

The AFA requires that a contract implementing an inshore cooperative must be signed by the owners of 80% or more of the vessels qualified for that processor. This is equivalent to requiring a vote on whether a cooperative should be implemented, with at least 80% of the votes in favor being required for passage. The implications of this rule can be analyzed using the theory of the optimal majority (Buchanan and Tullock 1962).

Increasing the percent of votes required for approval of an issue has both benefits and costs to those potentially affected by the outcome. The main benefit is that as the percent is increased, the probability of any one type of participant being affected by an adverse outcome is reduced. In the extreme, requiring 100% approval, i.e., a unanimity voting rule, would eliminate the possibility of any voter being adversely affected, because anyone who would be hurt by passage could block it with a negative vote. In effect, a unanimity rule gives each individual voter veto power over the issue in question. As the required percent approval decreases below 100%, the percent of individuals who would have to vote negatively to block passage increases. This increases the probability of some participants being hurt by adverse outcomes, as well as the number of individuals who might be on the losing side.

The cost of increasing the percent of votes required for approval of an issue is that it increases the costs of reaching agreement. Under a unanimity rule, negotiations would have to occur until every individual voter agreed to a proposal. This would not only be time consuming, but would also involve strategic behavior by individuals as they sought to take advantage of the leverage that their veto power gave them. In fact, the difficulty of reaching agreement might be so great that no proposals could pass. As the percent approval required decreases, the costs of reaching agreement decrease, and the probability of passing proposals increases.

Because participants will differ with respect to their potential gains or loses from various types of issues, they will also differ with respect to the optimal choice of voting rule. In considering the AFA provisions for cooperatives, it is not possible to determine in general how changing the 80% required

approval to a higher or lower percent would affect the participants. However, the following observations should be noted.

First, there is a clear and important difference in one aspect of the benefits and costs to processors and ICVs. As the percent approval increases, the costs of reaching agreement increase for both processors and ICVs. However, the benefits in terms of reducing the probability of adverse decisions increase only for ICVs, because the processor already has veto power by the requirement that it agree to process the cooperative's fish.

On the other hand, differences between processors and ICVs in the rate at which costs increase with the required percent approval could more than offset the difference in benefits. For example, if the number of catcher vessels qualified for a processor were relatively small, and included one or more substantially under-vested PCVs, the costs to the processor of not being able to reach agreement could be much less than the cost to the qualified ICVs. The reason for this is that if agreement were not reached, all the CVs qualified for this processor would have to go into open access. As discussed in Section 3A, this open access scenario could be very costly for the ICVs that would have to compete against the under-vested PCVs.

It should be noted that the 80% rule allocates one vote to each CV. If a different allocation of votes had been used, the relative influence of different types of participants would have been affected. For example, one alternative would have been to base the allocation of votes on the quantity of catch history that a CV would bring into a cooperative. The data in Table 3 indicate that processors' vessels generally account for a larger percentage of catch history than of the number of vessels, implying that basing the allocation of votes on catch history would have increased the fraction of votes held by PCVs. Another effect of allocating votes on the basis of catch history would have been to reduce the fraction of votes held by small CVs.

E. The 10% rule

The AFA permits a cooperative to transfer up to 10% of its total pollock harvest to a different processor than the one for which it is qualified. The possibility of increasing the permitted transfer to more than 10% is one of the alternatives to the AFA rules that we consider later in this report. In this section, we consider some issues related to the rule as currently written.

If decisions on such transfers are entirely up to the cooperatives, without being subject to hindrance by their primary processors, then this rule will increase cooperative's bargaining power relative to a situation in which they had to deliver all of their harvest to the processor for which they were qualified. In addition, any such transfers that took place should increase the degree of rationalization in processing under the AFA, because the willingness to pay for fish would reflect the economic value of the fish to the bidder.

However, the ability of a cooperative to make transfers that are against the interests of its primary processor can not be taken for granted. For example, if the transfer could be made subject only to the approval of the processor's official in charge of scheduling deliveries, then the processor might be able to reduce or eliminate the advantage to the cooperative from making the transfer. Similarly, PCVs will presumably be allowed to vote on issues such as whether or not to transfer harvest (though not on the price at which it would be transferred) and could cast their votes in favor of the processor's interests, rather than the cooperative's.

The 10% rule could be of direct benefit to processing companies that own more than one processing facility, because it could make it possible to fine tune the allocation of deliveries between its own plants to reflect their relative efficiencies. This would again facilitate rationalization of processing under the AFA, but potentially not as much as transfers between processing firms. However, if cooperatives were effectively limited to transfers within processing companies they would receive relatively little benefit from the 10% rule.

While the AFA places specific limitations on the amount of transfers that could be initiated by a cooperative, it does not appear to place any limitations on the amount of a cooperative's harvest that could be transferred by a processor. In discussions with participants, we have heard the view expressed that such transfers would be essentially unlimited. If this is correct, a processor could have its cooperative deliver part or all of its harvest to one or more other processors, while retaining the benefit of any difference between the price it had to pay its cooperative and the amount that other processors would be willing to pay. Such transfers of harvest might result in substantially more rationalization of processing capacity than could otherwise be attained under the AFA, but the increased transparency of the resulting transfers of rents could also be a source of friction between processors and cooperatives.

F. Timeframe

Rationalization in both the harvesting and processing sectors would benefit from a long timeframe for planning decisions. The AFA is scheduled to expire at the end of 2004. As players anticipate an end, a change, or a straight renewal of the AFA at the end of this period, their behavior will be affected. In other words, players will not behave as if the AFA had no end in sight. For instance, a player might not exploit all its market or bargaining power for fear of changes after 2004. This means that few long-term lessons can be learned from the experience of the first years of the AFA.

Also, less rationalization might take place if CVs and processors anticipate that the scheduled end of the AFA will imply a return to the race for fish. In this case, participants would want to retain more capacity than would otherwise be optimal.

Catcher vessels and processors might also decide to retain excess capacity for another reason. When bargaining for the cooperative and the price contracts, catcher vessels and processors know that in case an agreement is not reached by the deadline, they will be thrown back into a race for fish in the open-access part of the fishery. In that case, keeping excess capacity will make open-access more attractive and therefore improve the bargaining power in the cooperative and price negotiations.

IV. Alternatives to AFA Cooperatives

A. The Dooley-Hall Proposal

The Dooley-Hall proposal would modify or eliminate several of the AFA rules for inshore cooperatives. A list of the proposed changes is shown in Table 2. The most important proposed change is to eliminate the "qualification" requirements. A cooperative could deliver to any processor, and any eligible catcher vessel could join any cooperative. Elimination of the qualification requirements makes the 80% rule inoperable, and it is replaced by a rule requiring that the cooperative contract be signed by the owners of five or more catcher vessels.

Except for the requirement that CVs have to belong to a cooperative in order to obtain the advantages of pollock harvest allocations, the Dooley-Hall proposal would be equivalent to an individual fishing quota (IFQ) program. The cooperative requirement has some important practical implications for the management of the fishery, for example, with respect to monitoring and enforcement issues. However, for the purpose of evaluating the principal effects of the Dooley-Hall alternative on the different types of participants in the fishery, we can treat the proposal as if it were an IFQ program.

Therefore the evaluation of the Dooley-Hall proposal can be based on the considerable amount of theoretical and empirical information available on fishery management programs involving IFQs (see, e.g., National Research Council 1999). One basic finding is that IFQ programs score highly on efficiency grounds, allowing the creation of rents and facilitating rationalization in both the harvesting and processing sectors. However, rationalization generally involves losers as well as winners, and IFQ programs have been controversial with respect to their distributional effects.

We have been repeatedly informed by participants that the AFA rules for cooperatives were designed to avoid adverse effects of rationalization on processors. In addition, there is an apparent consensus that processors would be worse off, and ICVs better off, under the Dooley-Hall proposal than under the AFA cooperatives. However, there is sharp disagreement concerning the magnitude of the distributional effects. We have had representatives of processors tell us that both sides would gain under the AFA rules, whereas the processors would lose disastrously under the Dooley-Hall proposal, while representatives of ICVs have said that both sides would gain under the Dooley-Hall proposal, whereas ICVs would lose disastrously under the AFA rules.

We have heard coherent arguments in favor of both of these extreme positions. Our goal in this section is to analyze the economic determinants of different possible outcomes, and to evaluate the extent to which they are likely to be present in the inshore pollock fishery. In carrying out the analysis, we will assume for simplicity that the same total amount of wealth would be available for division under the AFA and Dooley-Hall rules. Thus we will ignore for the moment the probability that the efficiency gains under the Dooley-Hall proposal would be greater than under the AFA rules.

The basic change that the AFA made in the economic circumstances of the fishery is that catcher vessels will have a claim on the available harvest allocation based on their catch history. Historically, the lack of such a claim has been the primary incentive for the race to fish, and therefore the AFA is expected to decrease the daily rate of harvest and thereby extend harvesting periods. This in turn will create extra capacity in both the harvesting and processing sectors. The extent of excess capacity may be an important determinant of the degree of competitive behavior among processors. Other things equal, greater excess capacity will encourage more competition for fish.

Therefore the extent to which the AFA creates excess capacity will be another important factor in determining outcomes under the Dooley-Hall proposal. Although the AFA has eliminated the classic incentive for a race for fish, it appears that some incentives for a race to fish will remain. For example, we have been informed that the limited time period during which high quality roe is available during the A-Season, and increasing restrictions on fishing in the B-Season, will limit the reduction in the race for fish. These offsetting factors make it difficult to assess the extent of excess capacity that will be created.

Our discussions with participants yielded widely varying responses, with representatives of processors predicting much more excess capacity than representatives of ICVs. The NMFS gave us an intermediate response, informing us that there is sufficient excess capacity that the inshore TAC could be used fully even if three or four of the smaller processing facilities did not process BSAI pollock. Not having sufficient technical knowledge of the industry to form an independent opinion, we will rely on the NMFS estimate. Based on 1998 data on pollock deliveries, the three smallest processing facilities together processed about 10% of the total deliveries, while the four smallest together processed about 20%. Therefore we can assume that excess capacity is in the range of 10-20%.

The degree of competitive behavior among processors would be a critical factor in determining outcomes under the Dooley-Hall proposal. As discussed in Section II, the processing sector is very concentrated, and the situation in the inshore fishery is a classic example of a repeated game. Processors should anticipate that aggressive tactics that give them short-term gains might not be profitable in the long run as each can engage in such tactics. If the processors have similar costs, they could simply be satisfied with the status quo, and be able to retain rent by keeping their processing share constant. This would be accomplished not as a result of collusion but as a result of an optimal long-term equilibrium strategy of a non-cooperative game.

It is very doubtful that the above degree of excess capacity would blind processors to the long-run advantages to be gained from restraining their competitive instincts. Therefore, we would not expect the situation to deteriorate, from the processors' point of view, into the equivalent of a perfectly competitive market. Nevertheless, the competitive market outcome is not a logical impossibility, and therefore the outcomes under perfect competition should be examined.

This case has previously been considered by Matulich, Mittelhammer, and Reberte (1996) in the context of a race for fish that is ended by the introduction of IFQs. Their paper concludes that if processing capital is non-malleable, the ex-vessel price of fish will increase to the point where it is equal to the difference between final product price and short-run variable processing cost. Processors will leave the industry until excess capacity no longer exists. During the transitional period, catcher vessels not only gain all the rents from the fish, but also the quasi-rents from the processors' capital. Once a new equilibrium is established, the remaining processors earn a normal rate of return on capital.

However, this theoretical analysis cannot be applied straightforwardly to the BSAI pollock fishery. Even under the unlikely assumption that processors in such a highly concentrated fishery would not be able to do better than the perfectly competitive market outcomes, the results of this paper would exaggerate the negative effects on pollock processors of an IFQ, or Dooley-Hall, program. First, the model assumes that processors receive no IFQs. However, in the pollock fishery, processors own catcher vessels, which are being given harvest allocations on the same terms as the ICVs. To the extent that processors would be paying the higher prices for fish to their own vessels, except for higher crewshare payments the result would be merely an internal transfer, not an economic loss. Second, the model assumes that processing capital is homogeneous, so that excess aggregate capacity implies that all types of capital are in excess

supply. However, pollock processors produce two main types of primary product, surimi and fillets. Under current market conditions, fillet capital would not be in excess supply even if total excess capacity was substantially larger than assumed by NMFS. Therefore, fillet capital would continue to earn quasi-rents. The model's assumptions that processors could not earn informational rents, and that pollock processing capital has no alternative uses, are also too pessimistic.

Nevertheless, it is clear that if processors were unable to restrain themselves from cutthroat competition, the Dooley-Hall proposal could result in adverse results for them relative to the benchmark case. Therefore, in order to protect processors from the effects of such an adverse scenario, consideration might be given to putting some constraints on processor behavior. One possibility would be to impose restrictions on increases in the share of total deliveries processed by each facility, or firm. For example, a processor might be restricted from increasing its share more than X% from that in a base year, or alternatively, by more than Y% from that in the previous year. Such restrictions would impede the extent of rationalization in the processing sector, but not necessarily relative to that under the AFA cooperative rules.

B. Increase in the Transfer Limit

Under the AFA rules, a cooperative contract may provide for up to 10% of the cooperative's pollock harvest to be processed by a different processor than the one for which it is qualified. One of the proposed alternatives that we have been asked to evaluate would increase the 10% to a larger, unspecified, figure, while retaining the remainder of the AFA rules unchanged.

As discussed in section III.E, the ability of a cooperative to benefit from a transfer rule depends on the extent that it could implement transfers if they were against the interests of its principal processor. If a processor can impede transfers through its role in the scheduling of deliveries, or through its influence over PCVs, the existing transfer rule would not be very effective in increasing a cooperative's bargaining power. Accordingly, increasing the limit on the percent that could be transferred would not be a significant improvement in the AFA rules from an ICV's perspective, although it might facilitate rationalization in processing. However, if the regulations implementing the AFA ensure that cooperatives are able to exercise the transfer option without hindrance from their processors, then the transfer rule does enhance the bargaining power of cooperatives, and increasing the limit could be of significant benefit to them.

Under the AFA rules, each processor is guaranteed at least 90% of its cooperative's deliveries. Therefore, the potential adverse consequences to them of aggressive competition over the transferable amounts would be much less then if their total supplies were potentially at stake. In addition, the amount subject to transfer is equivalent to an incremental supply of fish, the value of which to a processor is equal to the value of processed fish minus the variable cost of production. Therefore, processors would be expected to be willing to pay more for incremental supplies than for their base supplies, and this expectation is consistent with experience in the market for CDQs.

The data available to us are not adequate to estimate the value of incremental fish to inshore processors under the AFA, and therefore we will use a hypothetical example to illustrate the analysis. Suppose that the ex-vessel price under the AFA rules would be P dollars if there were no provision for a cooperative to transfer part of its harvest, and that the value to a processor of incremental supply were constant over the relevant range at 2.5P dollars. Then the provision allowing a cooperative to transfer 10% of its deliveries could increase its average ex-vessel price by up to 15% ($.9\times P + .1\times 2.5P$) over what they would be without such a provision.

Similarly, under these illustrative conditions, each percentage point by which the transfer limit were raised could result in an increase in average revenue of up to 1.5%. However, the actual benefit would be less than this if the processors did not compete away the full net benefit to them of incremental supplies. Also, as the percent allowed to be transferred increases, the characterization of these amounts as incremental supplies would become less appropriate.

We emphasize that the numbers used in this example are purely hypothetical. We recommend that the Council conduct further research on the magnitude of the principal determinants of the value of incremental supply.

C. Eliminate the Qualification Requirement for Cooperative Membership

Under the AFA rules, a cooperative contract must allow owners of other qualified catcher vessels to enter the cooperative, after the contract is filed but before fishing for the year begins, under the same terms and conditions as the qualified vessel owners who entered the contract when it was filed. One of the proposed alternatives that we have been asked to evaluate would eliminate the qualification requirement for vessels entering a contract after it is filed, while retaining the remainder of the AFA rules unchanged.

The intention of this proposed change in the AFA rules was to allow CVs to change processors without going through an open-access year. Because the open-access requirement is potentially very costly to a catcher vessel, eliminating it would help ICVs by increasing their bargaining power. However, there is considerable ambiguity about the interpretation of the proposed rule change, and about its compatibility with other aspects of the AFA rules.

The original rule made it mandatory for cooperatives to allow qualified CVs to enter under the same terms and conditions as the original members. The same wording is carried over into the new rule, but now the class of CVs that would have to be allowed to enter is broadened to include all eligible CVs, not just qualified CVs. Therefore, it would be possible that a cooperative could suddenly be faced with a large influx of new members. This could create serious difficulties for both the cooperative and its processor. For example, the optimal set of terms and condition for a cooperative may be affected by the composition of the membership, and logistical problems could be created for processors from large changes in cooperative membership. Therefore, some industry participants have suggested that the rule should be made permissive, rather than mandatory. That is, an eligible CV would not have to be qualified for a processor in order to join its cooperative, but would require the permission of the cooperative's current members. One possible middle course would be to make the rule mandatory with respect to qualified CVs, as currently drafted, but permissive for eligible but not qualified CVs.

Because the other AFA rules would be retained unchanged, the implementation of a contract would still require that it be signed by the owners of 80% of the catcher vessels that qualified for a processor by delivering the largest share of their catch to it. However, under the proposed new rule, between the date the contract was filed, expected to be December 1, and the end of the year, non-signers could join either the cooperative for which they were qualified, or any other cooperative. This could make it more difficult to implement cooperatives, because ICVs would have an incentive to not commit themselves to a cooperative by the filing date, in order to keep open the possibility of finding a more attractive cooperative to join. Therefore, if the proposed rule were adopted, consideration should be given to reducing the percentage required for approval below 80%.

The most important ambiguity concerning the interpretation of the proposed new rule is whether it would apply only when a new cooperative agreement is signed, or every year. This is a crucial distinction, because cooperatives are expected to have multiple-year durations. If the rule change applied only at the beginning of a cooperative contract, CVs would still have to go through open-access to change processors during most years. Furthermore, the duration of a cooperative agreement might be defined as the effective life of the AFA, in which case the proposed rule change would be moot.

In evaluating the effects of this alternative, we will assume that it is meant to apply in every year, and also that cooperative agreements will have annual withdrawal clauses. Therefore if this alternative were adopted, a CV could change processors in any year without going through open-access. As discussed in Section III.A, the potential cost of having to go through open access is a crucial consideration in considering the bargaining power of a CV within an AFA cooperative. By eliminating these costs, this proposed alternative would greatly improve the position of ICVs under the AFA.

Two principal objections to this proposed rule change have been expressed to us by representatives of inshore processors. The first objection rests on two assertions. One, annual withdrawal clauses, together with the elimination of the open-access requirement, would mean that cooperative agreements would effectively be annual contracts, regardless of their legal duration. Two, this would be very disadvantageous to processors, who need long-term agreements for operational purposes. We agree with the first assertion. We do not have sufficient technical knowledge of the industry to independently evaluate the second assertion, but note that fully binding long-term contracts do not appear to have been the norm in this fishery. Moreover, as discussed in Section III.B, long-term contracts are difficult to implement.

The second objection is that the proposed rule change would give CVs too much bargaining power. This objection can also be expressed in terms of two assertions. One, elimination of the open-access requirement is equivalent to adopting the Dooley-Hall proposal, because ICVs would be able to sell their fish to the highest bidder. Two, the effect on processors of the Dooley-Hall proposal would be disastrous because of the existence of excess capacity with the end of the race for fish.

With respect to the first assertion, we do not agree that the elimination of the open–access requirement is equivalent to adoption of the Dooley-Hall proposal. The most important difference between the two proposals is the organization of the cooperatives. Under Dooley-Hall the cooperatives could be organized more independently of processors, because a cooperative would not have to sell 90% of its fish to a single processor. Under the open-access proposal, the qualification rule implies that cooperatives would still need the approval of a single processor in the form of an agreement to process. Therefore processors would be expected to retain more influence concerning the operation of cooperatives than they would under the Dooley-Hall proposal.

While not as beneficial to ICVs as the Dooley-Hall proposal, the elimination of open-access could greatly enhance the bargaining position of ICVs. The analysis of the outcomes under Dooley-Hall can be used here as a lower bound, or worst case, evaluation of the possible outcomes for processors of the elimination of the open-access requirement. In both cases, the willingness of processors to forego apparent short-term competitive advantages in favor of their long-term interests in a highly concentrated industry would be a crucial determinant of the outcome.

If eliminating the open access requirement is feared to have consequences that are too dramatic, consideration could be given to alternatives that would reduce, but not eliminate, the costs of going through

open-access. We will briefly discuss two such alternatives: limiting catch in open-access, and partially guaranteeing harvest allocation in open-access.

Limiting catch in open-access

As discussed in Section III.A, if all the CVs in open-access were fully-vested (i.e., had harvest allocations consistent with their catching power), open-access would not be very costly for them. What can put a particular CV at a disadvantage is the presence of a large under-vested CV with catching power much larger than its harvest allocation. One possible approach, therefore, would be to limit the extent to which a vessel's harvest in open access could exceed its harvest allocation. For example, the limit on open-access catch could be equal to (100+C)% of its harvest allocation, where C is greater than zero.

If C were close to zero, outcomes for all CVs in open access would be expected to be similar to their harvest allocations. If C were large, the outcomes would be similar to those under the AFA, with open-access being potentially very costly for fully-vested CVs.

Guaranteeing harvest allocation in open-access

An alternative approach is to guarantee any CV in open access the opportunity to catch a share, F%, of its harvest allocation. If F were close to 100%, open-access would be very similar to a guaranteed harvest allocation for a CV. If F were close to zero, the outcomes would be similar to those under the AFA, with open-access being potentially very costly for fully-vested CVs.

The open-access pool would be reduced to reflect the guaranteed catch. Each CV would be expected to catch more than F% of its harvest allocation, because it would be able to harvest fish from the remaining open-access pool in addition to its guaranteed catch. In aggregate, the total catch would not exceed the original open-access pool.

Either approach could have the effect of lowering the incentives to join a cooperative if the parameters were set too generously, that is, if C were set too low or F were set too high. For instance, if F were too high, CVs might choose to stay in open access and rationalization would be reduced because they would still race for a fraction (1-F) of the fish. Limiting the number of years a CV could remain in open access would be one possible amendment to these approaches. Other things equal, the shorter the time limit, the less these approaches would increase the bargaining power of ICVs.

TABLE 1

AFA RULES FOR INSHORE SECTOR COOPERATIVES

a. Such cooperatives can be implemented beginning in 2000.

b. The contract implementing a cooperative must be signed by the owners of 80 percent or more of the qualified catcher vessels that delivered pollock for processing by a inshore processor in the directed pollock fishery in the year prior to the year in which the fishery cooperative will be in effect.

c. The contract must specify, except as provided in item j, that such catcher vessels will deliver pollock in the directed pollock fishery only to such inshore processor during the year in which the fishery cooperative will be in effect and that such inshore processor has agreed to process such pollock.

d. The share of the inshore sector allocation available to the vessels in a specific cooperative will equal the percent of the inshore sector harvest of pollock in the pollock fisheries in 1995-97 accounted for by the vessels in that cooperative and the contract will prevent the members of a cooperative from catching more than that share. The Council is considering alternative catch history rules.

e. The contract must allow the owners of other qualified catcher vessels to enter into such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the qualified catcher vessels who entered into such contract upon filing.

f. A catcher vessel shall be considered a "qualified catcher vessel" if, during the year prior to the year in which the fishery cooperative will be in effect, it delivered more pollock to the inshore processor to which it will deliver pollock under the fishery cooperative than to any other inshore processor.

g. The contract shall, to the extent practicable, provide fair and equitable terms and conditions for the owners of qualified catcher vessel that delivered pollock to factory trawlers or motherships during 1995-97.

h. The share of the inshore sector allocation not apportioned to the AFA cooperatives will in aggregate be available to the vessels that do not participate in a cooperative. Due to 1995-97 catch by catcher vessels that will not be eligible to participate in the inshore sector pollock fishery, that share will be greater than the percent of the inshore sector harvest of pollock in the pollock fisheries in 1995-97 accounted for by the vessels that do not participate in an inshore cooperative.

i. The eligible vessels that are not in a cooperative may deliver pollock to any eligible inshore processor(s).

j. A contract may provide for up to 10 percent of the pollock harvested under such cooperative to be processed by an eligible inshore processor other than the principal inshore processor to which pollock will be delivered under the contract.

k. There are no provisions to allow one cooperative to transfer pollock to another cooperative. Therefore, for example, if one cooperative exceeded its apportionment, it could not correct for this error by acquiring pollock from another cooperative.

TABLE 2

ALTERNATIVE SETS OF RULES FOR INSHORE SECTOR COOPERATIVES

1. The Dooley-Hall (Independent Catcher Vessel Owners) Proposal

a. No change.

b. Substantial change. The contract implementing a cooperative must be signed by the owners of five or more catcher vessels eligible to harvest pollock in the directed pollock fishery and deliver it to an eligible inshore processor.

c. Rule eliminated: A cooperative could deliver pollock from the BSAI pollock fishery to any eligible inshore processor(s).

d. No change.

e. Some change: The contract must allow the owners of other ~~qualified~~ eligible catcher vessels to enter into such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the ~~qualified~~ eligible catcher vessels who entered into such contract upon filing.

f. Rule eliminated.

g. Some change. The contract shall, to the extent practicable, provide fair and equitable terms and conditions for the owners of ~~qualified~~ eligible catcher vessel that delivered pollock to factory trawlers or motherships during 1995-97.

h. No change.

i. No change.

j. Rule eliminated: A cooperative would be able to decide what part of its allocation to deliver to any or each eligible inshore processor.

k. No change.

2. Replace the 10% transfer limit with a higher limit

No change in the current AFA rules with the exception of item j.

j. A contract may provide for up to x percent of the pollock harvested under such cooperative to be processed by an eligible inshore processor other than the principal inshore processor to which pollock will be delivered under the contract. The value of x has not been determined but it would be greater than 10.

3. Allow any eligible catcher vessels to belong to any inshore cooperative (eliminate the qualified catcher vessel requirement)

No change in the current AFA rules with the exception of item e.

e. The contract must allow the owners of other ~~qualified~~ eligible catcher vessels to enter into such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the qualified catcher vessels who entered into such contract upon filing.

Table 3

Cooperative Shares if Qualification were Based on 1998 Deliveries

	Qualified Vessels:		Processor Controlled Vessels as Percent of Processor's	
	Share of Assigned Inshore Allocation*	Cumulative Share of Assigned Inshore Allocation	Total Qualified Vessels	Share of Inshore Allocation
By Facility				
	25.6%	25.6%	54.5%	84.7%
	24.9%	50.5%	7.1%	15.3%
	17.2%	67.7%	50.0%	66.4%
	12.6%	80.3%	66.7%	85.6%
	9.4%	89.7%	100.0%	100.0%
	8.5%	98.2%	50.0%	44.7%
By Companiy				
	35.4%	35.4%	59.4%	87.9%
	29.8%	65.2%	57.9%	74.5%
	24.9%	90.1%	7.1%	15.3%
	8.5%	98.6%	50.0%	44.7%
Total industry			45.5%	60.9%

*The share of each entity in the total catch history assigned to catcher vessels that had deliveries in 1998, which accounted for 92.2% of the total inshore catch history.

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Appendix A

Lessons from Agricultural Marketing and Bargaining Cooperatives

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Draft membership agreements for pollock fishery cooperatives pay particular attention to the allocation of quota among cooperative members. Since the impetus for cooperative organization among pollock fishing boats derives largely from the opportunity provided by transferable quotas, this emphasis is not surprising. However, a cooperative structure requires attention to other important issues as well. Below, we review the following issues, with particular attention to the lessons from agricultural marketing and bargaining cooperatives:

(a) features of a marketing/bargaining cooperative
(b) control of a marketing/bargaining cooperative
(c) functions of a bargaining cooperative in particular
(d) combinations of marketing and bargaining functions
(e) the bargaining process
(f) possible pricing structures
(g) prospects for success and ideas for the future

The terms "cooperative member," "producer," and "raw product supplier" will be used here interchangeably.

Features of a Marketing/Bargaining Cooperative

A cooperative is a firm that is owned by those who use its services, as distinguished from an investor-owned firm, namely one whose owners are not necessarily its users. Cooperatives which market their members' products are further divided into those which take title to their members' products in order to handle or process them, and those which do not take title but instead provide other services. Agricultural bargaining cooperatives normally fall into the latter category, although some bargaining cooperatives do take title to their members' products.

It is helpful to look briefly at the manner in which cooperatives which do take title allocate their net returns among members. Return allocation procedures fall into two alternative categories: allocation by individual account, and allocation by pool. In the individual account method, the cooperative segregates each member's product (in the fisheries case, the member's catch), sells it separately, and returns the revenue to the member less the variable and overhead costs of the cooperative's services. (Procedures for covering fixed or capital costs are discussed three paragraphs below.)

In the pooling method, the cooperative instead adds the revenue from the sale of all (or of a given subset) of its members' products, deducts the cooperative's variable and overhead costs, then allocates this pooled net revenue to each member according to a prearranged rule. A typical rule is that each member's share of the net revenue is determined by the proportion of the total value of raw product that the member contributed to the pool that year. That is, the member's share of the pooled net revenue equals the share of the raw product value he contributed to the pool. Computing such a share requires estimating the "prices"

of the raw products delivered by each member. These prices are often known in agricultural marketing cooperatives as "established" or transfer values and play a critical role in a cooperative's organization. A cooperative may conduct one or more pools at a given time. Members' products need not be physically commingled in order to sell them on a pool basis. However, once products are commingled, member incomes must be allocated through a pool because payment by individual account is no longer feasible.

Cooperatives that do not take title to members' goods instead provide services to members, such as bargaining for contract terms with processors and providing member information. These coops have no revenues from which to deduct their costs, so must finance themselves in another way. Most typically, agricultural bargaining cooperatives charge members a fixed rate either per unit of product or per dollar of raw product value the member sells. If the charge is on a per-dollar-of-raw-product-value basis, "established values" must again be used.

Whether or not the cooperative takes title to product, it must subscribe equity capital from its members in order to cover fixed or capital costs. Cooperatives do so in one or more of three ways: membership application fees, withheld patronage dividends, and capital retains. Typically, little capital is raised through application fees. The second or withheld patronage dividend approach involves holding back a percentage of each member's net return allocation each year. That is, part of the cooperative's payment to a member is made in the form of an equity certificate, which is recorded in the cooperative's books in the member's name. The third or capital retains approach is to charge each member a fixed fee per unit or per unit value of the raw product that the member delivers to the cooperative. As with the withheld patronage dividend approach, an equity certificate is exchanged for this fee, which is recorded in the cooperative's books in the member's name.

The capital retains approach is used heavily by bargaining cooperatives because these cooperatives typically do not have any revenues as such and so have no patronage dividends to distribute to members. Even cooperatives that do earn revenues often draw part or all of their capital through capital retains. Most cooperatives revolve members' capital back to them after a certain period, either as determined annually by the board of directors or according to a fixed time interval as stated in the bye-laws. Interest may or may not be paid on the member's withheld capital, but usually is not paid. Nonpayment of interest creates no efficiency or fairness problem as long as each member's share of the cooperative's total equity capital stays roughly in proportion to that member's share of the value of product delivered.

Control of a Marketing/Bargaining Cooperative

The cooperative's constitution and bylaws distribute decision-making power among the board of directors, members, and hired employees. Some cooperatives choose to become members of a cooperative federation, which is a cooperative whose members are individual cooperatives. In that case, the constitution both of the cooperative federation and of the member cooperative determine the distribution of decision-making power between the federation and the member cooperative. Cooperative federations perform such functions as exporting or further-processing members' goods, purchasing supplies, serving as information clearing houses, and representing members to the public and to policy makers. Cooperative federations are run democratically by the member cooperatives, just as member cooperatives are run democratically by the individual raw product suppliers.

Despite the compelling reasons raw product suppliers often have for forming a cooperative, a potential always exists for some members to free-ride on others. For example, if the cooperative's per-unit costs decline as its volume grows (increasing returns to size), larger members can argue reasonably that

they contribute more to the coop's economic success than do smaller members. If, then, all members receive equal benefits per unit from patronizing the cooperative, smaller members free-ride on larger ones. On the other hand, larger members free-ride on smaller ones if the cooperative faces decreasing returns to size. Other sources of free-riding may also be present.

Claims that some members free-ride on others are a major source of cooperative failure. Why, then, do many cooperatives succeed? The academic literature suggests that cooperatives whose members are relatively homogeneous -- especially with regard to their size and to the type of product they harvest -- are more likely to be successful than are cooperatives whose members are relatively heterogeneous. The principal reason is that the greater the homogeneity, the less likely it is that some members can point to others as free-riding.

Coops whose members are very heterogeneous must do the best they can to limit the circumstances in which some members think that others are free-riding. One way of doing so is to use sliding scales when charging members for the cooperative's services. Another way of doing so is to give some members more votes than others have. In our own survey of forty-three agricultural marketing cooperatives, 63% allocated one vote to each member regardless of size, 9% allocated votes in proportion to a member's dollar volume of business with the cooperative, 7% allocated one vote to each member plus additional votes according to volume of business, and 14% allocated votes in proportion to each member's stock ownership in the cooperative. (Seven percent of the respondents did not answer the question.)

Functions of a Bargaining Cooperative in Particular

The subset of marketing cooperatives known as bargaining cooperatives see their chief service as negotiating with processor/buyers over prices and terms of trade. Numerous agricultural bargaining cooperatives are organized under the Capper-Volstead Act, that is are exempt from certain anti-trust provisions by virtue of that Act. Although bargaining coops are registered under incorporation laws in their own states, only a few states, such as Michigan and California, have laws regulating their activities as specifically bargaining cooperatives.

Through the membership document, each member agrees that the bargaining cooperative will be the member's sole agent in negotiating contractual terms with processors. In agricultural cooperatives, membership usually is specified for a given quantity of the farmer's acreage rather than for a given quantity of the goods produced from it, since the quantity produced typically isn't known at the time of contract negotiations. Membership may or may not be closed; that is, the cooperative may or may not reserve the right to restrict the entry of given individuals or of given acreage to the cooperative. Although a cooperative normally wants as many members as possible, the demand for its product may sometimes be such that restricting entry of new members or of new acreage is in the best interest of the incumbent members.

Agricultural bargaining cooperatives normally distinguish between bargaining for "price" and bargaining for "terms of sale." "Price" refers to the base price corresponding to a reference product specification, which often is the lowest or highest grade of product available from members, or a grade that members commonly deliver. Anti-trust law, and perhaps the cooperative's self-interest, prohibits agricultural bargaining cooperatives from agreeing with processors on a particular price. Rather, agreement is reached on a minimum price that processors will pay for the reference product specification. Processors are free during the season to pay prices higher than this.

Agricultural bargaining cooperatives sometimes negotiate different base prices with different processors. However, they do so only to account for such cost factors as the differing locations of these processors. The reason is that bargaining cooperatives have a strong incentive to equalize the price paid to all members for a given quality of product. The literature of virtually every bargaining cooperative refers specifically to this equalization goal. In the absence of equalization, farmer dissension grows, sub-coalitions form among them, processors move to take advantage of the division, and members drop out.

In contrast to the base price, "terms of sale" refer to any combination of: (a) discounts and premia for selected grade standards, for selected varieties or species of product, or for alternative dates and places of delivery; (b) conditions under which the processor can refuse an entire lot; (c) division of responsibility for containers and for off-loading of product; (d) changes in the base price according to the portion of the season in which the product is delivered; (e) members' delivery schedules and permissible adjustments to these schedules to account for unforeseen events; and (f) means of redress of grievances between cooperative and processor. Terms of sale typically are included in a document, often called the "Master Document," separate from that stipulating the base price. In many cases, the Master Document is renegotiated only every two or three years, whereas base price is renegotiated every year. Terms of sale are nearly always the same for every member except for allowances regarding the plant or processor to which the product is shipped.

Besides negotiating over price and terms of sale, agricultural bargaining cooperatives offer other member services. The most important is regular dissemination of information about supply and demand conditions in the industry. Economic information of this sort not only helps members estimate the value of the bargaining cooperative's services, but also assists them in making short-term management and long-term investment decisions. Cooperative managers agree that the principal key to a bargaining cooperative's success is full and frequent communication among the manager, board, and members.

Combinations of Marketing and Bargaining Functions

The distinction between a bargaining cooperative and one that takes title to or processes members' product is not straightforward. Some bargaining cooperatives, the California Canning Peach Bargaining Association in particular, take title to their members' products even though their principal goal is only to bargain for prices. The advantage of taking title is that members cannot drop out during the bargaining process; knowledge of this fact probably gives the cooperative greater bargaining leverage with processors. In addition, the cooperative can use its ownership of the product to perform marketing services for members, for example coordinating sales with individual processors and commingling the products of a group of members prior to a particular sale.

Most of the product which the Canning Peach Bargaining Association sells to processors is segregated by member. That is, payments to individual members are determined mostly by individual account rather than through a pool. However, the Association's ownership of the member's product permits it to pool product across members if market conditions warrant. In particular, product which does not move readily at prices the Association has negotiated is often commingled together and held in a pool, to be sold later. Returns from this pool are allocated according to the principles outlined above.

Obtaining title to members' products gives the bargaining cooperative another advantage: if the coop considers that prices and trade terms negotiated with processors are inadequate, it may seek a co-packing arrangement with one of the processors. In a co-packing arrangement, the cooperative and processor agree to share the proceeds of the pack in some manner. Such arrangements include profit-

sharing or an agreement under which the processor is paid a fixed fee for its services and the cooperative bears the full profit risk. Pollock cooperatives now forming in the Alaska fishery largely envisage themselves as bargaining with a single processor over prices and trade terms. However, they should bear in mind that pooling and/or co-packing generally remain as alternatives in the event that negotiations prove unfruitful.

The Bargaining Process

Before negotiating with processors each year, an agricultural bargaining cooperative must ensure that it has sufficient support from farmers in the industry. Normally, support is reckoned in terms of the percentage of the acreage in that industry which is signed up with the cooperative in the form of a membership agreement. Some bargaining cooperatives say they need as little as 40% of the acreage in their industry in order to bargain effectively with processors. Other cooperatives say they need a minimum of 70%. An informal survey of agricultural bargaining cooperatives suggests that they represent between 45% and 80% of the acreage in their industries. Often, much of the remaining acreage is committed to another cooperative which takes title to and processes the members' goods. This, for example, is the case in the California raisin industry, where much of the acreage not represented by the Raisin Bargaining Association (RBA) is sold through a processing/marketing cooperative. The RBA and the latter cooperative have close informal ties with one another.

Because processors are forbidden by anti-trust law from colluding in the establishment of prices or terms of trade, a bargaining cooperative must negotiate individually with each processor. Some cooperatives seek first to bargain with the smaller or weaker processors, then move to the larger ones. However, the most frequent strategy seems to be to begin negotiating first with the larger processing firms. Only in California and in several other states are processors required to bargain. In any event, processors are free to offer different terms to different farmers, and in general to find various ways to encourage individual farmers to break from their cooperative organization. For example, processors are free to pay to cooperative nonmembers prices different than those that they pay to members.

Many bargaining cooperatives feel it is important to agree with processors first concerning terms of trade and only then concerning base price. Such a sequence helps assure farmer-members of a home for their product because, unlike base price, terms of trade are negotiated on a multi-year basis. In addition, agreeing first about trade terms helps processor and cooperative become familiar with one another's bargaining strengths and attitudes before they begin negotiations over the price level itself. Furthermore, trade term negotiations allow the cooperative to reveal the interests that it holds in common with the processor, such as the establishment of a price premium/discount schedule best suited to maintaining high product standards and timely raw product deliveries. Overall, agricultural bargaining managers seem to agree that it is usually better to discuss first the issues on which producer and processor are likely to agree.

Some agricultural bargaining cooperatives authorize a single negotiating team to bargain with all processors. Others establish a separate negotiating committee to work with each processor or plant. These processor-level committees come under the central direction of the cooperative manager and board. In any event, if agreement cannot be reached with a processor before the onset of the harvest season, the cooperative and processor may turn to a mediator, and if that is not successful, to an arbitration board. However, cooperatives usually try to avoid arbitration because it tends to undermine members' estimation of the cooperative's value.

Possible Pricing Structures

Most agricultural bargaining cooperatives confine themselves to negotiating a base price (and associated terms of trade) to be paid in cash during that harvest season to the coop's members. Many coops in earlier years tried instead to utilize a price formula in which the price which processors would pay would depend upon such industry aggregate data as cold-storage inventories at time of delivery. However, these formulae proved too simplistic to capture all the factors that affect supply and demand, and hence value, of raw product.

Despite the failure of price formulae based on industry aggregate data, other alternatives to a simple annual cash price remain. One set of possibilities pertains to multi-year contracts. The California Tomato Growers Association presently is proposing to sign a two-year contract with canners in which a price would be set for each of the succeeding two years. The contract would state that, at the end of the first year of the contract, the second-year price would be renegotiated. Simultaneously, the price for the following (i.e. third) year would be determined. That is, contracts would be "rolling two-year-term" ones in which the second-year price would be renegotiated even as the following-year price is *originally* negotiated. Such an arrangement might help producer and processor plan for the future because, even though second-year prices could be changed through negotiation, they likely would not be changed appreciably unless both parties saw it in their interest to do so.

Along the same lines, the California Canning Peach Bargaining Association frequently utilizes rolling-ten-year contracts with processors. The Master Document in these instances allocates a given member's acreage to a given processor for the ten-year period, but states in only a general way how the price per ton will be determined each year.

In addition to multi-year contracts, the cooperative might negotiate price formulae in which raw product price is tied to the processor's performance. "Sales-minus" or revenue-share contracts are a case in point. In these contracts, the producer is paid a fixed percentage of the processor's resale price. If some of the processor's per-unit costs are deducted first from this resale price before the producer's share is computed, the contract instead is called a net-revenue-share or profit-share one. The latter contracts essentially treat the cooperative as if it were a full-fledged marketing cooperative, that is, as if it owned equity in the processing firm. The advantage of doing so is that producers are encouraged to act in accordance with the processor's interests, so that both producer and processor work to maximize the joint profit of the production and processing operation.

Except in cases in which the cooperative owns equity in the processor, agricultural bargaining cooperatives have not for the most part succeeded in negotiating revenue-share or net-revenue-share contracts with processors. One reason is that the processors' owners have been unwilling to share processing profit or revenue with those, like bargaining cooperative members, who do not bear the risk associated with equity ownership. Even bargaining cooperatives perceive that profit- or revenue-share contracts can be injurious to cooperative members. In the first place, processors can, in one cooperative leader's words, engage in "creative accounting" when computing the processor's revenues or costs. For example, prices to some of the processor's customers may be subject to adjustment because of discounts offered to these customers or because of special services provided to them. Costs may be subject to similar adjustment. In the second place, agricultural bargaining cooperatives acknowledge that when a processor must pay a portion of its revenues to cooperative members, the processor becomes ill-inclined to obtain the maximum price possible for its product. This hurts coop members because the processor then has less net revenue from which to pay for raw product supplies. As the manager of the California Canning Peach

Bargaining Association said, revenue-share contracts for raw product can be similar to raw product sales by consignment, because as the revenue share payable to the producer rises, the processor becomes simply a sales agent for the cooperative.

Nevertheless, profit- and revenue-share contracts have been used in a number of instances. Profit-share contracts between bargaining cooperatives and processors have been employed from time to time in the Florida citrus industry. And the Oregon Hazelnut Growers' Bargaining Association has, since 1983, obtained revenue shares from processors in the following way: If the processor's resale price (minus a discount if the processor adds much value through dicing, say, or adding chocolate) exceeds or falls short of the raw product price originally negotiated between cooperative and processor, producer and processor share the difference on a 50-50 basis. Recently, this arrangement has been amended as follows: If the resale price (possibly as discounted for costs as described above) drops *below* the originally negotiated raw product price, the raw product price is not reduced; but if the resale price rises *above* the originally negotiated raw product price, processors get the first three cents per pound of increase and producers get anything above that. In order for a revenue-share formula to be implemented, the processor's sales books must by audited by an independent auditor. The Hazelnut Bargaining Association acknowledges that, despite the overall success of its formula, processors are never happy about the auditing process.

Prospects for Success and Ideas for the Future

Managers of agricultural bargaining cooperatives say it is unrealistic to expect cooperative bargaining to bring dramatic gains to members. Processor-cooperative bargaining is part of the process of discovery of the raw product price. The process requires both parties to take into account current information about the supply and demand for the processed product as well as about the cost of raw product production. When raw product suppliers conduct their bargaining process as a group, they probably enhance price "a little bit" relative to what the price would be if suppliers each negotiated prices independently of one another. This may be enough justification for the bargaining cooperative's existence.

As we have mentioned, cooperatives offer other valuable services as well, principally in supplying information to their members. Indeed, a bargaining cooperative is primarily in the information business. Effective information provision requires that the cooperative maintain wide contacts in its own industry and in related ones. For this and other reasons, a pollock fishery bargaining cooperative tied to a particular processor may well want to explore the possibility of joining with other Alaska pollock cooperatives in a cooperative union or federation. One role of the federation would be to gather and disseminate, to each member coop, information obtained from the other member coops and from the industry and general economy. Centralized information processing reduces fixed costs and enables the member coops to benefit in a timely manner from the other cooperatives' experiences. A pollock fisheries cooperative federation likely would also serve as the cooperatives' spokesman to individuals and groups outside the industry.

Appendix B

Participants in Research Discussions

F. Gregory Baker; Westward Seafoods
Chris Blackburn; Alaska Groundfish Data Bank
Al Burch; Alaska Draggers Association
Bob Desautel; Nina Fisheries
John Dooley; F/V Pacific Prince, F/V Caitlin Ann
Dan Holland; National Marine Fisheries Service
L. John Iani; UniSea
Levis Kochin; University of Washington
Lil Kuhr; Nina Fisheries
Todd Lee; National Marine Fisheries Service
Kent Lind; National Marine Fisheries Service
Jim McManus; Trident Seafoods
Joe Plesha; Trident Seafoods
Edward J. Richardson; At-Sea Processors Association
Chris Riley; Trident Seafoods
Kathy Shepard; Nina Fisheries
Dave Stanchfield; F/V Morningstar
Peter Stitzel; Fisheries Business Consultant
Joseph M. Sullivan; Mundt, MacGregor
Joe Terry; National Marine Fisheries Service
John G. Young; Young, deNormandie, and Oscarsson

Appendix C

Ownership Links for Catcher Vessels Tentatively Eligible to Operate in the BSAI Pollock Fishery

Independent vessel with no clear ownership link either to other AFA eligible catcher vessels or to an AFA eligible processor

1. AJ **
2. Alaska Dawn
3. Aleutian Challenger (mothership eligible only)
4. Amber Dawn *
5. American Challenger (factory trawler eligible only)
6. American Eagle
7. Cape Kiwanda
8. Caravelle
9. Collier Brothers
10. Endurance (Is it still a trawl vessel and is it eligible?)
11. Excalibur II
12. Exodus
13. Fierce Allegiance
14. Fierce Sea (mothership eligible only or none)
15. Forum Star (factory trawler eligible only)
16. Gold Rush
17. Golden Pisces
18. Hickory Wind **
19. Lady Joanne
20. Lisa Marie
21. Lisa Melinda

22. Marathon
23. Margaret Lyn * ****
24. Marcy J
25. Mark I * ****
26. Messiah
27. Muir Milach (factory trawler eligible only)
28. Miss Berdie
29. Ms Amy
30. Oceanic * ****
31. Ocean Harvester (factory trawler eligible only)
32. Ocean Storm ?
33. Pacific Challenger *
34. Pacific Monarch ***
35. Pacific Ram
36. Pegasus
37. Peggy Jo
38. Raven
39. Royal American
40. Seeker
41. Topaz
42. Tracy Anne (factory trawler eligible only)
43. Vesteraalen (mothership eligible only) ****
44. Western Dawn *

Independent vessels with an apparent ownership link to one or more eligible catcher vessels

Group 1

These two vessels are owned by one of the partners in the Northern Victor and they fish for the Northen Victor. That partner also is a partner in the Arctic Wind which fishes for Unisea and which is in Group 9 based on its other owners.

45. Poseidon

46. Royal Atlantic

Group 2

47. Auriga

48. Aurora

Group 3

49. Blue Fox

50. Seadawn

Group 4

51. Catlin Ann

52. Pacific Prince

Group 5

Ownership link to Golden Alaska

53. American Beauty (mothership eligible only)

54. Ocean Leader *

Group 6

55. Gun-Mar

56. Mar-Gun * ****

Group 7

57. Elizabeth F

58. Walter N

Group 8

59. Leslie Lee

60. Traveler *

Group 9

61. Arctic Wind

62. Nordic Star

63. Starfish

64. Starlite

65. Starward

Group 10

66. Perseverence

67. Predator

Group 11

68. Alsea

69. Argosy

70. Progress

71. Vanguard *

Group 12

72. Nordic Fury (mothership eligible only) ****

73. Pacific Fury (mothership eligible only) ****

Group 13

74. Ocean Hope 1

75. Ocean Hope 3

Group 14

Ownership link to the Excellence

76. Alyeska * **

77. California Horizon (mothership eligible only)

78. Misty Dawn (mothership eligible only)

79. Papado II (mothership eligible only)

80. Pacific Alliance ? (mothership eligible only, sank)

Group 15

81. Neahkahnie (factory trawler eligible only)

82. Sea Storm (factory trawler eligible only)

Vessels with an apparent ownership link to an eligible inshore processor

Alyeska Seafoods

Alyeska did not comment on this list (8/3/99).

83. Alaska Rose

84. Bering Rose

85. Destination

86. Great Pacific

87. Morning Star

88. Sea Wolf

Trident Seafoods (including Tyson)

Trident agreed with the list (8/3/99).

89. Aldebaran

90. Arctic I

91. Arctic III

92. Arctic IV

93. Arctic VI

94. Arcturus

95. Columbia

96. Dominator

97. Dona Liliana

98. Dona Martita

99. Dona Paulita

100. Flying Cloud

101. Golden Dawn

102. Majesty

103. NW Enterprise

104. Ocean Enterprise

105. Pacific Enterprise

106. Pacific Viking

107. Viking Explorer

Unisea Seafoods

108. Defender (F/V Defender 56676 Seattle

Victor Seafood

Victor Seafood agreed with the list, these are catcher vessels owned by the same individuals who own the Northern Victor (8/6/99).

109. Anita J

110. Commodore

111. Half Moon Bay

112. Sunset Bay

113. Storm Petrel

Westward Seafoods

Westward agreed with the list (7/29?/99)

114. Alaskan Command

115. Chelsea K

116. F/V Westward I

117. Pacific Knight

118. Viking

Westward has at least partial ownership of these vessels but has direct control only of the Pacific Knight

* Vessels that are eligible to deliver to both inshore processors and motherships.

** Catch history is expected to be controlled by Westward Seafoods and used by the co-op that will deliver to Westward.

*** Catch history is expected to be purchased and used by some of the members of the co-op that will deliver to Unisea..

**** The owner of this vessel is a partner in the Ocean Phoenix.

APPENDIX V

Supplemental Analysis for

PLAN AMENDMENT 61/61

TO THE FISHERY MANAGEMENT PLANS FOR

THE GROUNDFISH FISHERIES OF THE GULF OF ALASKA

AND

THE GROUNDFISH FISHERIES OF THE BERING SEA/ALEUTIAN ISLANDS

to implement American Fisheries Act conformance measures

(FORMERLY PLAN AMENDMENT 62/62)

Prepared by

Staff of the
North Pacific Fishery Management Council

April 5, 1999

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EXECUTIVE SUMMARY

The American Fisheries Act of 1998 (AFA) significantly changed the management regime of the pollock fisheries in the Bering Sea, Aleutian Islands, and Gulf of Alaska. The AFA substantially changed the statutory climate in which the Council was acting during its deliberation for final action of I/O3 in June 1998. Along with other actions affecting the BSAI pollock fishery, it allocated 10% of the BSAI pollock TAC to the Western Alaska community development program (increased from 7.5%) and divided the remaining directed pollock fishery allocation: 50% to catcher vessels harvesting pollock for delivery to the inshore component; 40% to catcher processors harvesting pollock for processing by the offshore component; and 10% to catcher vessels harvesting pollock for processing by a new mothership component. As a result of AFA, on December 15, 1998, the Secretary disapproved the inshore/offshore allocations recommended by the Council in BSAI Amendment 51 for the period January 1, 1999 through December 31, 2001 and substituted the AFA percentages for 1999. Changing these percentages through 2004 in the BSAI FMP to conform with the AFA is the subject of Action 1.

AFA also signed into law changes to replacement restrictions for AFA-eligible vessels. This is the subject of Action 2. Action 3 is the sole action under consideration under GOA Amendment 62. This action is not mandated under the AFA, but conforms with Council intent to mirror the allocation sunset dates for pollock and Pacific cod allocations in the GOA and BSAI.

During its discussion of preparation of this analysis, the Council indicated that the actions under Alternative 2 for Actions 1, 2, and 3 were its preferred alternatives.

ACTION 1. BSAI POLLOCK ALLOCATIONS

Alternative 1: No action.

Alternative 2: Change the current inshore/offshore directed pollock allocations in the Bering Sea/Aleutian Islands FMP to conform with those allocations mandated by the American Fisheries Act of 1998. *Preferred*

ACTION 2. GOA POLLOCK ALLOCATIONS SUNSET DATE

Alternative 1: No action.

Alternative 2: Extend the sunset date of the current pollock and Pacific cod allocations in the GOA FMP to conform with the date mandated for the Bering Sea/Aleutian Islands area in the American Fisheries Act of 1998. *Preferred*

ACTION 3. REPLACEMENT VESSELS IN THE BSAI DIRECTED POLLOCK FISHERIES

Alternative 1: No action.

Alternative 2: Change restrictions in the BSAI FMP to conform with replacement requirements for eligible vessels under the American Fisheries Act of 1998. *Preferred*

None of the alternatives are likely to significantly affect the quality of the human environment. None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866. However, the FRFA will be completed by NMFS after opportunity for public comment on the proposed rule and IRFA.

1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) off Alaska are managed under the Fishery Management Plan for the Groundfish Fisheries of the Gulf of Alaska (GOA) and the Fishery Management Plan for the Groundfish Fisheries of the Bering Sea and Aleutian Islands (BSAI). Both fishery management plans (FMP) were developed by the North Pacific Fishery Management Council (Council) under the Magnuson Fishery Conservation and Management Act (Magnuson Act). The GOA FMP was approved by the Secretary of Commerce and become effective in 1978 and the BSAI FMP become effective in 1982.

Actions taken to amend FMPs or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1 of this document. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on endangered species and marine mammals are also addressed in this section. Section 3 contains a Regulatory Impact Review (RIR) which addresses the requirements of both E.O. 12866 and the RFA that economic impacts of the alternatives be considered. Section 4 contains the Initial Regulatory Flexibility Analysis (IRFA) required by the RFA which specifically addresses the impacts of the proposed action on small businesses.

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses three management actions affecting the groundfish fisheries off Alaska: 1) revising the BSAI FMP to reflect the inshore/offshore pollock allocations signed into law on October 21, 1998 under the American Fisheries Act of 1998 (AFA); 2) revising AFA-eligible vessel size length replacement restrictions; and 3) extending the current inshore/offshore allocations of pollock and Pacific cod in the Gulf through 2004.

1.1 Management Background

Inshore/Offshore (I/O) allocations of the BSAI and GOA pollock TAC and GOA Pacific cod TAC were originally established under Amendments 18/23 (I/O1) to the Bering Sea/Aleutian Island and Gulf of Alaska Fishery Management Plans, respectively, for 1993-95. The allocations were extended by the Council in Amendments 38/40 (I/O2) to the respective FMPs for 1996-98. In June 1998, the Council recommended another extension of the GOA allocations and recommended changing the BSAI pollock allocations from 65% offshore and 35% onshore to 61% offshore and 39% onshore for 1999-2001 under Amendments 51/51 (I/O3), after considerable discussion and debate. All three amendment packages contained "sunset" provisions, requiring the Council to reexamine the allocations in three years, or see them expire.

Current and potential preemption of resources by one industry sector over another was a focal issue for the Council with regard to setting the original inshore and offshore allocations of pollock and Pacific cod in the GOA and pollock in the BSAI in 1992. Though not necessarily a problem at that time in the BSAI, it was apparent that the capacity of the offshore catcher/processor fleet posed a real preemption threat to the inshore processing industry, which relied heavily on the pollock resource. During a series of meetings beginning in 1989, the Council and industry developed analyses of various alternative solutions to the preemption problem and set allocations of pollock and Pacific cod in the GOA and pollock in the BSAI in three separate inshore/offshore amendment packages described above. The inshore-offshore allocation issue became an

integral part of the overall effort towards addressing overcapitalization in North Pacific groundfish fisheries.

On January 1, 1996, access to the groundfish fisheries in the EEZ off Alaska, except those managed under the Individual Fishing Quota Program for Pacific halibut and sablefish, and commercial crab fisheries in the Bering Sea in and off of Alaska were limited under a vessel moratorium program. This program was intended by the Council, as implemented by National Marine Fisheries Service (NMFS), to be a first step in its comprehensive rationalization program to reduce excess capital and capacity in the affected fisheries.

On October 1, 1998, NMFS published a final rule (63 FR 52642) implementing part of the License Limitation Program (LLP) for BSAI and GOA groundfish and BSAI crab under Amendments 39/41/5. These amendments limited the number, size, and specific operation of vessels that may be deployed in the groundfish fisheries in the EEZ off Alaska, except for demersal shelf rockfish in Southeast Alaska and the halibut and sablefish IFQ fisheries. The crab LLP was effective beginning January 1, 1999. The groundfish LLP is expected to be effective on January 1, 2000. This program, upon implementation, supplants the vessel moratorium.

The American Fisheries Act, signed into law on October 21, 1998, substantially changed the statutory climate in which the Council was acting during its deliberation for final action of I/O3 in June 1998. Along with other actions affecting the BSAI pollock fishery, it allocated 10% of the BSAI pollock TAC to the Western Alaska community development program (increased from 7.5%) and divided the remaining directed pollock fishery allocation: 50% to catcher vessels harvesting pollock for delivery to the inshore component; 40% to catcher processors harvesting pollock for processing by the offshore component; and 10% to catcher vessels harvesting pollock for processing by a new mothership component. As a result of AFA, on December 15, 1998, the Secretary disapproved the inshore/offshore allocations recommended by the Council in BSAI Amendment 51 for the period January 1, 1999 through December 31, 2001 and substituted the AFA percentages for 1999. Changing these percentages through 2004 in the BSAI FMP to conform with the AFA is the subject of Action 1. AFA also signed into law changes to replacement restrictions for AFA-eligible vessels. This is the subject of Action 2.

The Secretary also approved GOA Amendment 51 in its entirety. One result of the Secretary's action is that the current I/O management program will sunset December 31, 2001 for the GOA under Amendment 51, without further Council action, and December 31, 2004 for the BSAI under the AFA. Changing the duration of the GOA pollock and Pacific cod allocations through 2004 is the subject of Action 3.

1.2 Purpose of and Need for the Action

On December 15, 1998, the Secretary partially approved Amendment 51 to the BSAI FMP and fully approved Amendment 51 to the GOA FMP which extended and revised the inshore and offshore allocations for pollock and Pacific cod in both FMPs for 1999-2001 (NPFMC 1998). Section 206 of the American Fisheries Act of 1998, which specifically mandates 10 percent of the pollock TAC for a directed fishing allowance for the CDQ program and stipulates specific allocations for the inshore and offshore sectors of the directed pollock fisheries, substantially changed the statutory climate in which the Council was acting in June 1998, when it approved Amendments 51/51 for submission to the Secretary. Hence, the Secretary partially disapproved some elements of Amendment 51 to the BSAI FMP that will not be further discussed in this EA/RIR.

Under the above provisions establishing allocations for the BSAI pollock fisheries, the AFA requires the Council and Secretary to act to conform the BSAI FMP with the AFA (Actions 1 and 2). The decision-making climate related to the sunset date for the GOA pollock and Pacific cod allocations in I/O3 has also changed (Action 3).

The salient part of the administrative record related to the AFA as it pertains to Amendments 51/51 is captured in the approval letter dated December 15, 1998, by the Administrator of the Alaska Region:

> "The effective period for the allocations in [GOA] Amendment 51 is extended for another three years, from January 1, 1999, through December 31, 2001. The section 213 provisions of the AFA do not apply to the GOA allocations proposed by the Council. Therefore, the proposed duration of the amendment is not inconsistent with AFA, the Magnuson-Stevens Act or other applicable law.
>
> Under Section 304 (a) (4) of the Magnuson-Stevens Act, the Council may submit a revised amendment in response to disapproved parts of an amendment proposal. Any inshore-offshore allocation measures that the Council may now wish to submit must be consistent with the AFA as well the Magnuson-Stevens Act and other applicable law. I recommend that the Council submit an FMP amendment that would. The Council may further wish to amend its December 31, 2001, sunset date for pollock and Pacific cod allocations in the GOA to be consistent with the AFA sunset date of December 31, 2004."

At its December 1998 meeting, the Council initiated this analysis to: 1) amend the BSAI FMP to make the inshore/offshore pollock allocations consistent with the AFA; 2) amend the BSAI FMP regarding replacement of AFA-eligible vessels; and 3) amend the GOA FMP to extend the current allocation of GOA pollock and Pacific cod through December 31, 2004 to mirror the sunset date for inshore/offshore allocations of pollock and P. cod in the BSAI FMP.

1.2 Alternatives Considered

1.2.1 ACTION 1: BSAI POLLOCK ALLOCATIONS

1.2.1.1 Alternative 1: No action.

Action 1, Alternative 1 would leave the current inshore/offshore directed fishery pollock allocations in place in the BSAI FMP. This would not conform with Section 206 of the American Fisheries Act of 1998 which specifically mandates 10 percent of the pollock TAC for a directed fishing allowance for the CDQ program through December 31, 2004, although the Council may adjust the CDQ allocation in two years (2001).

The Act also stipulates specific allocations for the inshore and offshore sectors of the directed pollock fisheries also through 2004. These allocations are implemented through the annual specification process. As such, the percentage allocations recommended by the Council in I/O3 were disapproved by the Secretary. Therefore, the no action alternative is not consistent with the Act and is therefore not a viable alternative for managing this fishery.

1.2.1.2 Alternative 2: Change the current inshore/offshore directed pollock allocations in the BSAI FMP to conform with those allocations mandated by the American Fisheries Act of 1998.

Alternative 2 would change the current inshore/offshore directed pollock allocations in the BSAI FMP to the following allocations, with a sunset date of December 31, 2004:

10% of the BSAI pollock TAC to the Western Alaska community development program; and divide the remainder:

50% to catcher vessels harvesting pollock for delivery to the inshore component;

40% to catcher processors harvesting pollock for processing by the offshore component;
10% to catcher vessels harvesting pollock for processing by mother ships in the offshore component.

Only Alternative 2 appears to be consistent with Congressional intent to allocate the directed commercial BSAI pollock fishery to the CDQ, and inshore and offshore sectors of the directed pollock fishery. As stated in Section 1.2, the AFA requires the Council and Secretary to act such that pollock allocations and sunset dates conform with Section 206. The AFA clearly directs the Council and the Secretary to increase the pollock CDQ allocation from the existing 7.5 percent to 10 percent of the BSAI pollock TAC, and to change the directed fishery allocations to 50% to catcher vessels harvesting pollock for delivery to the inshore component; 40% to catcher processors harvesting pollock for processing by the offshore component; and 10% to catcher vessels harvesting pollock for processing by motherships. Section 213 of the AFA also mandates that the sunset date for these allocations be extended through December 31, 2004, although the CDQ allocation may be adjusted after two years. Without this change, the BSAI FMP would be out of conformance with Section 206 of the AFA.

1.2.2 ACTION 2: REPLACEMENT OF AFA-ELIGIBLE VESSELS

1.2.2.1 Alternative 1: No Action.

Action 2, Alternative 1 would leave in place the current vessel replacement restrictions enacted under the moratorium (BSAI Amendment 23) license limitation program (BSAI Amendment 39). The status quo would not conform with Section 206 of the American Fisheries Act of 1998 which specifically mandates that an AFA-eligible vessel may be replaced under certain conditions with specific criteria which differ from existing regulations. Therefore, the no action alternative is not consistent with the Act for AFA-eligible vessels and is therefore not a viable alternative.

1.2.2.2 Alternative 2: Change restrictions in the BSAI FMP to conform with replacement requirements for eligible vessels under the American Fisheries Act of 1998.

Section 202(a)(6) of the AFA mandated that in the event of the actual total loss or constructive loss, an AFA-eligible vessel may be replaced so long as the vessel was not lost due to willful misconduct of the owner or his agent. The replacement vessel must have been built in the US and if the vessel is (was) rebuilt, then that must also have taken place in the US. The replacement vessel must have made a landing by the end of the third calendar year after the year the vessel was lost or destroyed. If the lost vessel was greater than 165 ft in registered length, of more than 750 gross registered tons, or has engines capable of producing more than 3,000 shaft horsepower, the replacement vessel must be of equal or lesser length, tons, and horsepower. If the lost vessel was less than 165 ft registered length, then the replacement vessel may exceed the original vessel's length, gross tons, and horsepower by 10 percent, but only up to the thresholds. The replacement vessel must also meet the US ownership provisions of the AFA.

The AFA restrictions for replacing vessels in the BSAI pollock fisheries are different from the moratorium and LLP provisions that do not allow any increase in vessel length of a replacement for a vessel that was lost or destroyed. In addition, the 20% upgrade rule under the moratorium and LLP only applies to vessels less than 125 ft. Only Action 2, Alternative 2 meets the AFA mandate on this issue for replacement of AFA-eligible vessels.

Note that Action 2, Alternative 2 applies only to vessel replacement and not upgrades. That is, an AFA-eligible vessel can still upgrade within current 20% upgrade provisions (up to 125 ft), but would be restricted

in the event of replacement to a 10% increase (up to 165 ft). This difference applies only to replacement of AFA-eligible vessels.

For example: an 80 ft vessel could upgrade to 96 ft, or replace up to 88 ft if it sinks. However, as with the current regulations, it cannot "stack" upgrades and replacements. For example, if an 80 ft vessel upgrades to 96 ft and then it sinks, it can only upgrade to 96 ft.

Specific language that should be incorporated into the BSAI FMP is:

> In the event of the actual total loss or constructive total loss of a vessel eligible under the American Fisheries Act, the owner of such vessel may replace such vessel with a vessel which shall be eligible in the same manner under that subsection as the eligible vessel, provided that—
>
> (1) such loss was caused by an act of God, an act of war, a collision, an act or omission of a party other than the owner or agent of the vessel, or any other event not caused by the willful misconduct of the owner or agent;
> (2) the replacement vessel was built in the United States and if ever rebuilt, was rebuilt in the United States;
> (3) the fishery endorsement for the replacement vessel is issued within 36 months of the end of the last year in which the eligible vessel harvested or processed pollock in the directed pollock fishery;
> (4) if the eligible vessel is greater than 165 feet in registered length, of more than 750 gross registered tons, or has engines capable of producing more than 3,000 shaft horsepower, the replacement vessel is of the same or lesser registered length, gross registered tons, and shaft horsepower;
> (5) if the eligible vessel is less than 165 feet in registered length, of fewer than 750 gross registered tons, and has engines incapable of producing less than 3,000 shaft horsepower, the replacement vessel is less than each of such thresholds and does not exceed by more than 10 percent the registered length, gross registered tons or shaft horsepower of the eligible vessel; and
> (6) the replacement vessel otherwise qualifies under federal law for a fishery endorsement, including under section 12102(c) of title 46, United States Code, as amended by this Act.

1.2.3 ACTION 3: GOA POLLOCK ALLOCATIONS SUNSET DATE

1.2.3.1 Alternative 1: No Action.

The status quo alternative would allow the current allocations of GOA pollock and Pacific cod to expire in 2001. Choosing this alternative would mean that GOA inshore/offshore allocations would sunset three years prior to the sunset of BSAI pollock and P. cod allocations. An earlier sunset of GOA allocations relative to the BSAI is contrary to the Council's intent since 1992 of linking the implementation of these allocations. Although the impacts of an earlier sunset in the GOA are not known, one potential impact could be a return to preemption of GOA fisheries or a reallocation of GOA pollock and cod, as discussed in detail in previous analyses (Amendments 40 and 51).

1.2.3.2 Alternative 2: Extend the sunset date of the current pollock and Pacific cod allocations in the GOA FMP to conform with the date mandated for the Bering Sea/Aleutian Islands area in the American Fisheries Act of 1998.

The partial disapproval of BSAI Amendment 51 due to the AFA has resulted in different sunset durations in the GOA and BSAI for the inshore/offshore allocations. The BSAI allocations set under the AFA extend through December 31, 2004. Following the recommendation of the Administrator, NMFS Alaska Region, in a letter to the Council dated December 15, 1998, the Council considered and approved development of an analysis to revise the duration of the current GOA inshore/offshore allocations to match the duration of the current BSAI inshore/offshore allocations. Only Action 3, Alternative 2 would extend the current GOA allocations past the current sunset of December 31, 2001 to December 31, 2004 to match the expiration of the BSAI inshore/offshore allocations.

The Council record has been to link the GOA and BSAI inshore/offshore allocations under GOA Amendments 23, 40, and 51). The EA/RIR for GOA Amendment 51 allowed the Council to set the current GOA pollock and Pacific cod allocations in perpetuity and is included here by reference. All less restrictive dates are included in the analysis.

2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2; and the list of preparers is in Section 8. This section contains the discussion of the environmental impacts of the alternatives including impacts on threatened and endangered species and marine mammals.

2.1 Environmental Impacts of the Alternatives

The environmental impacts generally associated with fishery management actions are effects resulting from (1) harvest of fish stocks which may result in changes in food availability to predators and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices, e.g. effects of gear use and fish processing discards; and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear.

A summary of the effects of the annual groundfish harvests on the biological environment and associated impacts on marine mammals, seabirds, and other threatened or endangered species are discussed in the final environmental assessment for the annual groundfish total allowable catch specifications (NMFS 1998).

2.2 Impacts on Endangered or Threatened Species

Background. The ESA provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by NMFS for most marine species, and the US Fish and Wildlife Service (FWS) for terrestrial and freshwater species.

The ESA procedure for identifying or listing imperiled species involves a two-tiered process, classifying species as either threatened or endangered, based on the biological health of a species. Threatened species are those likely to become endangered in the foreseeable future [16 U.S.C. §1532(20)]. Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range [16 U.S.C. §1532(20)]. The Secretary of Commerce, acting through NMFS, is authorized to list marine mammal and fish species. The Secretary of the Interior, acting through the FWS, is authorized to list all other organisms.

In addition to listing species under the ESA, the critical habitat of a newly listed species must be designated concurrent with its listing to the " maximum extent prudent and determinable" [16 U.S.C. §1533(b)(1)(A)]. The ESA defines critical habitat as those specific areas that are essential to the conservation of a listed species and that may be in need of special consideration. The primary benefit of critical habitat designation is that it informs Federal agencies that listed species are dependent upon these areas for their continued existence, and that consultation with NMFS on any Federal action that may affect these areas is required. Some species, primarily the cetaceans, listed in 1969 under the Endangered Species Conservation Act and carried forward as endangered under the ESA, have not received critical habitat designations.

Listed Species. The following species are currently listed as endangered or threatened under the ESA and occur in the GOA and/or BSAI:

Endangered	
Northern Right Whale	*Balaena glacialis*
Bowhead Whale[1]	*Balaena mysticetus*
Sei Whale	*Balaenoptera borealis*
Blue Whale	*Balaenoptera musculus*
Fin Whale	*Balaenoptera physalus*
Humpback Whale	*Megaptera novaeangliae*
Sperm Whale	*Physeter macrocephalus*
Snake River Sockeye Salmon	*Oncorhynchus nerka*
Short-tailed Albatross	*Diomedia albatrus*
Steller Sea Lion[2]	*Eumetopias jubatus*
Threatened	
Snake River Fall Chinook Salmon	*Oncorhynchus tshawytscha*
Snake River Spring/Summer Chinook Salmon	*Oncorhynchus tshawytscha*
Steller Sea Lion[3]	*Eumetopias jubatus*
Spectacled Eider	*Somateria fishcheri*
Steller's eider	*Polysticta stelleri*

Section 7 Consultations. Because both groundfish fisheries are federally regulated activities, any negative affects of the fisheries on listed species or critical habitat and any takings[4] that may occur are subject to ESA section 7 consultation. NMFS initiates the consultation and the resulting biological opinions are issued to NMFS. The Council may be invited to participate in the compilation, review, and analysis of data used in the consultations. The determination of whether the action "is likely to jeopardize the continued existence of"

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[1]species is present in Bering Sea area only.
[2]listed as endangered west of Cape Suckling.
[3]listed as threatened east of Cape Suckling.
[4] the term "take" under the ESA means "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" (16 U.S.C. §1538(a)(1)(B).

endangered or threatened species or to result in the destruction or modification of critical habitat, however, is the responsibility of the appropriate agency (NMFS or FWS). If the action is determined to result in jeopardy, the opinion includes reasonable and prudent measures that are necessary to alter the action so that jeopardy is avoided. If an incidental take of a listed species is expected to occur under normal promulgation of the action, an incidental take statement is appended to the biological opinion.

Section 7 consultations have been done for all the above listed species, some individually and some as groups. Below are summaries of the consultations.

Endangered Cetaceans. NMFS concluded a formal section 7 consultation on the effects of the BSAI and GOA groundfish fisheries on endangered cetaceans within the BSAI and GOA on December 14, 1979, and April 19, 1991, respectively. These opinions concluded that the fisheries are unlikely to jeopardize the continued existence or recovery of endangered whales. Consideration of the bowhead whale as one of the listed species present within the area of the Bering Sea fishery was not recognized in the 1979 opinion, however, its range and status are not known to have changed. No new information exists that would cause NMFS to alter the conclusion of the 1979 or 1991 opinions. NMFS has no plan to reopen Section 7 consultations on the listed cetaceans for this action. Of note, however, are observations of Northern Right Whales during Bering Sea stock assessment cruises in the summer of 1997 (NMFS per. com). Prior to these sightings, and one observation of a group of two whales in 1996, confirmed sightings had not occurred.

Steller sea lion. The Steller sea lion range extends from California and associated waters to Alaska, including the Gulf of Alaska and Aleutian Islands, and into the Bering Sea and North Pacific and into Russian waters and territory. In 1997, based on biological information collected since the species was listed as threatened in 1990 (60 FR 51968), NMFS reclassified Steller sea lions as two distinct population segments under the ESA (62 FR 24345). The Steller sea lion population segment west of 144 W. longitude (a line near Cape Suckling, Alaska) is listed as endangered; the remainder of the U.S. Steller sea lion population remains listed as threatened.

NMFS designated critical habitat in 1993 (58 FR 45278) for the Steller sea lion based on the Recovery Team's determination of habitat sites essential to reproduction, rest, refuge, and feeding. Listed critical habitats in Alaska include all rookeries, major haul-outs, and specific aquatic foraging habitats of the BSAI and GOA. The designation does not place any additional restrictions on human activities within designated areas. No changes in critical habitat designation were made as result of the 1997 re-listing.

Beginning in 1990 when Steller sea lions were first listed under the ESA, NMFS determined that both groundfish fisheries may adversely affect Steller sea lions, and therefore conducted Section 7 consultation on the overall fisheries (NMFS 1991), and subsequent changes in the fisheries (NMFS 1992). The biological opinion on the BSAI and GOA fisheries effects on Steller sea lions issued by NMFS on January 26, 1996 concluded that these fisheries and harvest levels are unlikely to jeopardize the continued existence and recovery of the Steller sea lion or adversely modify critical habitat. NMFS conducted an informal Section 7 consultation on Steller sea lions for this action in 1997 and concluded that the GOA groundfish fishery and the 1997 TAC amounts were not likely to affect Steller sea lions in a way or to an extent not already considered in previous Section 7 consultations (NMFS, January 17, 1997). Reinitiation of formal consultation was not required at that time. NMFS has reopened formal consultation on the 1998 fishery to evaluate new information specific to the 60 percent increase of pollock TAC in the combined W/C Regulatory Area. The 1998 biological opinion concluded that the 1998 fishery was not likely to jeopardize the continued existence and recovery of Steller sea lions or to adversely modify critical habitat.

In December 1998, a Biological Opinion on the Steller sea lion concluded with a 'jeopardy finding' relative to the pollock fisheries in the BSAI and GOA. To allow these fisheries to continue in 1999 and beyond, the

Council recommended emergency action to implement measures consistent with reasonable and prudent alternatives (RPAs) recommended in the opinion. The emergency RPAs, in summary, proposed spatial and temporal distribution of the pollock fisheries as well as additional closure areas around specific rookery and haul-out sites used by sea lions.

For the BSAI, the Council's actions include: (1) separating the pollock fisheries into four seasons (A1, A2, B, and C seasons), with a limit of 30 percent of the total TAC coming from any one season; (2) reducing the overall roe season fishery to 40 percent of the annual total TAC; (3) limiting the overall A season removals from the sea lion critical habitat area/catcher vessel operational area (CH/CVOA) to 62.5 percent of the total TAC for those seasons; (4) eliminating a directed pollock fishery in the Aleutian Islands subarea; and, (5) expanding closure areas around rookery and haul-out sites.

For the GOA, the Council also created four seasons with limits on the percentage of the TAC which can be taken from any one season, expanded the closure areas around rookery and haul-out sites, and established a 300,000 pound trip limit for pollock in the Western and Central Gulf areas.

On January 22, 1999, NMFS published an emergency interim rule implementing RPAs which significantly reduced the likelihood that the pollock A season fishery off Alaska will jeopardize the continued existence of the western population of Steller sea lions. In the Bering Sea subarea, NMFS is phasing in an exclusion zone of 10 nm around the Cape Sarichef haulout, and anticipates extending the exclusion zone to around 20 nm for 2000 and beyond. In the Gulf of Alaska, NMFS will not implement a series of 10 nm exclusion zones until 2000. To avoid determinations of jeopardy for the latter half of the year, the emergency rule must be revised and extended for the latter half of 1999 and beyond. Final action is scheduled for June 1999. Anticipated actions in that rule address: 1) spatial distribution of pollock catch in the B and C season, 2) continued reduction of the cap inside the critical habitat/catcher vessel operating area complex in the A1 and A2 seasons, 3) pollock trawl exclusion zones, 4) rollover provision of underharvested catch, 5)starting date for the B season in the Bering Sea, 6) Western/Central GOA management issues, and 7) Western/Central GOA trip limits.

Pacific Salmon. No species of Pacific salmon originating from freshwater habitat in Alaska are listed under the ESA. These listed species originate in freshwater habitat in the headwaters of the Columbia (Snake) River. During ocean migration to the Pacific marine waters a small (undetermined) portion of the stock extend into the Gulf of Alaska as far east as the Aleutian Islands. In that habitat they are mixed with hundreds to thousands of other stocks originating from the Columbia River, British Columbia, Alaska, and Asia. The listed fish are not visually distinguishable from the other, unlisted, stocks. Mortal take of them in the chinook salmon bycatch portion of the fisheries is assumed based on sketchy information on abundance, timing, and migration patterns.

NMFS designated critical habitat in 1992 (57 FR 57051) for the for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters, therefore, does not include any of the habitat where the groundfish fisheries are promulgated.

NMFS has issued two biological opinions and no-jeopardy determinations for listed Pacific salmon in the Alaska groundfish fisheries (NMFS 1994, NMFS 1995). Conservation measures were recommended to reduce salmon bycatch and improve the level of information about the salmon bycatch. The no jeopardy determination was based on the assumption that if total salmon bycatch is controlled, the impacts to listed salmon are also controlled. The incidental take statement appended to the second biological opinion allowed for take of one Snake River fall chinook and zero take of either Snake River spring/summer chinook or Snake River sockeye, per year. As explained above, it is not technically possible to know if any have been taken. Compliance with the biological opinion is stated in terms of limiting salmon bycatch per year to under 55,000 and 40,000 for chinook salmon, and 200 and 100 sockeye salmon in the BSAI and GOA fisheries, respectively.

Short-tailed albatross. The entire world population in 1995 was estimated as 800 birds; 350 adults breed on two small islands near Japan (H. Hasegawa, per. com.). The population is growing but is still critically endangered because of its small size and restricted breeding range. Past observations indicate that older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the GOA, although 1- and 2-year old juveniles may be present at other times of the year (FWS 1993). Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall--during the latter part of the second and the whole of the third fishing quarters.

Formal consultation on the effects of the groundfish fisheries on the short-tailed albatross under the jurisdiction of the FWS concluded that BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross and would result in the incidental take of up to two birds per year, but would not jeopardize the continued existence of that species (FWS 1989). Subsequent consultations for changes to the fishery that might affect the short-tailed albatross also concluded no jeopardy (FWS 1995, FWS 1997).

Seven albatross have been taken since 1983. Recent takes in the longline fishery include two in 1995, one in October 1996, and two in 1998. Both 1995 birds were caught in the vicinity of Unimak Pass and were taken outside the observers' statistical samples. Two birds were reportedly taken in the BSAI groundfish hook-and-line fishery for Pacific cod during September 1998. A Biological Opinion is being prepared by FWS for short-tailed albatross for the 1999-2000 groundfish fisheries. The 1997-98 opinion has been extended into 1999 until the 1999-2000 opinion has been completed.

Seabird avoidance devices have been required in the groundfish longline fishery since 1997. The 1998 takes were by vessels employing seabird avoidance devices. The Council is scheduled to take final action on further seabird avoidance measures at its April 1999 meeting.

Spectacled Eider. These sea ducks feed on benthic mollusks and crustaceans taken in shallow marine waters or on pelagic crustaceans. The marine range for spectacled eider is not known, although Dau and Kitchinski (1977) review evidence that they winter near the pack ice in the northern Bering Sea. Spectacled eider are rarely seen in U.S. waters except in August through September when they molt in northeast Norton Sound and in migration near St. Lawrence Island. The lack of observations in U.S. waters suggests that, if not confined to sea ice polyneas, they likely winter near the Russian coast (FWS 1993). Although the species is noted as occurring in the GOA and BSAI management areas, no evidence exists that they interact with these groundfish fisheries.

Conditions for Re-initiation of Consultation. For all ESA listed species, consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, new information reveals effects of the action that may affect listed species in a way not previously considered, the action is subsequently modified in a manner that causes an effect to listed species that was not considered in the biological opinion, or a new species is listed or critical habitat is designated that may be affected by the action.

2.3 Impacts on Marine Mammals Not Listed Under the ESA

Marine mammals not listed under the ESA that may be present in the GOA and BSAI include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (e.g., *Berardius bairdii* and *Mesoplodon spp.*)] as well as pinnipeds [northern fur seals (*Callorhinus ursinus*), and Pacific harbor seals (*Phoca vitulina*)] and the sea otter (*Enhydra lutris*).

None of the alternatives will affect takes of other marine mammals not listed under the ESA. Therefore, none of the alternatives are expected to have a significant impact on marine mammals not listed under the ESA.

2.4 Coastal Zone Management Act

Implementation of each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

2.5 Conclusions or Finding of No Significant Impact

The alternatives under the three actions in this analysis address the duration of the inshore/offshore allocation of pollock and Pacific cod in the Gulf of Alaska. Neither alternative impacts the status of the stocks of either resource. Therefore, none of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

_____ _____

Assistant Administrator for Fisheries, NOAA Date

3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES (E.O. 12866 considerations)

Executive Order 12866, "Regulatory Planning and Review," was signed on September 30, 1993, and established guidelines for promulgating and reviewing regulations. While the executive order covers a wide variety of regulatory policy considerations, the benefits and costs of regulatory actions are a prominent concern. Section 1 of the order deals with the regulatory philosophy and principles that are to guide agency development of regulations. The regulatory philosophy stresses that, in deciding whether and how to regulate, agencies should assess all costs and benefits of all regulatory alternatives. In choosing among regulatory approaches, the philosophy is to choose those approaches that maximize net benefits to society.

The regulatory principles in E.O. 12866 emphasize careful identification of the problem to be addressed. The agency is to identify and assess alternatives to direct regulation, including economic incentives, such as user fees or marketable permits, to encourage the desired behavior. When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. Each agency shall assess both the costs and benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation.

NMFS requires the preparation of a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new FMP or significantly amend an existing plan or regulations. The RIR is part of the process of preparing and reviewing FMPs and provides a comprehensive review of the changes in net economic benefits to society associated with proposed regulatory actions. The analysis also provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems. The purpose of the analysis is to ensure that the regulatory agency systematically and comprehensively considers all available alternatives so that public welfare can be enhanced in the most efficient and cost-effective way. The RIR addresses many of the items in the regulatory philosophy and principle of E.O. 12866.

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

1. Have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof, or

4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is "economically significant" if it is likely to result in the effects described in item (1) above. The RIR is designed to provide information to determine whether the proposed regulation is likely to be "economically significant."

3.1 Economic and Social Impacts of the Management Alternatives

3.1.1 ACTION 1: BSAI POLLOCK ALLOCATIONS

3.1.1.1 Alternative 1: No action.

Action 1, Alternative 1 would take no action on the current inshore/offshore directed fishery pollock allocations in the BSAI FMP. The no action alternative would not conform with Section 206 of the AFA which specifically mandates an allocation of ten percent of the pollock TAC for a directed fishing allowance for the CDQ program and stipulates specific allocations for the inshore and offshore sectors of the directed pollock fisheries. A such, the no action alternative is not consistent with Congressional intent and is therefore not a viable management alternative.

3.1.1.2 Alternative 2: Change the current inshore/offshore directed pollock allocations in the Bering Sea/Aleutian Islands FMP to conform with those allocations mandated by the American Fisheries Act of 1998.

Action 1, Alternative 2 would amend the BSAI FMP to reflect the BSAI CDQ and inshore/offshore directed pollock allocations as stipulated in the AFA, with a sunset date of December 31, 2004. The AFA clearly directs the Council and the Secretary to increase the pollock CDQ allocation from the existing 7.5 percent to 10 percent of the BSAI pollock TAC, and to change the directed fishery allocations to 50% to catcher vessels harvesting pollock for delivery to the inshore component; 40% to catcher processors harvesting pollock for processing by the offshore component; and 10% to catcher vessels harvesting pollock for processing by mother ships in the offshore component. The duration of the allocations, as specified in the Act, would expire in five years, though the CDQ allocation may be adjusted after two years. Section 213 of the AFA also mandates that the sunset date for these allocations be extended through December 31, 2004. Only Action 2, Alternative 2 meets the AFA requirements.

The current inshore/offshore directed pollock allocations identified in the BSAI FMP would be changed to the following allocations, with a sunset date of December 31, 2004:

10% of the BSAI pollock TAC to the Western Alaska community development program; and divide the remainder:

50% to catcher vessels harvesting pollock for delivery to the inshore component;
40% to catcher processors harvesting pollock for processing by the offshore component;
10% to catcher vessels harvesting pollock for processing by mother ships in the offshore component.

The AFA-mandated allocations will not be analyzed here. They were, however, included within the scope of the EA/RIR for Amendments 51/51 and are included here by reference.

3.1.2 ACTION 2: VESSEL REPLACEMENT

3.1.2.1 Alternative 1: No action.

Action 2, Alternative 1 would leave the current inshore/offshore directed fishery pollock vessel replacement restrictions in place for all vessels in the BSAI FMP. This would not conform with Section 206 of the American Fisheries Act of 1998 which specifically mandates certain conditions for replacing AFA-eligible vessels. Therefore, the no action alternative is not consistent with the Act and is therefore not a viable management alternative.

3.1.2.2 Alternative 2: Change restrictions in the BSAI FMP to conform with replacement requirements for eligible vessels under the American Fisheries Act of 1998.

Section 202 (a) (6) of the AFA mandated that in the event of the actual total loss or constructive loss, an AFA-eligible vessel may be replaced so long as the vessel was not lost due to willful misconduct of the owner or his agent. The replacement vessel must have been built in the US and if the vessel is (was) rebuilt, then that must also have taken place in the US. The replacement vessel must make a landing by the end of the third calendar year after the year the vessel is lost or destroyed. If the lost vessel was greater than 165 ft in registered length, of more than 750 gross registered tons, or has engines capable of producing more than 3,000 shaft horsepower, the replacement vessel must be of equal or lesser length, tons, and horsepower. If the lost vessel was less than 165 ft registered length, then the replacement vessel may exceed the original vessel's length, gross tons, and horsepower by 10 percent, but only up to the thresholds. The replacement vessel must also meet the US ownership provisions of the AFA.

The AFA restrictions for replacing vessels in the BSAI pollock fisheries are different from current replacement provisions implemented under the moratorium and LLP programs, which allow for a 20% upgrade or replacement only to vessels less than 125 ft. Only Action 2, Alternative 2 meets the AFA mandate on this issue to amend current replacement regulations regarding lost vessels to reflect the allowances under the Act for AFA-eligible vessels.

Length	Current regulations	AFA mandate
< 125 ft	20% increase	10% increase
125-165 ft	none	10%
>165 ft	none	none

Note that these provisions are more restrictive for AFA-eligible vessels than currently allowed in that it only allows a 10% increase in length while also being less restrictive because it does allow a vessel between 125 and 165 ft to increase its length, which is not allowed under current regulations. This new provision under Action 2, Alternative 2 does not allow for an upgrade for vessels greater than 125 ft (only replacement).

3.1.3 ACTION 3: GOA POLLOCK SUNSET DATE

3.1.3.1 Alternative 1: No action.

The status quo alternative would retain the current sunset date of December 31, 2001 for the inshore/offshore allocations for pollock and P. cod in the Gulf of Alaska. This means that the GOA allocations would expire three years prior to those for the BSAI. It has been Council intent since 1992 to retain the linkage for the inshore/offshore allocations for the BSAI and GOA. If the GOA inshore/offshore allocations were allowed to lapse, the management void could create the preemption problems envisioned when the amendments were originally approved and implemented. Action 3, Alternative 1 does not conform with Council intent and would not be a viable management alternative for this fishery.

3.1.2.2 Alternative 2: Extend the sunset date of the current pollock and Pacific cod allocations in the GOA FMP to conform with the date mandated for the Bering Sea/Aleutian Islands area in the American Fisheries Act of 1998.

Only Alternative 2 extends the current GOA allocations past the current sunset of December 31, 2001 for three additional years. The current sunset date of December 31, 2001, was specifically chosen to link with the sunset date for the BSAI allocations. The EA/RIR for Amendments 51/51 also contained specific language in the analysis for the GOA allocations to 'rollover' the GOA allocations without a sunset date. This recognized the acceptance and lack of controversy within the Council, fishing industry, environmentalists, and general public on the appropriateness of these allocations in the GOA. While voluminous public testimony was received on the BSAI allocations, none was received in opposition to the GOA allocations. Despite the general acceptance of the GOA allocations, the Council opted to 'rollover' the GOA allocations with a three-year sunset date to match the BSAI allocations. Action 2, Alternative 2, the Council's preferred alternative to extend the GOA inshore/offshore allocations through December 2004 is within the scope of the EA/RIR for Amendments 51/51. That analysis is included here by reference.

3.2 Administrative, Enforcement and Information Costs

No significant additional administrative, enforcement, or information costs are expected for any of the alternatives for the above actions.

4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

4.1 Economic Impact on Small Entities

The AFA mandates establishment of specific BSAI pollock allocations and their duration under Action 1, as well as replacement criteria of AFA-eligible vessels under Action 2. The expiration of the Council's GOA pollock and cod allocations were intended to coincide with those in the BSAI (Action 3). Therefore, the three actions in this analysis represent a combination of Congressional and Council intent. The basic purpose of the proposed measures is to maintain the 'status quo' - i.e., to maintain essentially the current distribution of BSAI and GOA pollock and GOA Pacific cod (and processing) among competing user groups.

Appendix 1 and Section 3 of the EA/RIR for Amendments 51/51 contains detailed descriptions of the numbers, types, and characteristics of vessels and processors operating in the BSAI pollock fisheries. Section 4 of that EA/RIR contains projections of economic impacts (changes in gross revenues, for example). Section 8 contains the RFA analysis for the BSAI inshore/offshore alternatives. Only catcher vessels involved in the BSAI

pollock fisheries were determined to be small entities as defined by the RFA. Processors and catcher/processors were not defined as small entities. These determinations pertain to Actions 1 and 2.

Section 2.4.3 of the EA/RIR for Amendments 51/51 contains a similar description of the GOA pollock and P. cod fleet. In that RFA analysis, none of the affected individuals were determined to be significantly affected because the GOA sunset alternatives positively impacted all individuals affected by Action 3.

The RFA analyses from Amendments 51/51 are incorporated here by reference in their entirety.

4.2 Initial Regulatory Flexibility Act

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

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

4.2.1 Requirement to Prepare an IRFA

If a proposed rule is expected to have a significant economic impact on a substantial number of small entities, an initial regulatory flexibility analysis must be prepared. The central focus of the IRFA should be on the economic impacts of a regulation on small entities and on the alternatives that might minimize the impacts and still accomplish the statutory objectives. The level of detail and sophistication of the analysis should reflect the significance of the impact on small entities. Under 5 U.S.C., Section 603(b) of the RFA, each IRFA is required to address:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply (including a profile of the industry divided into industry segments, if appropriate);
- A description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;

- An identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap or conflict with the proposed rule;
- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the Magnuson-Stevens Act and any other applicable statutes and that would minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:

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

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

    3. The use of performance rather than design standards;

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

4.2.2 What is a Small Entity?

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

Small businesses: Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominate in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States; and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor...A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the US including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of $ 3 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or less persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the $3 million criterion for fish harvesting operations. Finally a wholesale business servicing the fishing industry is a small businesses if it employs 100 or less persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or

substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

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

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

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

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

4.2.3 What is a Substantial Number of Small Entities?

In determining the scope, or 'universe,' of the entities to be considered in making a significance determination, NMFS generally includes only those entities, both large and small, that can reasonably be expected to be directly or indirectly affected by the proposed action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this criterion. NMFS then determines what number of these directly or indirectly affected entities are small entities. NMFS generally considers that the 'substantial number' criterion has been reached when more than 20% of those small entities affected by the proposed action are likely to be significantly impacted by the proposed action. This percentage is calculated by dividing the number of small entities impacted by the action by the total number of small entities within the universe. The 20% criterion represents a general guide: there may be instances when, in order to satisfy the intent of the RFA, an IRFA should be prepared even though fewer than 20% of the small entities are significantly impacted.

4.2.4 What is a Significant Economic Impact?

NMFS has determined that an economic impact is significant for the purposes of the RFA if a regulation is likely to result in:

- more than a 5% decrease in annual gross revenues,
- annual compliance costs (e.g., annualized capital, operating, reporting) that increase total costs of production by more than 5%,
- compliance costs as a percent of sales that are 10 or more percent higher for small entities than compliance costs for large entities,
- capital costs of compliance that represent a significant portion of capital available to small entities, considering internal cash flow and external financing capabilities, or
- the regulation is likely to result in 2 or more percent of the small entities affected being forced to cease business operations.

Note that these criteria all deal with adverse or negative economic impacts. NMFS and certain other Federal agencies interpret the RFA as requiring the preparation of an IRFA only for proposed actions expected to have significant adverse economic impacts on a substantial number of small entities over the short, middle, or long term. Most regulatory actions are designed to have net benefits over the long term; however, such actions are not shielded from the RFA's requirement to prepare an IRFA if significant adverse economic impacts on a substantial number of small entities are expected in the short or longer term. Thus, if any action has short-term significant adverse impacts on a substantial number of small entities, even though it will benefit small entities in the long term, an IRFA must be prepared.

4.2.5 Small Entities in the BSAI Pollock Fishery

The BSAI pollock sector industry profiles prepared for the Council's June 1997 meeting and contained in Appendix 1 of Amendments 51/51 identify: (1) the number of operations, by size, capacity, mode of processing, and product form; (2) catch, bycatch, discards, and utilization; (3) relative "operational dependence" deriving from BS/AI pollock fisheries; (4) product mix and output quantities of pollock; (5) price, by product form and markets; (6) employment patterns; (7) linkages to CDQ apportionments; and (8) ownership interests and patterns.

To identify the number and type of business concerns participating in the BS/AI pollock fishery that meet the definition "small entities," the operations described in that appendix must be measured against the size and affiliation standards outlined in Section 4.2.2. While available data on ownership and affiliation patterns in the BS/AI pollock fishery are not sufficiently detailed to discern whether each individual business concern meets the definition of "small entity," data available in the sector profiles do allow some general conclusions on the number of small entities in each industry component. These general conclusions are displayed in Table 1 for the base year 1996 (from Table 8.1.6 from the EA/RIR for Amendments 51/51).

Table 1 Estimated numbers and types of small entities participating in the BS/AI pollock fishery in 1996

Industry component or type of entity	*Small*	*Large*	*Total*
Inshore sector			
Inshore processors	0	8	8
Catcher-boats < 125 ft LOA	37	15	52
Catcher-boats ≥ 125 ft LOA	2	15	17
Offshore sector			
"True" motherships	0	3	3
Catcher-processors	0	31	31
Catcher-boats < 125 ft LOA	21	5	26
Catcher-boats ≥ 125 ft LOA	2	0	2
Vessels delivering to both sectors			
Catcher-boats < 125 ft LOA	1	13	14
Catcher-boats ≥ 125 ft LOA	0	8	8
Small organizations (CDQ groups)	6	0	6
Government jurisdictions (cities)	60	1	61

Inshore processors. Four of the 8 inshore processors operating in the BS/AI pollock fishery are either wholly owned subsidiaries or close affiliates of Japanese multi-national corporations. Due to their affiliation with large foreign entities with more than 500 employees worldwide, none of these processors is a small entity. Of the remaining 4 inshore processors, 3 are owned by US companies that employ more than 500 persons in all their affiliated operations, and therefore cannot be considered small entities. The remaining inshore processor has been identified as closely affiliated with its 5 delivering catcher-boats and the gross annual receipts of the affiliated entities taken together (the processor and its 5 affiliated catcher-boats) exceed the $3 million criterion for fish harvesting operations. Therefore, none of the inshore processors in the BS/AI pollock fishery appear to meet the criteria for small entities.

Inshore catcher-boats. The sector profiles provided in Appendix 1 identify 119 catcher-boats altogether: 69 operate in the inshore sector exclusively, 28 operate in the offshore sector exclusively, and 22 operate in both sectors. Of the 91 catcher boats that operate exclusively or partly in the inshore sector, the ownership data in the sector profiles identify 26 vessels owned in whole or part by inshore processors. These 26 vessels may be considered to be affiliated with their respective inshore processor owners and cannot therefore be considered small entities because none of the inshore processors in the BSAI pollock fishery themselves are small entities. An additional 5 catcher boats have been identified as closely affiliated with an inshore floating processor and these 5 catcher boats taken together with their affiliated processor exceed the $3 million criterion for fish harvesting operations and are therefore not believed to be small entities. Furthermore, an additional 20 catcher-boats have ownership affiliations with other catcher-boats or catcher processors. The gross annual receipts of each of these groups of affiliated catcher boats is believed to exceed the $3 million criterion for small entities when all their fisheries earnings are taken as a whole. The remaining 40 catcher boats operating exclusively or partly in the inshore sector are believed to qualify as small entities.

Offshore catcher-boats. Twenty eight catcher boats operate in the offshore sector exclusively and 22 operate in both sectors for a total of 50 offshore catcher boats. Of these, 13 have ownership affiliations with large inshore or offshore processors and; therefore, do not meet the $3 million criterion for small entities. An additional 13 catcher-boats have ownership affiliations with other vessels or operations that taken together with their affiliated entities are believed to exceed the $3 million gross receipts criterion for small entities when all their fisheries earnings are taken as a whole. The remaining 24 catcher boats operating exclusively or partly in the offshore sector are believed to qualify as small entities.

"True" motherships. Three "true" motherships operate in the offshore sector. All 3 "true" motherships have ownership or business affiliations with large Japanese-owned processing companies, and are further affiliated with some of their delivering catcher boats. Taken together with their affiliated entities, none of the "true" motherships are believed to meet the criteria for small entities.

Offshore processors. To qualify as a small entity, a catcher processor must be independently owned and operated, have no more than 49% foreign ownership, and have gross annual receipts of less than $3 million. None of the offshore catcher processors operating in the BSAI pollock fishery appear to meet the criteria for small entities.

Small organizations. The 6 CDQ groups participating in the BSAI pollock fishery are the only small organizations that have been identified as directly affected by the inshore/offshore alternatives under consideration. Impacts to these small organizations are analyzed in detail in Appendix 3.

Small governmental jurisdictions. The governmental jurisdictions with direct involvement in the BSAI pollock fishery are described in detail in Appendix 2. In Appendix 3, 56 CDQ communities and 4 Alaska non-CDQ communities (Unalaska, Sand Point, King Cove, and Kodiak) are identified as small governmental jurisdictions with direct involvement in the BSAI pollock fishery. The remaining government jurisdiction with direct involvement in the BSAI pollock fishery, Seattle, does not qualify as a small governmental jurisdiction.

Directly affected vessels, plants, and companies

As more thoroughly described in Chapter 11 of Amendments 61/61, the entities directly affected by the BSAI pollock allocations (Action 1) and replacement restrictions (Action 2) are a very well defined group as defined by the AFA. Harvesters and processors eligible for the BSAI pollock fisheries are either named specifically in the AFA or qualify by meeting specific criteria in the AFA. The Act specifies by name 20 catcher processors (offshore sector), owned by nine different companies, that are eligible to continue participating in the pollock fisheries. The Act further specifies three motherships which are eligible to process the mothership

allocation under the Act, and lists 19 catcher vessels which are eligible to fish and deliver that sector's allocation (2 others not specified are eligible through landings history).

For the inshore sector, the Act does not list the eligible plants and catcher vessels by name; rather, it stipulates the landing/processing history necessary for eligibility. For catcher vessels that is >250 mt delivered onshore in 1996, or 1997, or 1998 through September 1, or >40 mt for vessels under 60'. There are 113 catcher vessels eligible in the mothership and inshore categories (92 for inshore delivery, 7 for mothership delivery, and 14 which qualify for both). A shoreside processor must have processed >2,000 metric tons in both 1996 and 1997 to be eligible, except that processors who did less than 2,000 mt in both 1996 and 1997 would also be eligible, but restricted from processing more than 2,000 mt in any future year under the Act. Eight plants, owned by 7 companies fall under these definitions.

Based on information from Amendments 61/61 Chapter 10, as well as from information contained in Amendments 51/51 (the inshore/offshore 3 analysis) it appears that the only directly affected entities which would be classified as 'small entities' for Actions 1 and 2 would be a subset of the 113 catcher vessels described above. Essentially this would be the approximately 50 catcher vessels that are predominately independently owned. The remaining entities, including catcher/processors, motherships, shore plants, and catcher vessels owned by larger companies would exceed the criteria for defining small entities.

Indirectly impacted entities

Up to 60 coastal communities in Alaska appear to meet the definition of small entity for the purpose of the IRFA and could be impacted by Actions 1 and 2.

Taking BSAI and GOA groundfish and crab fisheries into account, there are as many as 1,300 additional catcher vessels which would likely qualify as small entities and which would be indirectly impacted by the proposed actions. This includes both fixed gear and trawl fishing vessels, ranging from 30' to over 100' in length, many of which are independently owned and operated.

4.2.6 Final Regulatory Flexibility Analysis (FRFA)

When an agency issues any final rule, it must either prepare an FRFA or certify that the rule will not have a significant economic impact on a substantial number of small entities. The FRFA must discuss the comments received, the alternatives considered and the rationale for the final rule. Each FRFA must contain:

- A succinct statement of the need for, and objectives of, the rule;
- A summary of significant issues raised by the public comments in response to the IRFA, the agency's response to those comments, and a statement of any changes made to the rule as a result of the comments;
- A description and estimate of the number of small entities to which the rule will apply, or an explanation of why no such estimate is available;
- A description of the reporting, recordkeeping, or other compliance requirements of the rule; and
- A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency that affect the impact on small entities was rejected.

The last item is the most notable change in the requirements for a FRFA under the 1996 amendments to the RFA. Previously, an agency had only to describe each significant alternative it had considered that could minimize the significant economic impact of the rule and provide a statement why each had been rejected. Under the 1996 amendments, an agency must provide an explanation of why it rejected significant alternatives to the chosen course that merely affect the economic impact of the rulemaking on small entities. Further, an agency must describe the steps it has taken to minimize the significant economic impact of the alternative it has chosen, including factual, legal, and policy reasons explaining why the agency selected the preferred alterative.

The FRFA will be completed by NMFS after opportunity for public comment on the proposed rule and IRFA.

5.0 SUMMARY AND CONCLUSIONS

The American Fisheries Act of 1998 (AFA) significantly changed the management regime of the pollock fisheries in the Bering Sea, Aleutian Islands, and Gulf of Alaska. The AFA substantially changed the statutory climate in which the Council was acting during its deliberation for final action of I/O3 in June 1998. Along with other actions affecting the BSAI pollock fishery, it allocated 10% of the BSAI pollock TAC to the Western Alaska community development program (increased from 7.5%) and divided the remaining directed pollock fishery allocation: 50% to catcher vessels harvesting pollock for delivery to the inshore component; 40% to catcher processors harvesting pollock for processing by the offshore component; and 10% to catcher vessels harvesting pollock for processing by a new mothership component. As a result of AFA, on December 15, 1998, the Secretary disapproved the inshore/offshore allocations recommended by the Council in BSAI Amendment 51 for the period January 1, 1999 through December 31, 2001 and substituted the AFA percentages for 1999. Changing these percentages through 2004 in the BSAI FMP to conform with the AFA is the subject of Action 1.

AFA also signed into law changes to replacement restrictions for AFA-eligible vessels. This is the subject of Action 2. Action 3 is the sole action under consideration under GOA Amendment 62. This action is not mandated under the AFA, but conforms with Council intent to mirror the allocation sunset dates for pollock and Pacific cod allocations in the GOA and BSAI.

During its discussion of preparation of this analysis, the Council indicated that the actions under Alternative 2 for Actions 1, 2, and 3 were its preferred alternatives.

None of the alternatives are likely to significantly affect the quality of the human environment. None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866. However, the FRFA will be completed by NMFS after opportunity for public comment on the proposed rule and IRFA.

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APPENDIX VI

SUPPORTING STATEMENT FOR COLLECTION OF INFORMATION AMERICAN FISHERIES ACT VESSEL AND PROCESSOR PERMIT APPLICATIONS FOR THE ALASKA BERING SEA/ALEUTIAN ISLANDS POLLOCK FISHERY

OMB 0648-0393

Prepared by
National Marine Fisheries Service
Alaska Region

December, 1999

INTRODUCTION

Participation in the U.S. groundfish fisheries in the exclusive economic zone (EEZ) off Alaska grew faster than anticipated after the cessation of the foreign groundfish harvesting operations. This rapid expansion in the U.S. fishery placed increased pressure on the resource and eventually led to overcapitalization and a dangerous "race for fish" in the U.S. groundfish fisheries off Alaska.

On October 21, 1998, the President signed into law the American Fisheries Act (AFA), which imposed major structural changes on the Bering Sea and Aleutian Islands Management Area (BSAI) pollock fishery which is managed by National Marine Fisheries Service (NMFS), Alaska Region. These changes include:

- Buyout and scrapping of nine pollock factory trawlers.
- Allocation of 10 percent of the BSAI pollock total allowable catch quota (TAC) to the Western Alaska Community Development Quota (CDQ) Program (see OMB 0648-0269).
- Allocation of the remaining BSAI pollock TAC by processing sector: 50 percent to the inshore sector; 40 percent to the catcher processor (factory trawler) sector, and 10 percent to the offshore mothership sector.
- Prohibition on entry of new vessels and processors into the BSAI pollock fishery.
- Specific criteria for vessels and processors to participate in the various pollock sector fisheries, including license limitation program (LLP) qualification (see OMB 0648-0334).
- Facilitate the creation of fishing vessel cooperatives by participants from the inshore, mothership, and catcher/processor sectors.

- Allocations of pollock to individual inshore catcher vessel cooperatives formed around each AFA inshore processor. Each cooperative is required to deliver at least 90 percent of its allocation to its "home" processor.
- Protection measures or "sideboards" to prevent BSAI pollock fishing vessels and processors from expanding their level of participation in other fisheries under the authority of the North Pacific Fishery Management Council.

Integral AFA elements are that it creates a closed class of vessels and processors that are eligible to participate in the BSAI pollock fishery and imposes restrictions on the ability of such AFA-eligible vessels and processors to participate in other fisheries. In some instances, specific vessels are listed by name in the AFA. In other instances, the AFA simply establishes qualifying criteria and requires that the Secretary of the Department of Commerce (the Secretary) identify and license AFA-authorized vessels and processors using the qualifying criteria and procedures set out in the AFA. To implement the intent of Congress as expressed in the AFA, NMFS is required to create a new set of AFA vessel and processor permits and establish a new family of application forms that AFA-eligible vessels and processors must use when applying to NMFS for AFA fishing and processing permits.

JUSTIFICATION

1. Need to Conduct the Information Collection

It is NMFS' intention to include this collection-of-information into the 0648-0206. The purpose of this collection-of-information is to allow NMFS to administer new AFA fishing, processing, and cooperative permits for the BSAI pollock fishery through application form requirements for the participants to identify and permit the vessels and processors that are eligible to participate in the BSAI pollock fishery by requiring the owners of vessels and processors to submit evidence of their qualification to participate in the BSAI pollock fishery. The NMFS Federal fisheries and processor permit systems already collects some information from the owners of vessels and processors. However, the information currently collected to administer Federal fisheries and processor permits is not adequate to administer new AFA permits because the current permit systems are not based on catch histories.

In response to the closed classes of vessels and processors established by the AFA, and fishing cooperatives authorized by the AFA, NMFS will identify and permit the participants through four separate applications plus another application to request replacement of an AFA qualified catcher vessel, catcher/processor, or mothership in the event of total or constructive loss of the qualified vessel. AFA vessel and processor permits are valid for the duration of the AFA and will expire on December 31, 2004. AFA inshore cooperative permits are valid only for the fishing year for which issued, and are renewable on an annual basis.

AFA Catcher Vessel Permit.

A catcher vessel may be qualified to deliver BSAI pollock to an AFA catcher/processor or to one or both of a mothership or shoreside processor (inshore). All AFA catcher vessels that are qualified to deliver pollock will complete the same catcher vessel permit application.

Catcher vessels delivering to inshore processor. A catcher vessel can qualify for this category if: (1) It is a LLP-qualified catcher vessel determined by the Secretary to have delivered more than 250 metric tons (mt) of pollock for processing by the inshore sector in the Bering Sea or Aleutian Islands in

1996, or 1997, or between January 1 through September 1 of 1998; or (2) It is an LLP-qualified catcher vessel less than 60 ft length overall that delivered at least 40 round weight mt of pollock for processing by the inshore sector in the Bering Sea or Aleutian Islands in 1996, or 1997, or between January 1 through September 1 of 1998.

Catcher vessel delivering to motherships (offshore sector). A catcher vessel can qualify for this category if: (1) It is one of 19 individual catcher vessels listed in the AFA section 280(c) as eligible to harvest pollock for processing by eligible motherships; or (2) It is an LLP-qualified catcher vessel determined by the Secretary to have delivered more than 250 mt of Bering Sea or Aleutian Islands pollock for processing by motherships in the offshore component in 1996, or 1997, or between January 1 through September 1 of 1998.

Catcher vessels delivering to AFA catcher/processors (offshore sector). A catcher vessel can qualify for this category if: (1) It is one of 7 individual catcher vessels listed in the AFA section 280(b) as eligible to harvest pollock for processing by eligible AFA catcher/processors; or (2) It is an LLP-qualified catcher vessel determined by the Secretary to have delivered at least 250 mt of Bering Sea or Aleutian Islands pollock with at least 75 percent of 1997 BSAI pollock harvested delivered to catcher/processors for processing by the offshore component.

AFA Catcher/processor permit:

A catcher/processor qualifies for this category if: (1) It is one of 20 individual catcher/processors listed in AFA section 280(a) as eligible to harvest and process pollock in the BSAI directed pollock fishery; or (2) It is an additional LLP-qualified catcher/processor determined by the Secretary to have harvested more than 2,000 mt of pollock in the 1997 directed pollock fishery, except that such vessels are prohibited from harvesting in the aggregate a total of more than 0.5% of the pollock TAC allocated to the catcher/processor sector. This provision of the AFA took effect on January 1, 1999 and NMFS has already issued AFA permits to all AFA catcher/processors. These permits would be renewed automatically by NMFS. Therefore, the AFA catcher/vessel permit requirement will not generate a collection of information requirement and is not included in this request.

AFA Mothership and inshore processor permit.

Motherships. A mothership can qualify for this category if it is one of 3 individual motherships listed in AFA section 280(d) as eligible to process pollock as an AFA mothership. The AFA also places restrictions on crab processing by AFA motherships that receive pollock harvested by catcher vessels in a catcher vessel cooperative.

Inshore processors. A inshore processor can qualify to receive and processor pollock harvested in the BSAI directed pollock fishery if: (1) It is one determined by the Secretary to have processed more than 2,000 mt of pollock in 1996 or 1997; or (2) It is determined by the Secretary to have processed pollock harvested in the directed pollock fishery in 1996 or 1997, but to have processed less than 2,000 mt of pollock in each year, except that effective January 1, 2000, each such inshore processor may not process more than 2,000 mt of BSAI pollock in any year.

AFA Inshore cooperative permit.

If the owners of 80 percent or more of the catcher vessels delivering to a particular inshore processor form a fishing vessel cooperative and the contract implementing the fishery cooperative meets restrictions listed below, the AFA will issue a cooperative permit:

(1) The Secretary allocate an annual share of the BSAI pollock TAC for exclusive harvest by members of the cooperative;

(2) The cooperative share is equivalent to the aggregate total amount of pollock harvested by such catcher vessels in the BSAI pollock directed fishery for processing by the inshore component during 1995, 1996, and 1997 relative to the aggregate total amount of pollock harvested in the directed pollock fishery for processing by the inshore component during such years;

(3) The vessels in the cooperative deliver at least 90 percent of their pollock allocation to the processor named in their cooperative contract; and

(4) The catcher vessels in the cooperative are prohibited in the aggregate from exceeding their annual allocation of BSAI pollock.

AFA permit for replacement vessel.

A operator would complete this application to request replacement of an AFA qualified catcher vessel, catcher/processor, or mothership in the event of total or constructive loss of the qualified vessel as authorized at AFA section 208(g).

2. How, by whom, how frequently, and for what purpose the information will be used.

The information will be collected on paper application forms to be notarized and submitted by participants to NMFS' Restricted Access Management Program, Juneau, Alaska.. The completed applications will allow NMFS to uniquely identify the vessel and owner of the vessel and to verify and make determinations about a vessel's qualification to fish for pollock under the AFA. AFA vessel and processor permits are valid for the duration of the AFA and will expire on December 31, 2004. AFA inshore cooperative permits are valid only for the fishing year for which issued, and are renewable on an annual basis.

a. AFA Catcher vessel application

A separate application must be completed for each associated mothership or inshore processor.

BLOCK A - Vessel information

Vessel name

Alaska Department of Fish and Game (ADF&G) Vessel Registration Number and U.S. Coast Guard (USCG) documentation number

Vessel telephone number (if any)

Grossitons, shaft horsepower, and registered length (in feet)

BLOCK B - Owner information

Owner name. If more than one owner, list principal owner first

Social security number (voluntary) or tax identification number of owner

Complete permanent business mailing address, including state and zip code. If permit must be sent to a different address, attach a note with alternate address.

Business telephone, FAX number, and E-mail address of vessel owner.

Managing company name (if any)

BLOCK C - Vessel AFA qualification information

Under the AFA a vessel can be qualified to deliver BSAI Pollock to an AFA Catcher/Processor or to one or both of the following: AFA Mothership or AFA Inshore processor. Select the catcher vessel permit type(s) for which you are applying. All claims of catch history are subject to NMFS verifications.

Catcher vessel delivering to AFA Catcher/processors

1. Is this vessel listed by name in the AFA section 208(b) [see below]? Indicate YES or NO.
   (1) AMERICAN CHALLENGER (USCG number 615085);
   (2) FORUM STAR (USCG number 925863);
   (3) MUIR MILACH (USCG number 611524);
   (4) NEAHKAHNIE (USCG number 599534);
   (5) OCEAN HARVESTER (USCG number 549892);
   (6) SEA STORM (USCG number 628959);
   (7) TRACY ANNE (USCG number 904859); and

2. If NO, in 1997 did this vessel deliver at least 250 mt of BSAI pollock and at least 75 percent of it's 1997 BSAI pollock catch to offshore catcher/processors? Indicate YES or NO.

Catcher vessel delivering to AFA Motherships

1. Is this vessel listed by name in the AFA section 208(c) [see below]? Indicate YES or NO.
   (1) ALEUTIAN CHALLENGER (USCG number 603820);
   (2) ALYESKA (USCG number 560237);
   (3) AMBER DAWN (USCG number 529425);
   (4) AMERICAN BEAUTY (USCG number 613847);
   (5) CALIFORNIA HORIZON (USCG number 590758);
   (6) MAR-GUN (USCG number 525608);
   (7) MARGARET LYN (USCG number 615563);
   (8) MARK I (USCG number 509552);
   (9) MISTY DAWN (USCG number 926647);
   (10) NORDIC FURY (USCG number 542651);
   (11) OCEAN LEADER (USCG number 561518);
   (12) OCEANIC (USCG number 602279);
   (13) PACIFIC ALLIANCE (USCG number 612084);
   (14) PACIFIC CHALLENGER (USCG number 518937);
   (15) PACIFIC FURY (USCG number 561934);
   (16) PAPADO II (USCG number 536161);
   (17) TRAVELER (USCG number 929356);
   (18) VESTERAALEN (USCG number 611642);
   (19) WESTERN DAWN (USCG number 524423)

2. If NO, did this vessel deliver at least 250 mt of BSAI pollock to AFA listed motherships in 1996, or 1997, or between January 1 through September 1, of 1998? Indicate YES or NO.

Catcher vessel delivering to AFA Inshore processor

1. Did this vessel deliver to inshore processors at least 250 mt of pollock harvested in the BSAI directed pollock fishery in 1996, or 1997, or between January 1 through September 1, of 1998? Indicate YES or NO.
2. If NO, is this vessel less than 60 feet LOA, and did it deliver to inshore processors at least 40 mt of BSAI pollock in 1996, or 1997, or between January 1 through September 1, of 1998? Indicate YES or NO.

BLOCK D - Vessel Crab Activity Information.

Under regulations implementing the AFA, a vessel is ineligible to participate in any BSAI crab fishery unless that specific vessel participated in a specific crab fishery during certain qualifying years. The purpose of this section is to determine your vessel's eligibility to participate in BSAI crab fisheries. All claims of catch history are subject to NMFS verification.

Did this vessel make one or more legal landings in the following BSAI directed crab fisheries in the years indicated? Indicate YES or NO.

Bristol Bay red king crab - To obtain AFA authorization to participate in the Bristol Bay red king crab fishery, a vessel must have documented a landing of any BSAI king or Tanner crab species in 1996, 1997, or on or before February 7, 1998. Indicate if this vessel had such a landing in that fishery.

St. Matthew blue king crab - To obtain AFA authorization to participate in the St. Matthew blue king crab fishery, a vessel must have documented a landing in that fishery in 1995, 1996, or 1997. Indicate if this vessel had at least one such a landing.

Pribilof Islands red/blue king crab - To obtain AFA authorization to participate in the Pribilof Islands red/blue king crab fishery, a vessel must have documented a landing in that fishery in 1995, 1996, or 1997. Indicate if this vessel had at least one such landing.

Aleutian Islands (Adak) brown king crab - To obtain AFA authorization to participate in the Aleutian Islands brown king crab fishery, a vessel must have documented a landing in each of the last 2 years the fishery was open. Indicate if this vessel had such brown king crab landings in the 1997/1998 and 1998/1999 fisheries.

Aleutian Islands (Adak) red king crab - To obtain AFA authorization to participate in the Aleutian Islands red king crab fishery, a vessel must have documented a landing in each of the last 2 years the fishery was open. Indicate if this vessel had such red king crab landings in the 1995/1996 and 1998/1999 fisheries.

Opilio Tanner crab - To obtain AFA authorization to participate in the BSAI *Opilio* Tanner crab fishery, a vessel must have documented a landing in that fishery in 4 of more of the 10 years 1988 - 1997. Indicate if this vessel had such landings.

C. bairdi Tanner crab - To obtain AFA authorization to participate in the BSAI *C. bairdi* Tanner crab fishery, a vessel must have documented a landing in that fishery in 1995 and 1996. Indicate if this vessel had such a landing.

BLOCK E - Exemptions from AFA catcher vessel groundfish sideboard directed fishing closures.
An AFA catcher vessel permit may contain exemptions from certain groundfish sideboard directed fishing closures. To determine your vessel's eligibility for exemptions, indicate YES or NO.

(1) BSAI Pacific cod. For a catcher vessel to qualify for an exemption from AFA catcher vessel sideboards in the BSAI Pacific cod fishery, the catcher vessel must be less than 125 ft LOA, have harvested a combined total of less than 5,100 mt of BSAI pollock, and have made 30 or more legal landings of Pacific cod in the BSAI directed fishery for Pacific cod during the combined years 1995, 1996, and 1997.
(2) GOA groundfish species. For a catcher vessel to qualify for an exemption from AFA catcher vessel sideboards in the GOA groundfish fisheries, the catcher vessel must be less than 125 ft LOA, have harvested a combined total of less than 5,100 mt of BSAI pollock and made 40 or more legal landings of GOA groundfish during the combined years 1995, 1996, and 1997.

BLOCK F - Certification of applicant and notary

Signature and printed name of owner and date of signature
Signature and notary stamp or seal of notary public
Date notary commission expires

b. AFA Permit for Replacement Vessel Application

This application is used to request replacement of an AFA qualified catcher vessel, catcher/processor, or mothership in the event of total or constructive loss of the qualified vessel.

BLOCK A - Identification of Lost AFA Qualified Vessel

Vessel name

ADF&G vessel registration number, USCG documentation number, and AFA permit number

Gross tons, shaft horsepower, and registered length from USCG documentation

Owner(s) name; if more than one owner, primary owner first

Social security (voluntary) or Tax ID number of owner

Business mailing address, telephone number, FAX number, and e-mail address

Indicate the last year in which this vessel harvested or processed pollock in a BSAI directed pollock fishery

How was the vessel lost or destroyed? A USCG form 2692 or insurance papers must be submitted to verify the claim.

BLOCK B - Identification of Replacement Vessel

Vessel name

ADF&G vessel registration number and USCG documentation number

Gross tons, shaft horsepower, registered length, net tons, and current length overall (in feet) from USCG documentation

Federal Fisheries Permit number, if known.

Owner(s) name; if more than one, primary owner first

Social security (voluntary) or Tax ID number

Business mailing address, telephone number, FAX number, and e-mail address

Indicate YES or NO whether the vessel was built in the U.S.

Indicate YES or NO whether the vessel has ever been rebuilt? If YES, was it rebuilt in the United States?

BLOCK C - Certification of applicant and notary

Signature and printed name of owner and date of signature

Signature and notary stamp or seal of notary public

Date notary commission expires

c. AFA Inshore Cooperative Permit

BLOCK A - Cooperative Contact Information.

Cooperative name

Name of Cooperative representative

Cooperative business mailing address (P.O. Box or street, city, state, zip code)

Cooperative business telephone number, FAX number, and e-mail address

BLOCK B - Cooperative Designated Processor Information

If a shoreside processor, name and physical location of AFA Inshore Processor to whom the cooperative will deliver at least 90% of its BSAI pollock.

If a stationary floating processor, name and single geographic location (latitude and longitude) at which the processor will process BSAI pollock under the AFA.

Federal processor Permit number of the Inshore Processor

BLOCK C - Required Elements of Cooperative Contract

Indicate **YES** or **NO** whether a copy is attached of the cooperative contract showing the signatures of all parties and vessel owners.

Indicate **YES** or **NO** whether a copy is attached of a letter requesting a business review letter on the fishery cooperative from the Department of Justice and any response to such request? **NOTE: This application is not valid and cannot be processed without the submission of a copy of this information.**

Indicate **YES** or **NO** if the cooperative contract was signed by the owners of at least 80% of the qualified catcher vessels that delivered BSAI pollock for processing to the processor in Block B in the directed BSAI pollock fishery, in the year prior to that in which this cooperative would be effective. **If NO, this Cooperative cannot be authorized.**

Indicate **YES** or **NO** whether or not each catcher vessel listed in Block D, during the year prior to the year in which the cooperative will be in effect, deliver more BSAI pollock to the processor listed in B(1) than to any other AFA inshore processor.

Indicate **YES** or **NO** whether or not each catcher vessel listed in Block D, is otherwise eligible to fish for groundfish in the BSAI, has an AFA catcher vessel permit with an inshore endorsement, and has no permit sanctions against it that would prevent it from fishing for groundfish in the BSAI.

BLOCK D - Vessel Information

All cooperative member vessels must be listed. List complete information for each cooperative member catcher vessel (attach additional pages if necessary).

Vessel Name - Enter complete vessel name as displayed in official documentation.
ADF&G Vessel Registration Number - Enter 5-digit ADF&G number (example: 51233).
U.S. Coast Guard Number - Enter USCG documentation number (example: 566722).
AFA Permit Number - Enter the AFA Permit Number.

BLOCK E - Certification of notary and applicant

Signature and printed name of cooperative representative and date of signature
Signature and notary stamp or seal of notary public

Faxed applications will not be processed.

d. AFA mothership & inshore processor application

A separate application must be completed for each mothership or inshore processor.

BLOCK A - Type of permit requested

Type of processor.

Check Mothership or Inshore Processor (Stationary Floating Processor or Shoreside Processor)..

If a mothership, must be one of the 3 named in the AFA, section 208(d) (see below):

Excellence, Golden Alaska, or Ocean Phoenix.

If an inshore processor, indicate the choice that describes round weight amounts of pollock you processed from the directed BSAI pollock fishery in 1996 and 1997.

more than 2,000 round metric tons of BSAI pollock during both years 1996 and 1997; or

less than 2,000 round metric tons of BSAI pollock during either or both years, 1996 or 1997

AFA Cooperative endorsement.

Do you intend to receive fish for processing from an AFA COOPERATIVE: indicate YES or NO.

If YES, you must also complete Block E.

If the information provided in Block E changes, you must submit an amended application within 30 days of the date of the change.

BLOCK B - Mothership Information

Complete Block B if the permit is for a Mothership .

Mothership name,

ADF&G processor code,

USCG documentation number and Federal fisheries permit number

Gross tons, shaft horsepower, and registered length (feet) from USCG documentation/registration

BLOCK C - Shoreside Processor Information

Complete Block C if a shoreside processor or a stationary floating processor.

A **shoreside processor** means "any person or vessel that receives unprocessed fish, except catcher/processors, motherships, buying stations, restaurants, or persons receiving fish for personal consumption or bait".

A **stationary floating processor** means a vessel of the United States operating as a processor in Alaska State waters that remains anchored or otherwise remains stationary at a single geographic position while receiving or processing groundfish harvested in the GOA or BSAI.

1. Shoreside Processor Name - Enter complete name of shoreside processor or stationary floating processor as displayed in official documentation.
2. Federal Processor Permit Number - Enter the Federal Processor Permit number.
3. ADF&G Processor Code – Enter ADF&G Intent to operate processor license number (example: F12345).
4. Enter complete business street address, including street number, city, state and zip code.
5. Business Telephone Number - Enter business telephone number, including area code.
6. Business FAX Number - Enter business FAX number, including area code.
7. Business e-mail Address - Enter e-mail address, if any.

In addition, if a floating stationary processor, write "see BLOCK C" in the mothership name box and add the following information to BLOCK B.

USCG documentation number,

gross tons,

shaft horsepower,

registered length overall (in feet)

BLOCK D - Owner Information

Enter owner information for the processor listed in Blocks B and C.

Owner name. If more than one owner, list principal owner first

Social security number (voluntary) or tax identification number of owner

Owner business mailing address, including state and zip code. If permit must be sent to a different address, attach a note with alternate address

Business telephone number, FAX number, and e-mail address

Managing company name (if any), that manages the operations of the processor.

Block E - Crab facility ownership information

Complete Block E if you intend to receive fish from an AFA Cooperative. ***If a change occurs in the list of crab facilities (owned 10% or more) disclosed in Block E, you must submit an amended application within 30 days of the date of the change.***

Crab facility name. Indicate the name of any crab facility in which the owners (down to the individual person level) of the AFA inshore processor in Block B collectively have a 10% or greater ownership interest in any facility that processes Bering Sea or Aleutian Island king or Tanner crab. Record the following information for each crab facility.

Type of facility. Indicate inshore processor, catcher/processor, or mothership.

Percent of collective ownership of crab facility. Indicate the total percent of ownership.

ADF&G processor code

Circle appropriate permit type, whether Federal fisheries permit or Federal processor permit

If a mothership or catcher/processor, enter Federal Fishery Permit number.

If a shoreside processor or stationary floating processor, enter Federal Processor Permit number (Example AK991234 or PA1234).

BLOCK F - Certification of notary and applicant

Signature and printed name of owner and date of signature

Signature and notary stamp or seal of notary public

Date notary commission expires

3. Use of improved technology to reduce burden.

The application forms will be posted on the NMFS Alaska Region Home Page for viewing by the public. Otherwise, this information collection does not involve the use of automated, electronic, mechanical, or other forms of information technology. For legal and enforcement reasons, the application forms must be submitted on paper with the notarized signature of the vessel owner. These AFA pollock permits will not replace the need for these persons to obtain other groundfish and IFQ permits. Permit accounting for each of these programs is done separately by NMFS.

4. Efforts to identify duplication.

While some of the data fields in these permit applications duplicate the data collected for other permit programs (see OMB 0648-0206), it is necessary to identify the universe of participating vessels and processors prior to the start of each fishing year in order to assign allocations of pollock TAC to eligible groups of vessels that form cooperatives. None of the existing permit programs in place for the groundfish fisheries off Alaska collect the information necessary to issue permits under the AFA. For this reason, new permits and permit applications are required. NMFS considered the idea of expanding existing Alaska Federal fisheries permit applications to include all of the information necessary to administer AFA permits. However, this idea was rejected as unnecessarily burdensome to the thousands of non-AFA vessels that currently apply for Alaska Federal fishery permits and for whom this additional information collection burden would have no value. Other permit programs such as the Alaska LLP may appear duplicative to the AFA permit program but are not. The LLP program issues transferrable permits to fishermen not vessels. LLP permits are freely transferrable and include species and gear endorsements for fisheries unrelated to the BSAI pollock fishery. The AFA establishes a closed class of vessels for the pollock fishery only meaning that AFA permits will be non-transferrable. Neither program can serve as a substitute for the other.

5. Methods to minimize the burden on small entities.

The proposed collection-of-information does not impose a significant impact on small entities.

6. Consequences to Federal program activities if the collection were conducted less frequently.

If the information were not collected, NMFS would be unable to implement the provisions of the AFA as mandated by Congress. The information must be collected once a year because NMFS must identify the universe of participating vessels and processors prior to the start of each fishing year in order to assign allocations of pollock TAC to eligible groups of vessels that form cooperatives.

7. *Special circumstances.*

No special circumstances exist.

8. Public comment or consultation on the information collection.

The NMFS Alaska Region will submit a an emergency rule for publication in the Federal Register simultaneously with this request.

NMFS presented the proposed requirements at the April and June 1999 meetings of the North Pacific Fishery Management Council and provided an opportunity for public comment. In addition, NMFS held a 3-day workshop with pollock industry representatives in Seattle, Washington, from May 17-19, 1999 to develop the basic structure of the program.

9. *Payment or gift to respondents.*

No payment or gift is provided under this program.

10. Assurance of confidentiality provided to respondents and the basis for this assurance in statute, regulation, or agency policy.

The Privacy Act does apply to this collection-of-information because the social security number is requested on a voluntary basis. The social security number is needed basically to avoid inappropriate release of data: to distinguish between same names; to ensure that the records go to the same person through the use of this personal ID; when there are several operators on a vessel owned by a different individual, ensure that the confidential data of each operator is protected; with mis-spellings and possible duplications, it is necessary to select a unique identifier to find records in the database; and prevents release of confidential data to the wrong person.

11. Collection of information of a private and sensitive nature.

This collection of information requests the social security number (see item 10).

12/13/14. Total burden hours and annual costs of the collection-of-information for respondents and Federal Government.

The application forms are presented in Attachment 1. No capital or significant start-up costs are associated with this collection-of-information. Miscellaneous costs associated with the collection of information include mailing materials and notary public services. Estimate of the total burden hours and total annual cost per year for all respondents and for the Federal Government are presented in Table 1.

15. Program changes or adjustments.

This is a new collection-of-information.

16. Plans for tabulation and publication.

The results of this collection-of-information will not be published.

17. *Expiration date for OMB approval of the information collection.*

In accordance with OMB requirements, the control number and expiration date of OMB approval will be shown on all forms associated with this program.

18. Exception to the certification statement.

No exceptions to the certification statement exist under this renewal.

Table 1. Summary of Total Burden Hours and Annual Costs of the Collection-of-information for Respondents and Federal Government (sheet 1 of 2)

Application Description	Respondent			Federal Government	
	Time (hr)	Personnel Cost ($)	Miscellaneous Cost ($)	Time (hr)	Personnel Cost ($)
Mothership & inshore processor application					
Total annual responses	11				
Estimated hours per response	2			1	
Total response hours	22			11	
Personnel cost per hour (average wage equivalent to a GS-7 employee in Alaska, including COLA)		$20			$20
Total personnel cost		$440			$220
Annual postage (.35 x 11)			$4		
Annual photocopy (2 x .10 x 11)			$2		
Annual notary public (5 x 11)			$55		
Total miscellaneous cost			$61		
Inshore Cooperative Application					
Total annual responses	8			8	
Estimated hours per response	2			1	
Total response hours	16			8	
Personnel cost per hour (average wage equivalent to a GS-7 employee in Alaska, including COLA)		$20			$20
Total personnel cost		$320			$160
Annual postage (.35 x)			$2		
Annual photocopy (2 x .10 x 8)			$2		
Annual notary public (5 x 8)			$40		
Total miscellaneous cost			$44		

Table 1. Summary of Total Burden Hours and Annual Costs of the Collection-of-information for Respondents and Federal Government (sheet 2 of 2)

Application Description	Respondent			Federal Government	
	Time (hr)	Personnel Cost ($)	Miscellaneous Cost ($)	Time (hr)	Personnel Cost ($)
Catcher vessel (inshore, offshore, or mothership) application					
Total annual responses	121			121	
Estimated hours per response	2			1	
Total response hours	242			121	
Personnel cost per hour (average wage equivalent to a GS-7 employee in Alaska, including COLA)		$20			$20
Total personnel cost		$4,840			$2,420
Annual postage (.35 x 121)			$42		
Annual photocopy (2 x .10 x 121)			$24		
Annual notary public (5 x 121)			$605		
Total miscellaneous cost			$671		
AFA Replacement vessel application					
Total annual responses	1			1	
Estimated hours per response	0.5			1	
Total response hours	0.5			1	
Personnel cost per hour (average wage equivalent to a GS-7 employee in Alaska, including COLA)		$20			$20
Total personnel cost		$10			$20
Annual postage (.35 x 1)			$1		
Annual photocopy (2 x .10 x 1)			$1		
Annual notary public (5 x 1)			$5		
Total miscellaneous cost			$7		