AGENDA D-1(b)
FEBRUARY 2002

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver
Acting Executive Director

DATE: January 28, 2002

SUBJECT: LLP Recency Information

ESTIMATED TIME
8 HOURS
(for all D-1 items)

ACTION REQUIRED

Review information and discussion paper and provide further direction.

BACKGROUND

In October you tasked staff to develop information on participation patterns relative to potential LLP recency requirements, and to provide a discussion paper which would include a preliminary assessment of a proposal to convert AFA sideboard caps to quotas. The specific motion was to examine participation patterns by non-AFA trawl vessels (CV and CP) in various BSAI fisheries at landings thresholds of 50 mt, 150 mt, and 250 mt, from 1995-2000. A subsequent amendment to that motion requested similar information for GOA fisheries (which we included under agenda Item C-4, Gulf Rationalization). Information for the BSAI is attached as Item D-1(b)(1). All of this information was compiled under contract to Northern Economics, Inc. utilizing the databases they compiled for the sector and community profiles which were developed for the programmatic SEIS and which were also used in the SSL EIS.

Because we were unsure how this information would be utilized by the Council, we liberally interpreted your direction and included numerous fisheries and sectors in this data compilation. If further analyses, or amendments to examine specific LLP recency requirements, are desired based upon this information, I suggest that we will need to revisit such analyses when we circle back to staff tasking later in the meeting, where we will be addressing related amendments already initiated. Council staff and/or staff from Northern Economics, Inc. will present the summary findings from this initial data compilation.

AN EXAMINATION OF PARTICIPATION REQUIREMENTS AND MINIMUM LANDINGS REQUIREMENTS IN BSAI GROUNDFISH FISHERIES

DRAFT

Prepared for the

North Pacific Fishery Management Council

January 2002

Prepared by

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1 Overview

The North Pacific Fishery Management Council (NPFMC) is considering the possibility of adding species endorsements with minimum landings requirements to their existing groundfish license program. The assumed purpose of this LLP recency information is to inform the Council's discussion relative to the sequence and timing of various rationalization approaches among the sectors involved, such as LLP recency requirements and/or conversion of AFA sideboard caps to quotas. This report examines the various minimum landings requirements under consideration for trawl and fixed gear fisheries in the Bering Sea and Aleutian Islands (BSAI)[1]. For trawl vessels the report examines minimum landings requirements at three levels (50mt, 100mt, and 250mt) by summarizing harvests of target species made by catcher vessels (CVs) and catcher processors (CPs). The main body of the report in Section 2 contains tables indicating the percentage of licensed vessels in each sector (and various subsectors or vessel classes) that reported landings exceeding each of the landings levels from 1995-2000. The report also contains line charts for each sector/vessel class and species over the years 1995-2000. The charts show the average retained harvest for each vessel ranked from least to greatest catch. The charts enable readers to assess the applicability of the different landings levels to particular fisheries, and provide an indication of other potentially applicable levels.

As shown in Table 1 and Table 2, any of the three proposed minimum landings requirements for trawl vessels (50mt, 100mt, and 250mt) would significantly reduce the number of vessels that would qualify to participate. In the BSAI trawl Pacific Cod fishery only 63 percent of the 170 active trawl CVs caught more than 50mt in an average year (average of 1995-2000) (Table 1), and only 46 percent caught more than 250 mt. If the same minimums were applied to other trawl target fisheries in the BSAI, fewer than 10 percent of the active CVs would have qualified for any species endorsements. Similar results are seen if the minimums are applied to trawl catcher processors in the BSAI. In an average year between 1995 and 2000 less than 65 percent of the trawl CPs retained more than 50mt of Pacific cod (Table 2). Roughly 45 percent of the 79 active trawl catcher processors retained more than 50mt of each of the three flatfish species examined in an average year, and approximately 20 percent retained 50mt of Atka Mackerel and Rockfish in an average year.

Table 1. Percentage of Trawl Catcher Vessels in BSAI with Minimum Catches (170 Vessels Participating)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	66	77	67	61	52	58	0	1	2	2	0	0
Vessels with 100mt	0	0	0	0	0	0	58	69	62	54	50	53	0	0	0	1	0	0
Vessels with 250mt	0	0	0	0	0	0	44	57	53	42	36	44	0	0	0	0	0	0

	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	4	0	9	0	0	1	20	6	11	1	1	2	12	5	10	1	2	7
Vessels with 100mt	3	0	6	0	0	0	19	6	11	1	1	2	7	1	7	0	1	1
Vessels with 250mt	1	0	2	0	0	0	17	6	10	0	1	2	1	0	4	0	0	0

[1] Excluding BSAI pollock and fixed gear sablefish, which are already rationalized.

Table 2. Percentage of Trawl Catcher Processors in BSAI with Retained Harvests (79 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	27	25	17	20	22	15	68	66	66	69	58	58	25	25	19	15	15	14
Vessels with 100mt	27	24	17	15	19	15	66	61	56	61	47	44	24	24	15	14	12	10
Vessels with 250mt	25	20	17	14	19	14	58	46	41	51	39	34	15	17	15	8	12	10
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	54	53	49	39	39	44	56	53	49	42	41	42	59	49	42	47	41	41
Vessels with 100mt	51	47	49	39	32	41	56	51	49	41	41	39	56	44	39	39	34	37
Vessels with 250mt	41	41	44	31	31	34	54	49	49	39	41	37	37	24	22	31	22	27

A separate report examines minimum landing requirements in the GOA fisheries including non-trawl Pacific cod.[2] For comparison and completeness, this report shows the effects of similar requirements in the BSAI non-trawl Pacific cod fisheries.[3] In the BSAI 41 percent of the non-trawl CVs over 60' in length and 68 percent of non-trawl CP had landings of 50mt more during an average year.

Table 3. Percentage of Non-Trawl Vessels in BSAI with Retained Harvests of Pacific Cod

	Catcher Vessels (30 vessels >60')						Catcher Processors (45 Vessels)					
	95	96	97	98	99	0	95	96	97	98	99	0
	Percent of Fleet						Percent of Fleet					
Vessels with 50mt	22	32	25	17	30	41	63	67	57	56	65	68
Vessels with 100mt	17	24	23	13	22	28	61	67	57	53	61	65
Vessels with 250mt	10	12	19	6	7	8	58	63	54	51	57	58

1.1 Document Organization

The remainder of this report acknowledges the political difficulties with converting harvest sideboards into quota in the immediate near term and instead provides additional details on the prospects of the elimination of latent licenses with the use of recent participation requirements and minimum landings requirements. Minimum landings requirements are applied to different vessel classes within the CV and CP sectors. Section 2 summarizes minimum landings in BSAI fisheries from 1995-2000 by vessel class. Additional tables containing information on a vessel-by-vessel basis are provided in Appendix A. The vessel classes used in this report are the same vessel classes used in "Sector and Regional Profiles of the North Pacific Groundfish Fisheries—2001" submitted to the NPFMC by Northern Economics and EDAW in November 2001. Vessel classes in both this report and the sector profiles are defined

[2] Pacific cod is the only significant target fishery for non-trawl vessels in the BSAI, and therefore landings requirements for other species were not examined.

[3] Additional participation requirements were approved BSAI non-trawl fisheries under Amendment 67. Information for the BSAI fixed-gear fisheries is included only for comparison purposes and completeness.

based on a combination of vessel characteristics and fishing patterns. Table 4 provides descriptions of the 9 CV classes, while Table 5 provides descriptions of the 5 CP classes.

Table 4. Catcher Vessel Classes

Class	Acronym	Description
Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length	TCV BSP = 125	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is greater than value of catch of all other species combined, vessel length is greater than or equal to 125 ft., and total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.
Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length	TCV BSP 60-124	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is greater than value of catch of all other species combined, vessel length is 60 ft. to 124 ft., and total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.
Diversified AFA-Eligible Trawl Catcher Vessels	TCV Div. AFA	Includes all vessels that are AFA-eligible for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
Non-AFA Trawl Catcher Vessels	TCV Non-AFA	Includes all vessels that are not AFA-eligible for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
Trawl Catcher Vessels Less than 60 Feet in Length	TCV < 60	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, vessel length is less than 60 ft., and total value of groundfish catch is greater than $2500.
Pot Catcher Vessels	PCV	Includes all vessels that are not trawl CVs for which value of pot catch is greater than15% of total catch value, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
Longline Catcher Vessels	LCV	Includes all vessels that are not trawl CVs or pot CVs for which vessel length is greater than or equal to 60 ft. and total value of groundfish catch is greater than $2000, excluding halibut and state water sablefish.
Fixed Gear Catcher Vessels 33 Feet to 59 Feet in Length	FGCV 33-59	Includes all vessels that are not trawl CVs for which vessel length is 33 to 59 ft., and total value of groundfish catch is greater than $2000.
Fixed Gear Catcher Vessels Less Than or Equal to 32 Feet in Length	FGCV = 32	Includes all vessels that are not trawl CVs for which vessel length is less than or equal to 32 ft., and total value of groundfish catch is greater than $1000.

Table 5. Catcher Processor Classes

Acronym	Description
ST-CP	**Surimi Trawl Catcher Processor.** These factory trawlers have the necessary equipment to produce surimi from pollock and other groundfish. They are generally the largest of all CPs.
FT-CP	**Fillet Trawl Catcher Processor.** These trawl vessels have the equipment to produce fillets from pollock, Pacific cod, and other groundfish. They are generally smaller than ST-CP vessels.
HT-CP	**Head And Gut Trawl Catcher Processor.** These factory trawlers do not process more than incidental amount of fillets. Generally, they are limited to headed and gutted products or kirimi. In general, they do not focus their efforts on pollock, opting instead for flatfish, Pacific cod, and Atka mackerel. HT-CP vessels are the smallest of the trawl CPs.
P-CP	**Pot Catcher Processor.** These vessels have been used primarily in the crab fisheries of the North Pacific, but increasingly are participating in the Pacific cod fisheries. They generally use pot gear, but may also use longline gear. They produce whole or headed and gutted groundfish products, some of which may be frozen in brine rather than blast frozen.
L-CP	**Longline Catcher Processor.** These vessels, also known as freezer longliners, do not trawl or use pot gear but use longline gear with a focus on Pacific cod. Most L-CP vessels are limited to headed and gutted products, and in general are smaller than HT-CP vessels.

1.2 Conversion of AFA Harvest Sideboard to Quotas

A potential alternative for eliminating latent licenses and then moving to rationalization would be to convert AFA harvest sideboard limits to quotas, and thus obtain at least partial rationalization in the BSAI and GOA trawl fisheries. Harvest sideboard limits were established under AFA legislation to protect non-AFA vessels and processors from AFA vessels that could potentially leverage the ability to form pollock cooperatives into higher catches in non-pollock fisheries. The harvests sideboard limits were established for Pacific Cod based on non-pollock catches in 1997. The limits put a cap on the amount of non-pollock species in the BSAI and GOA that AFA-qualified vessels may harvest. Currently NMFS manages the harvest sideboard limits as an aggregate cap, leaving it up to the cooperatives to allocate caps among their participants. The sideboard limits are caps rather than quotas—if non-AFA vessels harvest relatively higher amounts than they did in 1997 it is possible that AFA vessels would not be able to harvests the full amount of the limits. Members of the Council have asked that the concept of converting the harvest sideboard limits into guaranteed catch quotas be examined and compared to alternative means of further rationalizing BSAI trawl fisheries. This section provides a discussion of this issue in the context of rationalizing the BSAI Pacific Cod Trawl fisheries.

In general, it is concluded that converting the sideboard limits into quotas will allow AFA-qualified vessels to fully rationalize. With rationalization operating, for example under cooperatives, the AFA vessels would be able to time harvests in a way that would maximize values obtained from harvesting and processing their guaranteed share of the fishery resources, while minimizing potentially negative effects on other marine resources—marine mammals, non-target fish species, benthic habitats, etc. However, it is also concluded that converting harvest sideboard limits to quotas would mean that non-AFA vessels and processors would have to bear all of the negative effects of the over-capitalized "race for fish" management regime governing the remaining unrationalized portions of federally managed fisheries in Alaska. In other words, the non-AFA participants would be left to deal with all of the problems, including elimination of latent licenses in a potentially protracted rationalization process that could take years to address, while the AFA vessels and processors are able to prosper. The imbalance that would be created between rationalized and unrationalized portions of the fishery needs to be weighed by the council.

The remainder of this section examines the prospects for rationalization in the BSAI trawl Pacific cod fishery. The discussion will be presented in two parts: a description of the current status of the trawl PCOD fishery followed by an initial discussion of potential regulatory actions that might be necessary to implement a rationalized fishery through the Council process.

1.2.1 Current BSAI Pacific Cod Trawl Fishery

The description of the current fishery will include the following:

- a description of the current regulatory environment
- a summary of harvest sideboard limits under AFA
- a summary of participation since 1997, including catch and vessel counts by sector
- an estimate of latent licenses that could potentially be used in the fishery

Current Regulatory Environment: Since 1997 harvests of BSAI Pacific cod have been allocated between trawl and fixed gear sectors by Amendment 46 to the BSAI groundfish FMP—after CDQ apportionments are removed, 47 percent of the remaining TAC is allocated to the trawl fishery. The trawl allocation is split evenly between trawl catcher vessels (CVs) and trawl catcher processors (CPs). Access to the fishery is limited by the Groundfish License Limitation Program (LLP) which was implemented in 1998 and further restricted by Amendment 60 which assigns trawl or non-trawl endorsement to the licenses, but which is not yet in place. An examination of BSAI trawl data from 1992 – 2000 indicates that 75 CPs and 312 CVs would be assigned trawl endorsements for the BSAI.[4]

AFA Harvest Sideboard Limits: In addition to the LLP, trawling in the BSAI is also restricted by the AFA—112 CVs and 21 CPs are permitted to fish for pollock under AFA. The AFA also limits harvests of non-pollock species for permitted vessels—the limits are currently enforced as aggregate harvest sideboard limits for AFA CVs and AFA CPs. The limits are caps not quotas—AFA permitted vessels are allowed to harvest up to the limits but are not guaranteed that amount because non-AFA vessels are not restricted.

Fishery Summary, 1997-2000: Table 6 provides a summary of the BSAI PCOD fishery from 1997 through 2000. The data are taken from the database used to develop the sector profiles used in the social impact assessment of the Steller Sea Lion EIS. Trawl harvests of Pacific cod have declined since 1997 from 122,661 to 70,914 in 2000. The decline is due in part to decreases in TACs and the Multi-species CDQ program,[5] but is also a result of the AFA harvest sideboard limits. Over the four years shown in Table 6, CP harvests have ranged from 47 to 53 percent of the total trawl harvest, which, have been within 3 percent of the total trawl apportionment with the exception of 2000 when trawl vessels managed to harvest only 85 percent of their apportionment.[6] A significant trend appears to be developing in the CP sector—since 1999 AFA CPs accounted for only 25 percent of the CP total compared to 49 percent of the CP total in 1997 and 1998. The reduction in AFA-CP totals is due to the AFA harvest sideboard restrictions, and the fact that the harvests of the nine CPs that were removed from the fishery under AFA harvested significant amounts of PCOD. Harvests by AFA CV have been approximately 96 percent of the CV total since 1997.

[4] The number of vessels that would be assigned trawl endorsements is an unofficial estimate based on data from 1992-1998. The RAM Division of NMFS-AKR is currently implementing this portion of the LLP and the exact numbers of vessels with trawl endorsements will not be known for some time.

[5] The Multi-species CDQ program, which allocates 7.5 percent of the TAC to CDQ communities, was implemented in 1998.

[6] NMFS has the authority to assign unharvested apportionments to other gear groups—typically unharvested trawl apportionments are assigned to the freezer longliner sector.

Table 6 also shows the number of vessels that have harvested Pacific cod since 1997. The number of CPs harvesting PCOD has declined steadily since 1997 from 58 in 1997 to 38 in 2000—the decline is due in part to AFA which removed 9 surimi and fillet CPs from the fishery in 1999, and which allowed AFA eligible CPs to pool their historical harvests and use fewer vessels. The number of CVs that have harvested PCOD since 1997 has been trending higher after a decline in 1998—a big increase in the participation of trawl CV < 60' occurred in 2000—15 vessels harvested PCOD with trawl gear in the BSAI compared to 6 in 1999. This increase was likely caused by the injunction on trawl gear in Steller Sea Lion habitat in August 2000 because small vessels that typically harvest in the GOA moved into the BSAI.

Table 6. BSAI Pacific Cod Trawl Harvests and Vessel Counts, 1997-2000

	1997	1998	1999	2000	1997	1998	1999	2000
Sector	**Metric Tons of PCOD (Non-CDQ)**				**Number of Vessels**			
Catcher Processors								
Surimi CP (AFA)	3,986	6,453	3,069	1,006	16	16	12	11
Fillet CP (AFA)	26,761	16,675	9,777	4,316	13	12	4	4
H&G CP (Non-AFA)	29,898[a]	25,733	24,965	28,283	28	23	24	23
Pot CP (Non-AFA)	a	0	0	0	1	0	0	0
AFA Subtotal	30,746	23,128	12,846	5,322	29	28	16	15
Non-AFA Subtotal	29,898	25,733	24,965	28,283	29	23	24	23
CP Subtotal	**60,644**	**48,861**	**37,811**	**33,605**	**58**	**51**	**40**	**38**
Catcher Vessels								
Trawl CV BS PLCK = 125' (AFA)	13,964	7,619	8,416	6,028	32	30	32	30
Trawl CV BS PLCK 60'-124' (AFA)	29,380	15,800	12,136	16,280	52	48	42	45
Trawl CV Diversified AFA	13,484	18,240	14,313	12,343	18	23	31	26
Trawl CV Non-AFA	5,177	1,499	1,789	2,494	9	8	8	9
Trawl CV < 60' (Non-AFA)	12	79[b]	6[b]	164[b]	6	3	6	15
Pot CV (Non-AFA)	0	b	0	b	0	1	0	1
Ghost CVs (Non-AFA)	0	b	b	b	0	1	2	1
AFA Subtotal	56,828	41,658	34,866	34,651	102	101	105	101
Non-AFA Subtotal	5,189	1,578	1,795	2,658	15	13	16	26
CV Subtotal	**62,016**	**43,236**	**36,661**	**37,309**	**117**	**114**	**121**	**127**
Trawl Vessel Total	**122,661**	**92,098**	**74,471**	**70,914**	**175**	**165**	**161**	**165**
Trawl Apportionment	126,900	91,298	76,951	83,907				
Harvest--Percent of Apportionment	97%	101%	97%	85%				

Source: Sector Profile Database, NPFMC.

Notes:

[a] Harvests of Pot CPs were added to H&G CP harvests to protect confidentiality.

[b] Harvests of Pot CVs and Ghost CV were added to Trawl CV < 60' harvests to protect confidentiality.

Latent Licenses: Rationalization of a fishery establishes a management system that significantly reduces the possibility that the harvests of individuals can be affected by the harvests of others. If entry of additional participants into a fishery is possible then it is unlikely that the fishery can be rationalized. Latent licenses represent the potential that additional participants may enter a fishery—the greater the number of latent licenses the less likely it is that the fishery can be rationalized.[7] Table 7 compares the number of active participants in the BSAI PCOD fishery with the number of latent licenses. Latent licenses were estimated by counting the number of CPs that made landings with trawl gear as reported in the NMFS blend data during the qualification period of the LLP and

[7] The inability to identify owners of latent licenses—a problem caused by confidentiality restrictions—is a major constraint to rationalization. If owners of latent licenses can be identified it may be possible to keep them out of a particular fishery through contractual agreements with active participants.

comparing this total to the number that made trawl landings of PCOD during the year. In the CP fishery, it is estimated that there were 37 latent licenses in 2000 compared to the 38 vessels with landings. In the 2000 CV fishery is estimated there were 185 latent licenses, which is more than the total number of CVs that made landings.

Table 7. Estimated Number of Active and Latent Licenses in the BSAI Trawl Pacific cod Fisheries

	1997	1998	1999	2000
	Number of Vessels			
AFA CPs	29	28	16	15
Non-AFA CPs	29	23	24	23
Latent CP Licenses	26	33	35	37
CP subtotal	**84**	**84**	**75**	**75**
AFA CVs	102	101	105	101
Non-AFA CVs	15	13	16	26
Latent CV Licenses	195	198	191	185
CV subtotal	**312**	**312**	**312**	**312**
Total	**396**	**396**	**387**	**387**

1.2.2 Potential Steps to Rationalize the BSAI Pacific Cod Fishery

There are many potential paths to a rationalized BSAI Trawl Pacific cod fishery. This discussion paper will examine two such paths. The first path, labeled "Subdivide and Rationalize," would create four separate BSAI Trawl fisheries two for AFA vessels and two for non-AFA vessels. The second path "The Chignik Approach" mirrors the process used by the Alaska Board of Fish in the Chignik Seine fishery.

Subdivide and Rationalize: This rationalization process would be accomplished as follows:

1. Subdivide the CP and CV fisheries into AFA and non-AFA fisheries.
2. Establish separate apportionments for each of the four fisheries by converting AFA BSAI PCOD harvest sideboards into quotas for the AFA fisheries and assigning the remainders to the non-AFA fisheries.
3. Establish separate halibut PSCs for AFA and non-AFA fisheries. Other prohibited species (e.g. for crab, herring and salmon) restrictions would also be subdivided.
4. Allow the AFA fisheries to form cooperatives stipulating that vessels not participating in cooperatives could fish in an open access portion where the amount in the open access portion is equal to the sum of harvest sideboards of the open access participants.
5. Eliminate latent trawl licenses in the non-AFA PCOD fisheries by amending the LLP program to create a BSAI Pacific Cod endorsement based on recency.
6. Allow the non-AFA vessels to form cooperatives. Vessels that do not choose to participate in the cooperatives can participate in an open access portion. Harvest amounts assigned to cooperatives and to the open access portions will be determined by an agreed upon formula.[8]

While this approach may appear to be expedient, it may be unlikely that non-AFA participants will agree to it—all of the potential costs of rationalization process appear to be borne by non-AFA vessels. First, non-AFA vessels become more limited under this process while AFA vessels are given a guaranteed harvest. Second, if additional vessels enter the fishery during the rationalization process

[8] The formula used is not specified here, but it could take many forms. Four different formulas have been employed in Alaskan fisheries—the halibut IFQ fishery, the sablefish IFQ fishery, AFA pollock fishery, and the Chignik Seine fishery.

non-AFA vessels will suffer the consequences. Finally, it is likely that the process for the non-AFA vessels could take several years to implement while the process for AFA vessels might take relatively little time.

The Chignik Approach: This approach to rationalization follows the process used by the Alaska Board of Fish to rationalize the Chignik Salmon Seine Fishery. This method would move directly to rationalization by establishing separate quotas for vessels participating in cooperative and vessels participating in an open pool fishery. To accomplish this the NPFMC would need to amend the BSAI FMP to create the process for establishing the separate apportionments (this may not be legal under the current congressional moratorium on ITQ's). An hypothetical example of the some of the issues follows—the Council would of course be free to change any of the elements of this hypothetical scenario.

If a majority of the active participants in 2001 (in either sector) agree to join a cooperative then each vessel joining would bring 90 percent of their harvests in 2001 to the cooperative on a percentage basis.[9] AFA vessels joining the cooperative(s) would bring their harvest amounts from the prior year, not their sideboard limit.[10] Vessels choosing not to participate in the cooperative would be allowed to participate in open access fisheries—the open access TAC would be equal to the amount of the trawl apportionment for CVs or CPs that are not allocated to the cooperatives. Any vessels that did not participate in 2001 would have to participate in the open pool fishery if they wished to harvest Pacific cod with trawl gear in 2002.

In subsequent years, vessels could choose to leave the cooperative or to join the cooperative. Vessels choosing to join the cooperative from the open pool could do so and would bring 90 percent of the catch they harvested in the previous year. Vessels leaving the cooperative would be allowed to take the unadjusted percentage they brought into the cooperative.[11]

The cooperatives could function similar to AFA cooperatives, or as alternatively, the Council may prefer to allow the CV cooperative(s) to be formed independent of processors. CPs could form one or multiple cooperatives if they chose (AFA-CP and non-AFA-CPs for example).

A Comparison of Approaches: There are two major differences in the two approaches specified above: In the "Subdivide and Rationalize" approach, AFA vessels would be assigned quota equal to their harvest sideboards and AFA vessels would be able to rationalize much sooner than non-AFA vessels, which could potentially have to wait for many year until the final program is implemented. Thus in the "Subdivide and Rationalize" approach AFA vessels would suffer relatively little pain in the rationalization process. Under the "Chignik Approach AFA harvest sideboards become moot because all sectors of the trawl fishery achieve rationalization at the same time, and because allocations to cooperative are based on the previous year's harvests.[12]

[9] Thus if a vessels harvested 1,000mt of Pacific cod and the trawl allocation was 100,000mt then the vessel would bring 90 percent of the 10 percent their harvest represented—in other words, 9 percent of the total trawl allocation would be assigned to the cooperative.

[10] In this example, AFA harvest sideboards would remain a limitation on AFA vessels operating in the open access fishery—note that the amount a vessel brings into the cooperative is based on the previous years harvest and does not necessarily assigned the amount equal to its sideboard cap.

[11] Vessels leaving would take with them the amount they brought to the cooperative before the 90 percent was applied. Thus if the vessel discussed in footnote 9 chose to leave the cooperative it would bring 10 percent of the trawl allocation to the open pool fishery.

[12] This is particularly true given that AFA trawl vessels did not harvest their sideboard amounts in 2001.

2 Minimum Landings Standards in BSAI Fisheries

This section provides information about the amounts harvested of each species caught in the Bering Sea / Aleutians Islands (BSAI) region, broken down into several CV and CP classes. The information by vessel class includes all vessels with federal permits for BSAI, and the aggregate information includes all vessels that participated in one or more fisheries in the region. In all figures, the vessels with the top four harvests have been omitted to protect confidentiality.

2.1 Trawl Catcher Vessel Harvests Compared to Minimum Standards

A total of 170 CVs participated in BSAI fisheries using trawl gear. Of these vessels, 164 are federally licensed. Table 8 shows the percentage of CVs operating in BSAI with minimum catches of species. Participation in the past several years has been focused on PCOD, with 58 percent of the vessels landing at least 50mt in 2000, and 44 percent landing 250mt or more. Participation in the RSOL, YSOL, and OFLT fisheries has declined significantly since 1997.

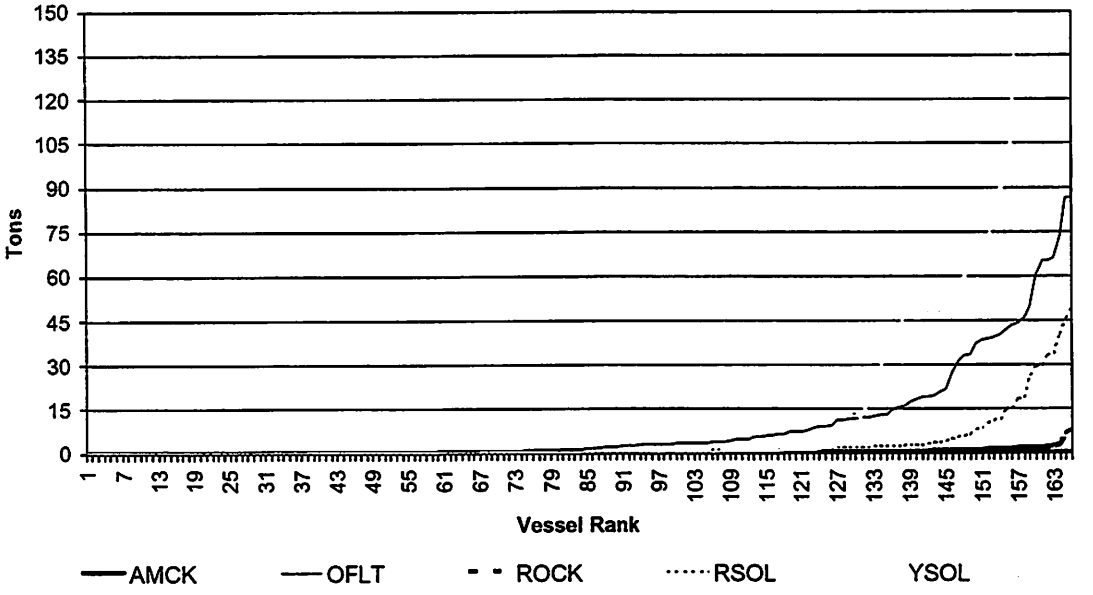
Figure 1 shows the retained harvest of AMCK, OFLT, ROCK, RSOL and YSOL by CVs operating in BSAI. The average catch of each vessel is one point on the line with averages catches sorted from low to high. These figures provide a graphical representation of the distribution of harvests during the average fishing year from 1995-2000, and can be useful to determine natural breaks in harvest patterns which are often the most justifiable points to establish landing standards. Natural breaks will be found at inflection points where relatively flat portions of the curves become relatively more steep. In Figure 1 the gray line shows average harvests by trawlers of Yellowfin Sole (YSOL). Approximately 125 of the vessels averaged less than 1 ton of YSOL per year--1 ton YSOL appears to be a natural break point. Average catches of the next 20 vessels increases steeply before leveling at approximately 50mt. YSOL catches of the top 25 vessels increase sharply after 50mt and thus 50mt also appears to be a natural break point. Another natural break point is seen at approximately 25 tons for the OFLT fishery. Figure 2 shows the retained harvest of PCOD by CVs. The catch of vessels gradually increases with vessel ranking, although a slight break occurs at 50mt.

Table 8. Percentage of Catcher Vessels in BSAI with Minimum Catches (170 Vessels Participating)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	66	77	67	61	52	58	0	1	2	2	0	0
Vessels with 100mt	0	0	0	0	0	0	58	69	62	54	50	53	0	0	0	1	0	0
Vessels with 250mt	0	0	0	0	0	0	44	57	53	42	36	44	0	0	0	0	0	0

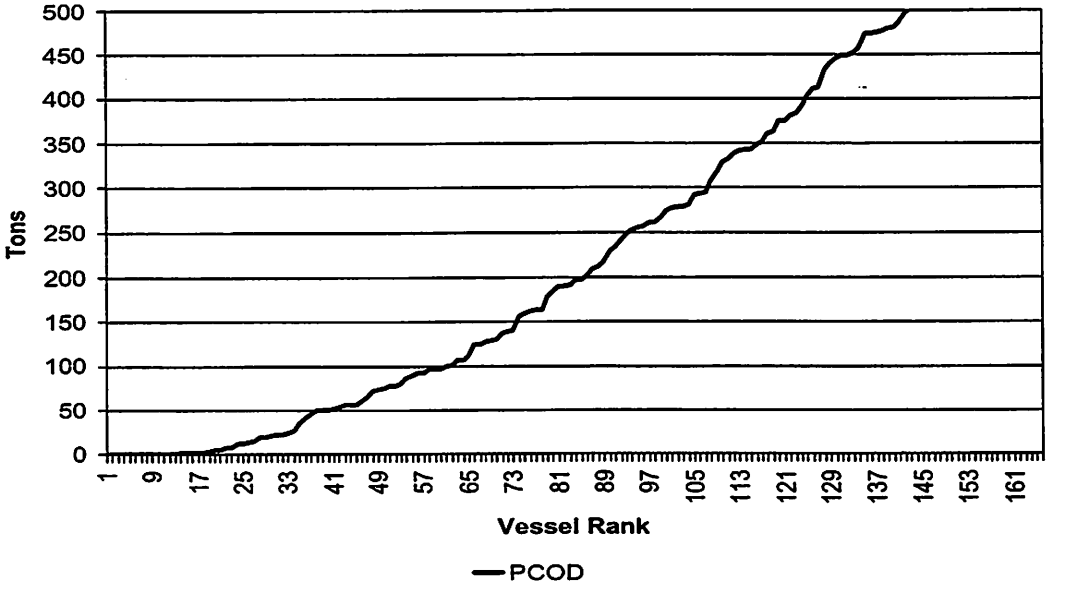
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	4	0	9	0	0	1	20	6	11	1	1	2	12	5	10	1	2	7
Vessels with 100mt	3	0	6	0	0	0	19	6	11	1	1	2	7	1	7	0	1	1
Vessels with 250mt	1	0	2	0	0	0	17	6	10	0	1	2	1	0	4	0	0	0

Figure 1. Average Retained Harvest by all Catcher Vessels Using Trawl Gear in BSAI, by species, 1995-2000 (170 Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

Figure 2. Average Retained Harvest of Pacific Cod by all Catcher Vessels Using Trawl Gear in BSAI, 1995-2000 (170 Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

2.1.1 Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length

This class includes all vessels for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is greater than the value of the catch of all other species combined, vessel length is greater than or equal to 125 feet, and the total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible. There are 38 federally licensed CVs in this class. In addition to pollock, this class has participated primarily in Pacific cod.

As shown in Table 9, 55 percent of the vessels in 2000 had PCOD landings of at least 50mt, while 32 percent had landings of at least 250mt. The tables also show that none of the vessels had significant landings of AMCK and that participation in most fisheries has been limited, particularly after 1997.

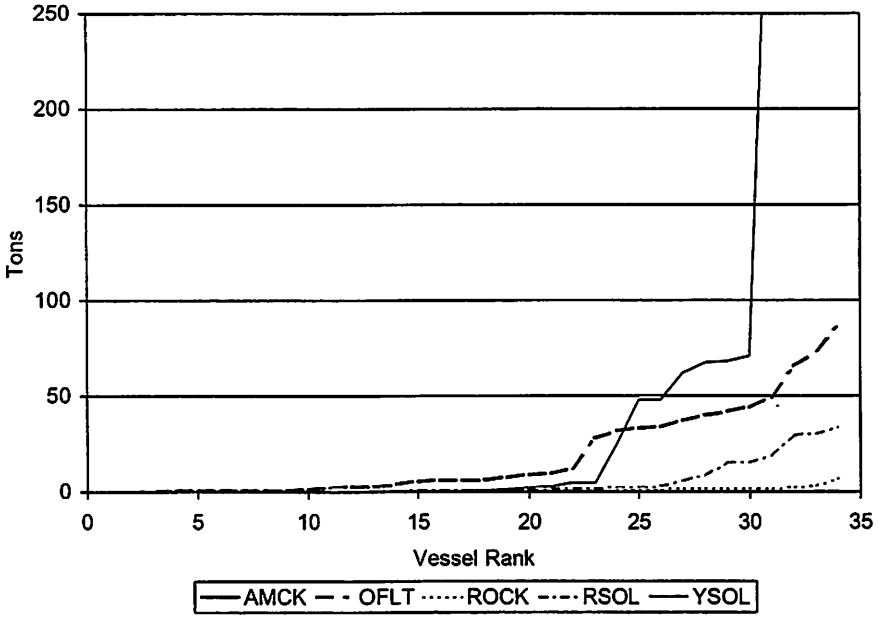
Figure 3 shows the retained harvest by species CVs operating in BSAI. Natural breaks in the amount caught exist at 5, 50, and 75mt for YSOL. Figure 4 shows the retained harvest of PCOD by CVs. The catch of vessels gradually increases with vessel ranking, although slight breaks occur at about 5mt, and at 100 and 200mt.

Table 9. Percentage of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length in BSAI with Minimum Catches (38 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	45	74	74	55	61	55	0	3	8	8	0	0
Vessels with 100mt	0	0	0	0	0	0	37	61	63	50	61	42	0	0	0	5	0	0
Vessels with 250mt	0	0	0	0	0	0	21	53	50	37	37	32	0	0	0	0	0	0

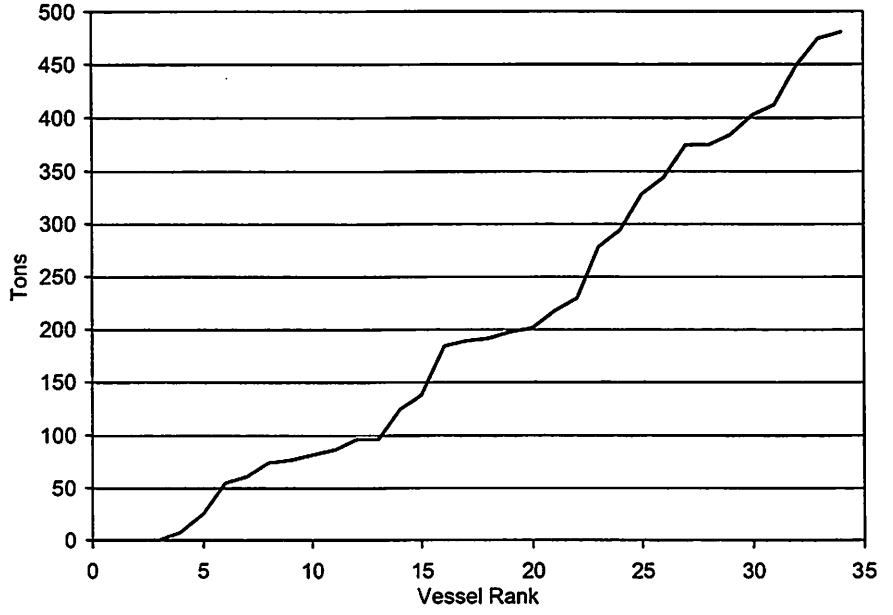
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	5	0	21	0	0	3	18	11	29	0	5	5	16	8	26	5	5	24
Vessels with 100mt	3	0	16	0	0	0	18	11	29	0	5	5	5	0	18	0	5	3
Vessels with 250mt	0	0	3	0	0	0	18	11	26	0	5	5	0	0	13	0	0	0

Figure 3. Average Retained Harvest by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length in BSAI, by species, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 4. Average Retained Harvest of Pacific Cod by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length in BSAI, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

2.1.2 Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length

This CV class includes all vessels for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is greater than the value of the catch of all other species combined, vessel length is 60 feet to 124 feet, and the total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible. There are 68 federally licensed CVs in this class. In addition to pollock, this class has participated primarily in the Pacific cod fishery.

As shown in Table 10, 57 percent of the vessels in 2000 had landings of PCOD of at least 50mt, and 44 percent had landings of at least 250mt. Participation in other fisheries has been limited, with catches declining during the past several years, and very little participation since 1997.

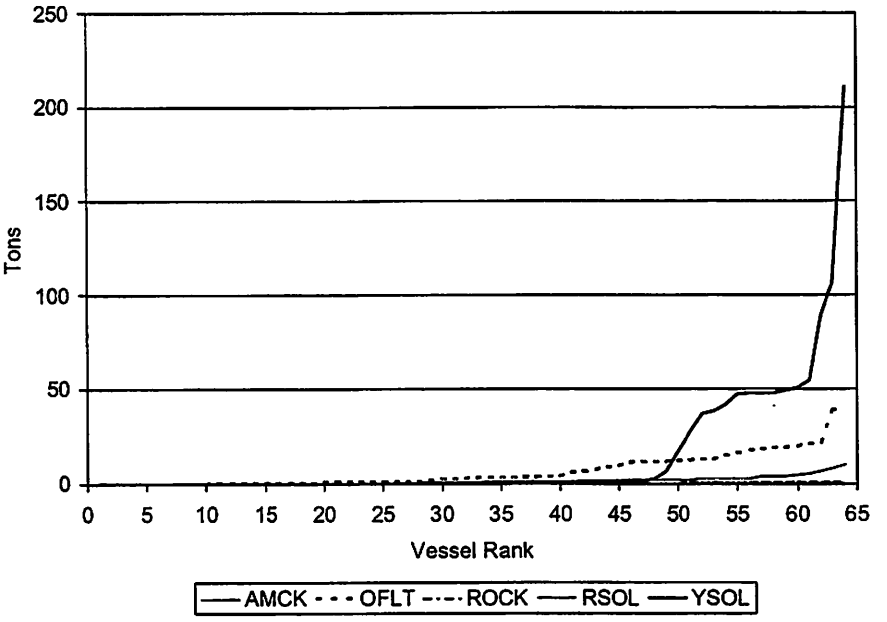
Figure 5 shows the retained harvest by species by CVs operating in BSAI. Natural breaks in the amount caught exist at about 5mt for OFLT and 5 and 50mt for YSOL. Figure 6 shows the retained harvest of PCOD by CVs. The catch of vessels gradually increases with vessel ranking, although a slight break occurs at 50mt.

Table 10. Percentage of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length in BSAI with Minimum Catches (68 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	79	81	66	56	44	57	0	0	0	0	0	0
Vessels with 100mt	0	0	0	0	0	0	71	76	63	54	41	56	0	0	0	0	0	0
Vessels with 250mt	0	0	0	0	0	0	56	68	56	41	31	44	0	0	0	0	0	0

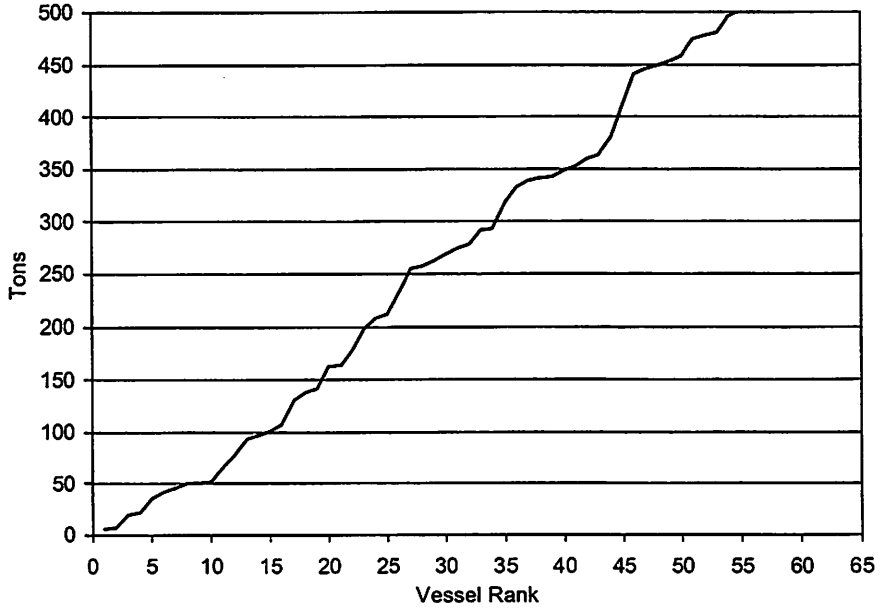
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	3	0	3	0	0	0	25	4	3	3	0	1	13	6	3	0	1	1
Vessels with 100mt	1	0	0	0	0	0	25	4	3	1	0	1	9	1	3	0	0	0
Vessels with 250mt	0	0	0	0	0	0	21	4	3	0	0	1	1	0	0	0	0	0

Figure 5. Average Retained Harvest by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length in BSAI, by species, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 6. Average Retained Harvest of Pacific Cod by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length in BSAI, 1995-2000



Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

2.1.3 Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length

The Diversified AFA-eligible Trawl Catcher Vessel Greater than or Equal to 60 Feet Class (TCV Div. AFA) includes all vessels that are AFA-eligible for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 feet, and the total value of groundfish catch is greater than $5000. There are 41 federally licensed CVs in this class, with most non-pollock participation primarily in the Pacific cod fishery.

As shown in Table 11, 37 percent of the vessels had landings of PCOD of at least 50mt in 2000, and 34 percent had landings of at least 250mt. These vessels have not shown significant participation in the other fisheries shown in the table in the past several years.

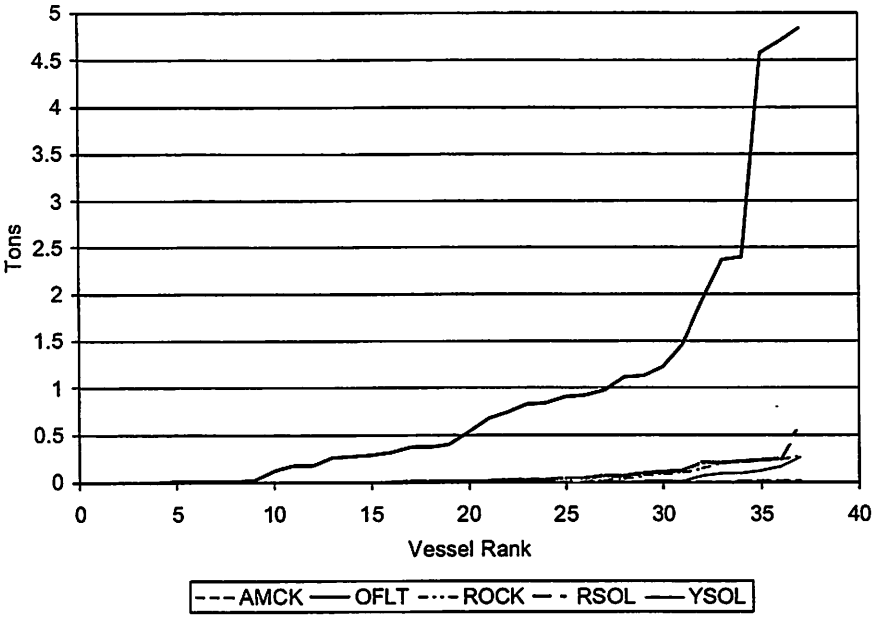
Figure 7 shows the retained harvest by species by CVs operating in BSAI, and Figure 8 shows the retained harvest of PCOD. PCOD is the major target of these CVs in the region. The catch gradually increases with vessel ranking, although slight breaks occurs a 25, 50, 125, and 275mt.

Table 11. Percentage of Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI with Minimum Catches (41 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	34	41	32	51	37	37	0	2	0	0	0	0
Vessels with 100mt	0	0	0	0	0	0	32	39	29	41	37	37	0	0	0	0	0	0
Vessels with 250mt	0	0	0	0	0	0	24	22	27	37	29	34	0	0	0	0	0	0

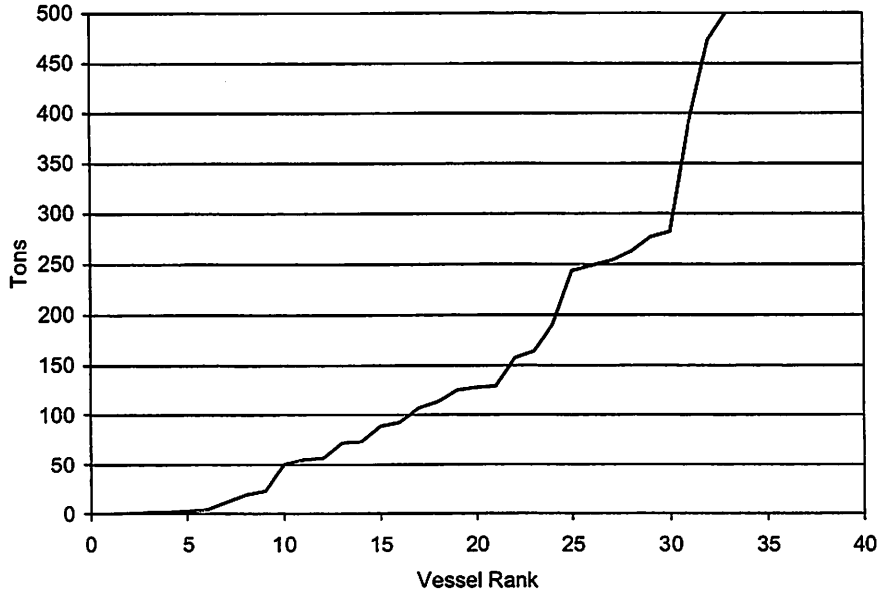
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	5	0	0	0	0	0	5	2	0	0	0	0	5	0	0	0	0	0
Vessels with 100mt	5	0	0	0	0	0	5	2	0	0	0	0	5	0	0	0	0	0
Vessels with 250mt	5	0	0	0	0	0	5	2	0	0	0	0	2	0	0	0	0	0

Figure 7. Average Retained Harvest by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI, by species, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 8. Average Retained Harvest of Pacific Cod by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI, 1995-2000



Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

2.1.4 Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length

This class includes all vessels that are not AFA-eligible for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 feet, and the total value of groundfish catch is greater than $5000. There are 17 CVs in this class, with participation primarily in the Pacific cod fishery.

As shown in Table 12, 24 percent of the vessels in 2000 had PCOD landings of at least 250mt. All other landings of PCOD were less than 50mt. Participation in the other fisheries has been limited, and no significant landings of the species indicated have been made since 1997.

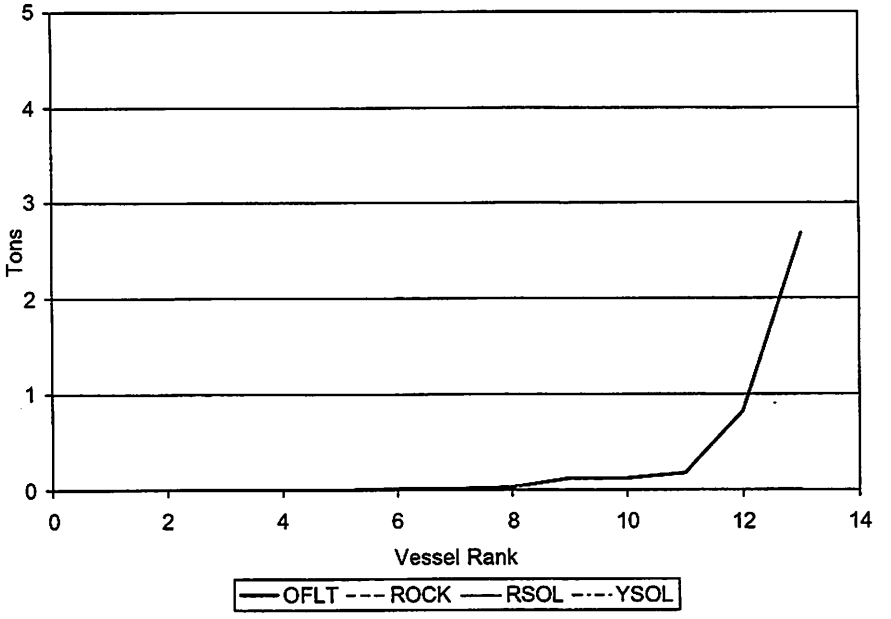
Figure 9 shows the retained harvest by species by CVs operating in BSAI, and Figure 10 shows the retained harvest of PCOD by CVs. PCOD is the major target for this vessel class in the region. The catch of PCOD by vessels has a slight break occurs at 25mt.

Table 12. Percentage of Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI with Minimum Catches (17 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	0	0	0	0	35	35	35	18	18	24	0	0	0	0	0	0
Vessels with 100mt	0	0	0	0	0	0	29	24	35	6	18	24	0	0	0	0	0	0
Vessels with 250mt	0	0	0	0	0	0	24	18	24	6	18	24	0	0	0	0	0	0

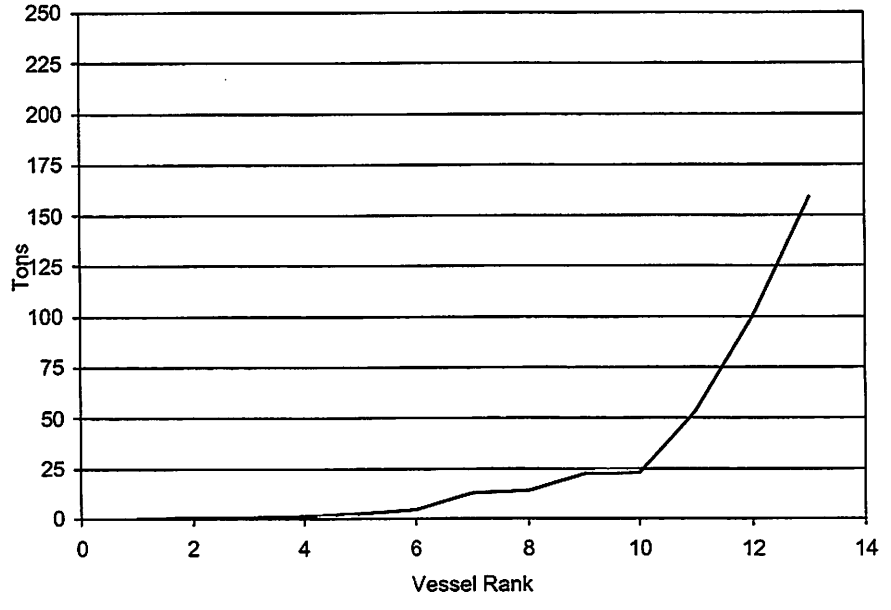
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0
Vessels with 100mt	0	0	12	0	0	0	0	0	12	0	0	0	0	0	6	0	0	0
Vessels with 250mt	0	0	12	0	0	0	0	0	12	0	0	0	0	0	6	0	0	0

Figure 9. Average Retained Harvest by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI, by species, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 10. Average Retained Harvest of Pacific Cod by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length in BSAI, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

2.2 Trawl Catcher Processor Harvests Compared to Minimum Standards

A total of 79 CPs participated in BSAI fisheries using trawl gear. Of these vessels, 57 are federally licensed. Table 13 shows the percentage of CPs operating in BSAI with minimum catches of species. Figure 12 and Figure 14 show the retained harvest by vessel rank.

As shown in Table 13, participation in the past several years has been spread between each of the six fisheries listed. Over a third of all vessels retained harvests of at least 250mt of PCOD, RSOL, and YSOL.

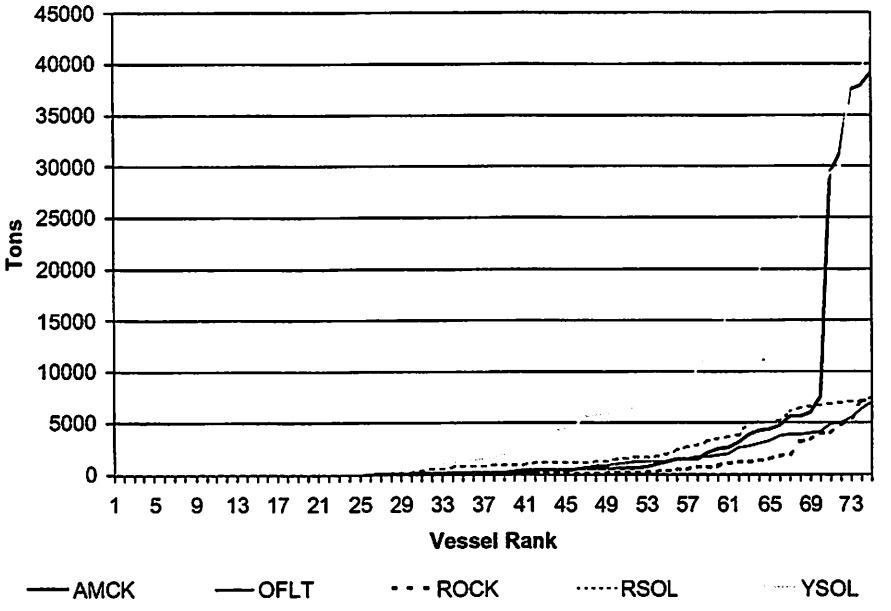
Figure 11 shows the retained harvest by species by CPs operating in BSAI, and Figure 12 focuses on catches up to 1,000mt. Natural breaks in the amount caught exist at about 50 to 60mt for all species. Figure 13 shows the retained harvest of PCOD by CPs, and Figure 14 focuses on catches up to 1,000mt. The catch of vessels gradually increases with vessel ranking, although a slight break occurs at 50mt.

Table 13. Percentage of Trawl Catcher Processors in BSAI with Retained Harvests (79 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	27	25	17	20	22	15	68	66	66	69	58	58	25	25	19	15	15	14
Vessels with 100mt	27	24	17	15	19	15	66	61	56	61	47	44	24	24	15	14	12	10
Vessels with 250mt	25	20	17	14	19	14	58	46	41	51	39	34	15	17	15	8	12	10

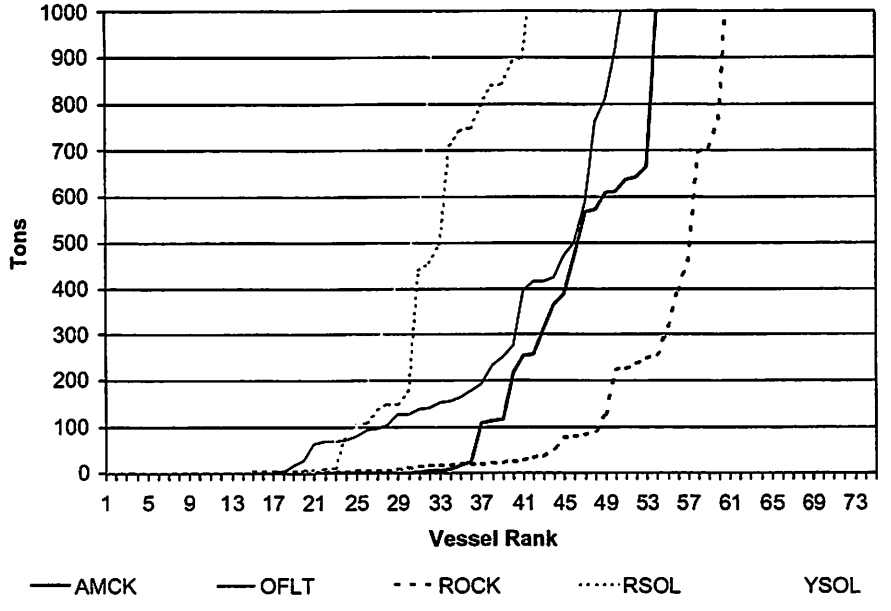
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	54	53	49	39	39	44	56	53	49	42	41	42	59	49	42	47	41	41
Vessels with 100mt	51	47	49	39	32	41	56	51	49	41	41	39	56	44	39	39	34	37
Vessels with 250mt	41	41	44	31	31	34	54	49	49	39	41	37	37	24	22	31	22	27

Figure 11. Average Retained Harvest by all Catcher Processors Using Trawl Gear in BSAI, by species, 1995-2000
(79 Vessels Participating)



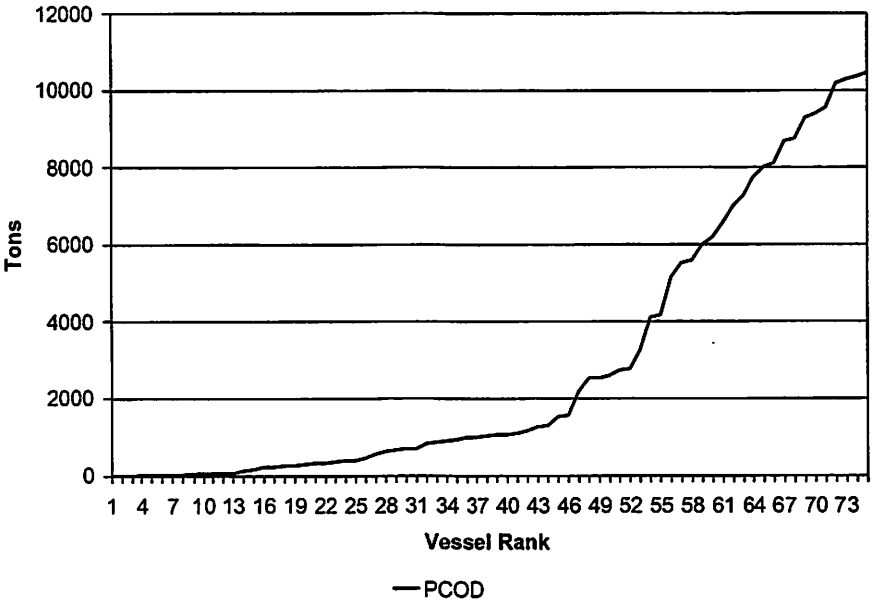
Note: Top four vessels have been omitted to protect confidentiality.

Figure 12. Average Retained Harvest by all Catcher Processors Using Trawl Gear in BSAI, 1995-2000
(79 Vessels Participating)



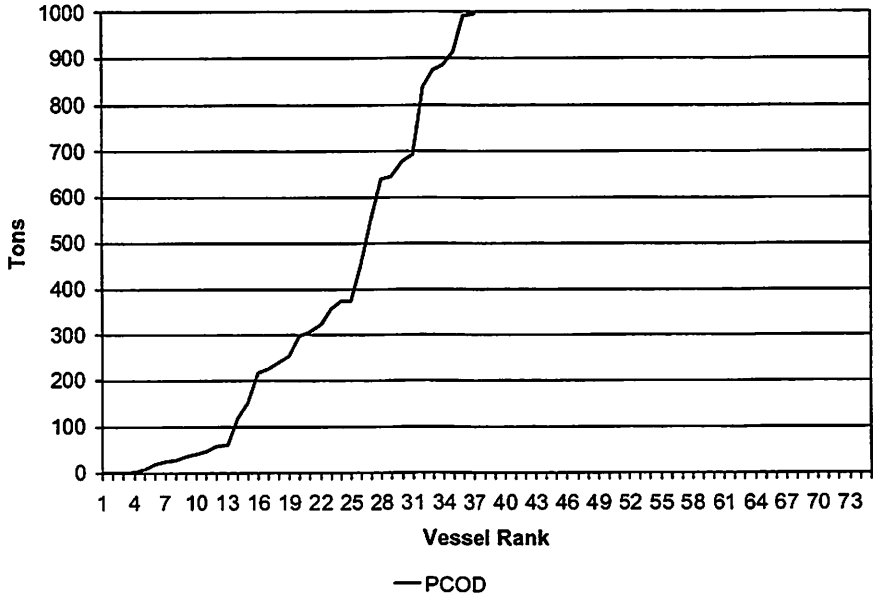
Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

Figure 13. Average Retained Harvest of Pacific Cod by all Catcher Processors Using Trawl Gear in BSAI, 1995-2000 (79 Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

Figure 14. Average Retained Harvest of Pacific Cod by all Catcher Processors Using Trawl Gear in BSAI, 1995-2000 (79 Vessels Participating)



Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

2.2.1 Surimi Trawl Catcher Processors

This class is distinct from other trawl CPs because all vessels in the class have the capacity to produce surimi. Consequently, they are typically the largest CPs in the North Pacific. Surimi trawl CP vessels focus almost exclusively on pollock, although some have produced surimi from yellowfin sole. The operational characteristics and activities of these vessels in waters off Alaska are largely determined by the pollock fishing seasons. Their Alaska operations are restricted under the AFA to the BS and AI regulatory areas. There are 16 federally licensed CPs in this class. In addition to pollock, this class participates primarily in the Pacific cod, rock sole, yellowfin sole, and other flatfish fisheries.

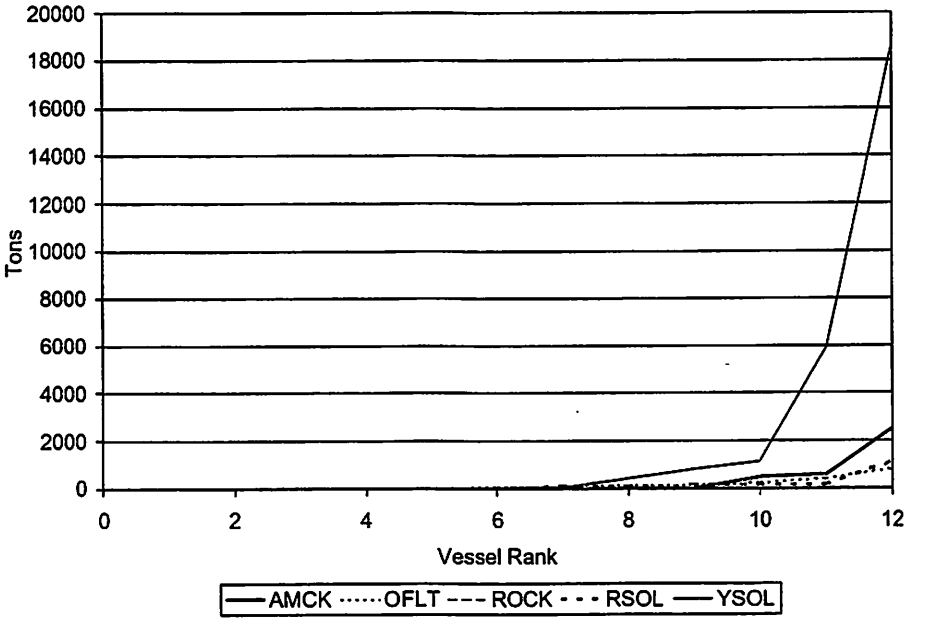
As seen in Table 14, 69 percent of vessels in 2000 retained harvests of at least 50mt of PCOD, while 25 percent retained at least 100mt and no vessels retained 250mt or more. About one-third of the vessels retained at least 50mt of RSOL, YSOL, and OFLT. No vessels retained 250mt or more of OFLT, while 25 percent of vessels retained at least 250mt of YSOL and 13 percent of vessels retained at least 250mt of RSOL.

Figure 15 shows the retained harvest by species by CPs operating in BSAI, and Figure 16 focuses on the catch up to 500mt. Natural breaks in the amount caught exist at about 5mt of AMCK, 150mt for OFLT, and 75mt for YSOL. Figure 17 shows the retained harvest of PCOD by CPs., and Figure 18 focuses on the catch up to 500mt. The catch of vessels gradually increases with vessel ranking, although a slight break occurs at 225 and 375mt.

Table 14. Percentage of Surimi Trawl Catcher Processors in BSAI with Minimum Catches (16 Vessels Total)

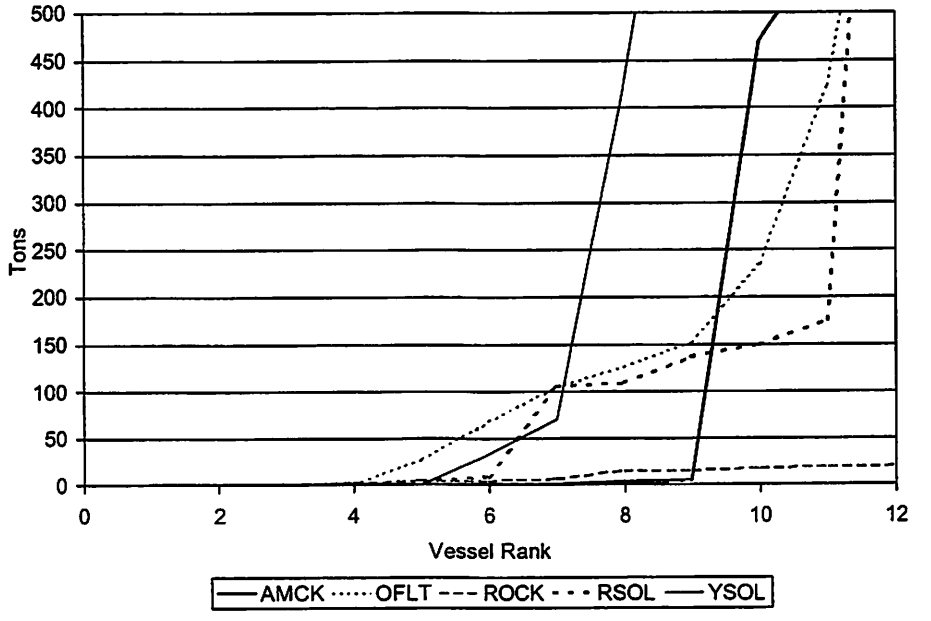
	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	13	6	13	0	6	0	50	44	56	88	63	69	0	0	0	0	6	0
Vessels with 100mt	13	6	13	0	6	0	50	25	31	63	38	25	0	0	0	0	0	0
Vessels with 250mt	13	6	13	0	6	0	31	0	6	31	13	0	0	0	0	0	0	0
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	31	31	31	25	31	38	38	44	31	38	31	31	44	31	19	31	31	31
Vessels with 100mt	19	25	31	25	6	31	38	38	31	38	31	25	44	19	19	19	25	25
Vessels with 250mt	0	13	19	25	0	13	38	38	31	31	31	25	13	6	13	6	13	0

Figure 15. Average Retained Harvest by Surimi Trawl Catcher Processors in BSAI, by species, 1995-2000



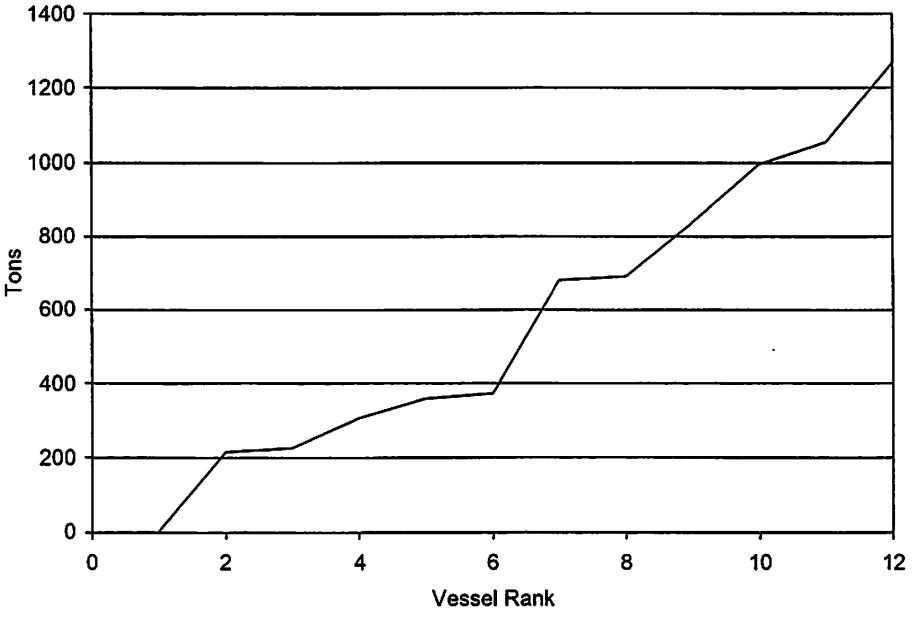
Note: Top four vessels have been omitted to protect confidentiality.

Figure 16. Average Retained Harvest by Surimi Trawl Catcher Processors in BSAI, by species, 1995-2000



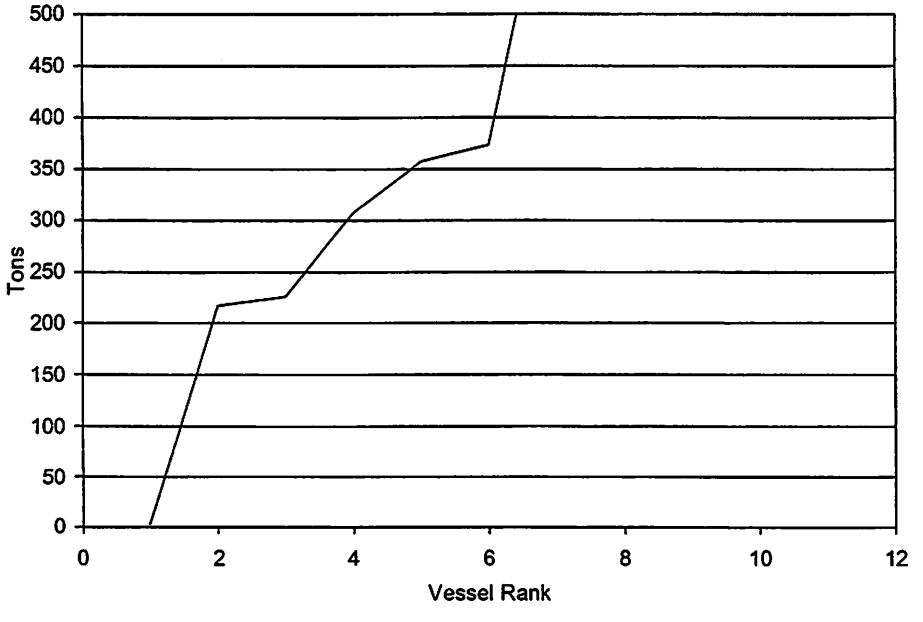
Note: Top four vessels have been omitted to protect confidentiality, and the vertical scale has been limited in order to focus on catches closer to the proposed minimums.

Figure 17. Average Retained Harvest of Pacific Cod by Surimi Trawl Catcher Processors in BSAI, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 18. Average Retained Harvest of Pacific Cod by Surimi Trawl Catcher Processors in BSAI, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality, and the vertical scale has been limited in order to focus on catches closer to the proposed minimums.

2.2.2 Fillet Trawl Catcher Processors

These trawl CPs produce fillets as their primary product from harvests in the BSAI pollock fisheries. The large size of these vessels also provides room for equipment to produce fishmeal, minced product, and other product forms. Pollock is the primary species harvested by this vessel class, but Pacific cod are also targeted. Their operational characteristics and activities in waters offshore Alaska are largely determined by the fishing seasons for these species. This class has been defined as a distinct class because these vessels do not have the capability to produce surimi, and because of their focus on higher value but more labor-intensive fillet production. There are seven federally licensed CPs in this class, with participation consisting primarily of Pacific cod and some rock sole.

As shown in Table 15, 57 percent of vessels in 2000 harvested at least 50mt of PCOD, and 29 percent harvested 250mt or more. Participation in other fisheries has been limited to one or two vessels in recent years, and most participation has fallen since 1997.

No figures are provided showing the retained harvest by species of fillet trawl CPs operating in BSAI because of the limited number of qualified vessels.

Table 15. Percentage of Fillet Trawl Catcher Processors in BSAI with Minimum Catches (7 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	0	29	0	0	0	0	71	86	86	86	57	57	0	29	0	0	0	0
Vessels with 100mt	0	29	0	0	0	0	71	86	86	86	57	43	0	29	0	0	0	0
Vessels with 250mt	0	14	0	0	0	0	71	71	71	86	43	29	0	0	0	0	0	0

	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	14	29	14	29	0	14	29	29	29	14	0	0	29	29	0	29	0	0
Vessels with 100mt	14	14	14	29	0	14	29	29	29	0	0	0	14	29	0	14	0	0
Vessels with 250mt	14	14	14	0	0	0	29	29	29	0	0	0	0	0	0	0	0	0

2.2.3 Head and Gut Trawl Catcher Processors

Head and gut trawl CPs primarily produce headed and gutted products from the BSAI and GOA groundfish fisheries. Flatfish is the primary target species for this vessel class, and components of the ARSO species aggregation (primarily Atka mackerel and rockfish) and Pacific cod are important secondary targets. This class was established for the following reasons:

- This class is the only trawl CP group that does not focus on pollock
- Vessels in this class are smaller than the surimi trawl CP or fillet trawl CP vessels
- This class primarily produces one product form—headed and gutted products

This focus on trawl fisheries other than pollock results in spatial and temporal differences in the operating patterns of head and gut trawl CP vessels compared to surimi trawl CP and fillet trawl CP vessels. There are 34 federally licensed CPs in this class, with participation consisting of Atka mackerel, Pacific cod, rockfish, rock sole, yellowfin sole, and other flatfish.

As shown in Table 16, vessels have been active in all six of the fisheries listed during the past six years. Over half of the vessels harvested 250mt or more of PCOD, RSOL, and YSOL, while 53 percent of vessels harvested at least 100mt of OFLT and 47 percent harvested at least 250mt. One quarter of the vessels harvested at least 250mt of AMCK, 24 percent harvested 50mt or more of ROCK, and 18 percent of vessels harvested 250mt or more of ROCK.

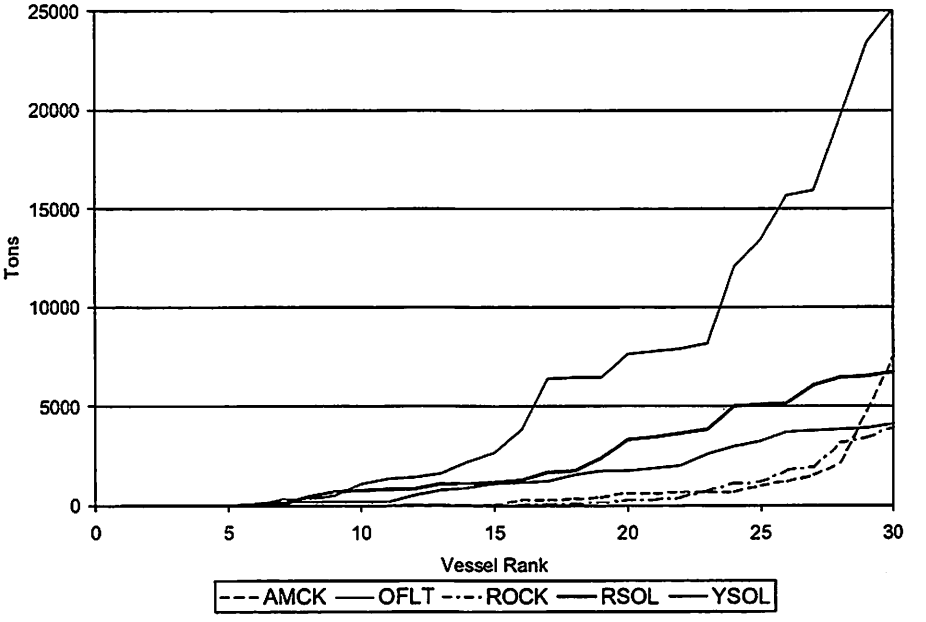
Figure 19 shows the retained harvest by species of CPs operating in BSAI, and Figure 20 focuses on catches up to 500mt. Natural breaks in the amount caught exist at or below 25mt for all species, as well as at about 200mt for OFLT and 250mt for ROCK. Figure 21 shows the retained harvest of PCOD by CPs, and Figure 22 focuses on catches up to 500mt. The catch of vessels gradually increases with vessel ranking, although a natural break occurs at 50mt.

Table 16. Percentage of Head and Gut Trawl Catcher Processors in BSAI with Minimum Catches (34 Vessels Total)

	AMCK						PCOD						ROCK					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	41	35	24	35	35	26	79	76	71	62	59	56	44	38	32	26	24	24
Vessels with 100mt	41	32	24	26	29	26	76	76	65	59	53	56	41	35	26	24	21	18
Vessels with 250mt	38	29	24	24	29	24	71	65	53	56	53	53	26	29	26	15	21	18

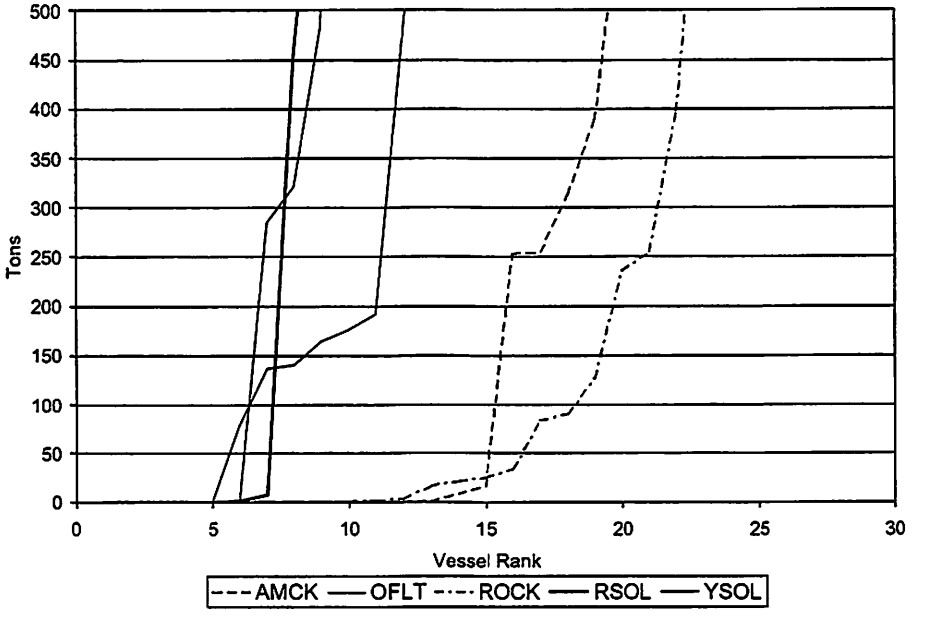
	RSOL						YSOL						OFLT					
	95	96	97	98	99	00	95	96	97	98	99	00	95	96	97	98	99	00
	Percent of Fleet						Percent of Fleet						Percent of Fleet					
Vessels with 50mt	76	71	68	50	53	56	74	65	65	53	56	59	76	65	65	62	56	56
Vessels with 100mt	76	68	68	50	53	53	74	65	65	53	56	56	74	62	59	56	47	53
Vessels with 250mt	68	62	65	41	53	53	71	62	65	53	56	53	59	38	32	50	32	47

Figure 19. Average Retained Harvest of Head and Gut Trawl Catcher Processors in BSAI, by species, 1995-2001



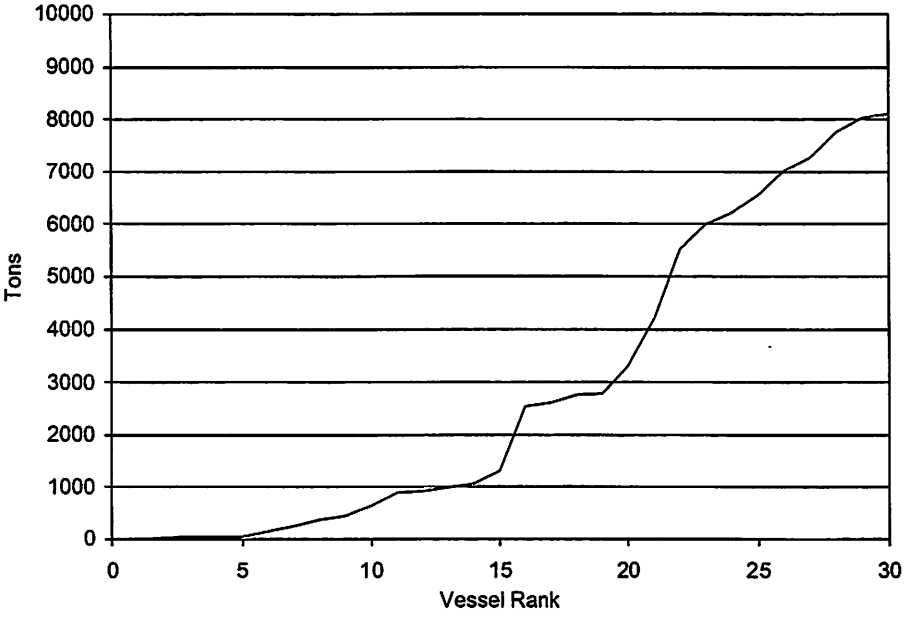
Note: Top four vessels have been omitted to protect confidentiality.

Figure 20. Average Retained Harvest of Head and Gut Trawl Catcher Processors in BSAI, by species, 1995-2000



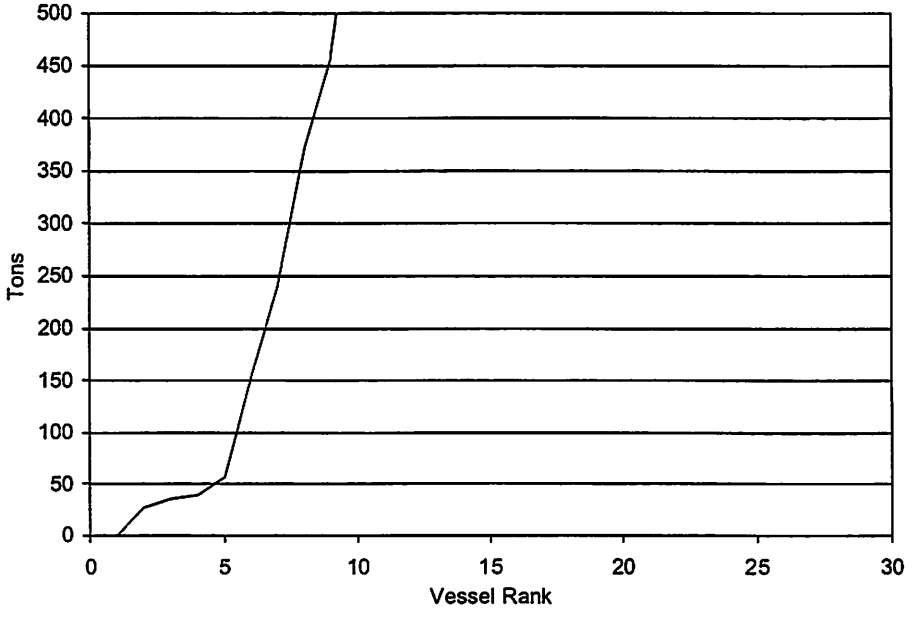
Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

Figure 21. Average Retained Harvest of Pacific Cod by Head and Gut Trawl Catcher Processors in BSAI, 1995-2000



Note: Top four vessels have been omitted to protect confidentiality.

Figure 22. Average Retained Harvest of Pacific Cod by Head and Gut Trawl Catcher Processors in BSAI, 1995-2000



Note: Vertical scale has been limited in order to focus on catches closer to the proposed minimums.

2.3 Non-Trawl Pacific Cod Harvests in BSAI Compared to Minimum Standards

This section shows the harvests of Pacific cod in the BSAI by pot and longline CVs and CPs. This information is included for purposes of comparison to trawl harvests of Pacific cod in the BSAI and for comparisons to non-trawl Pacific cod fisheries in the GOA. Catcher vessels less than 60 feet in length have not been included because these vessels have very limited catches and participation.

2.3.1 Non-Trawl Catcher Vessels

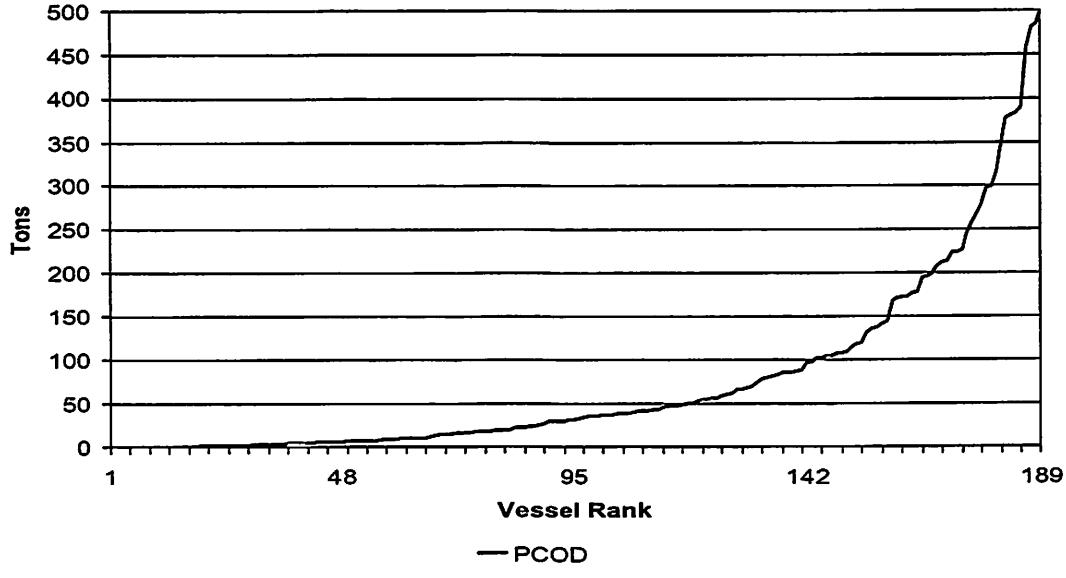
A total of 193 pot and longline CVs participated in BSAI fisheries using pot and longline gear. Of these vessels, only 30 of the active vessels meet the qualification requirements under Amendment 67 to the BSAI Groundfish Plan scheduled for implementation in 2003. Table 17 shows the percentage of active pot and longline CVs operating in BSAI with minimum catches of PCOD. Figure 23 shows the retained harvest by vessel rank.

As shown in Table 17, 41 percent of the vessels in 2000 retained at least 50mt of PCOD, and 8 percent of the vessels retained 250mt or more. Figure 23 shows the retained harvest of PCOD by pot and longline CVs operating in BSAI with pot and longline gear.

Table 17. Percentage of Pot and Longline Catcher Vessels in BSAI with Minimum Catches of Pacific Cod (193 Vessels Total)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	22	32	25	17	30	41
Vessels with 100mt	17	24	23	13	22	28
Vessels with 250mt	10	12	19	6	7	8

Figure 23. Average Retained Harvest of Pacific Cod by Pot and Longline Catcher Vessels in BSAI, 1995-2000 (193 Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

2.3.1.1 Pot Catcher Vessels Using Pot Gear

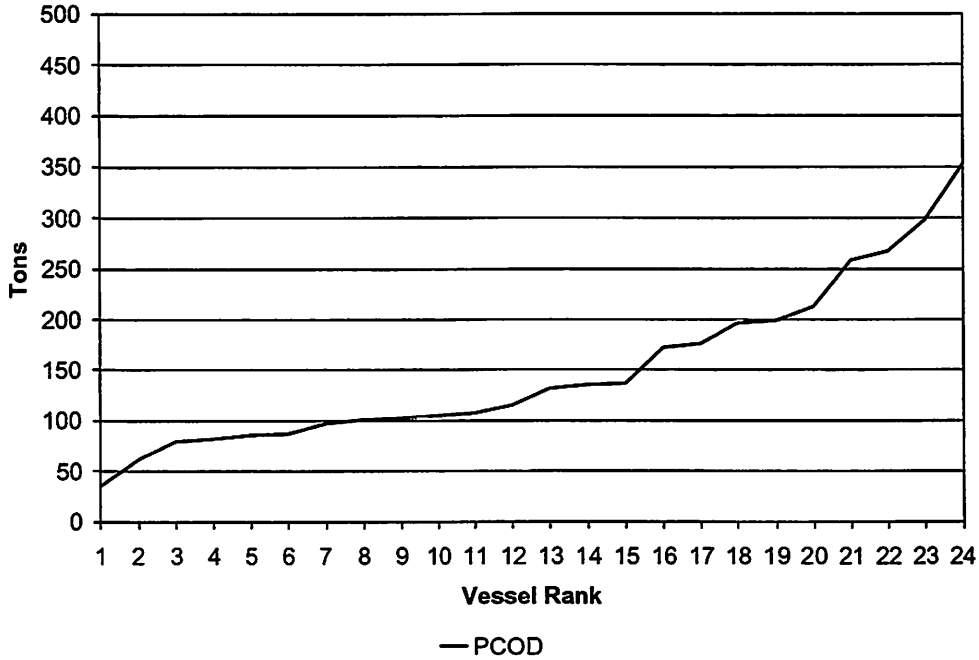
The Pot CV class includes all vessels that are not trawl CVs for which the value of pot catch is greater than 15 percent of total catch value, vessel length is greater than or equal to 60 feet, and the total value of groundfish catch is greater than $5000. In 2003, under Amendment 67 to the BSAI Groundfish Plan, licensed vessels will be limited to those that had landings of over 100,000 lbs. In the directed commercial BSAI Pacific cod fishery in any of the two years from 1995 to 1999. There are 28 Pot CVs over 60 feet in length that meet these requirements. Pot CVs less than 60 feet in length are not affected by the amendment.

As shown in Table 18, 61 percent of licensed pot CVs in 2000 retained 50mt or more of PCOD using pot gear, and 21 percent retained at least 250mt. The average retained harvest has shrunk over time, with 50 percent of vessels landing 250mt or more in 1995, compared to 14 percent in 1998 and 1999, and 21 percent in 2000 Figure 24 shows the retained harvest of PCOD by pot CVs using pot gear in the BSAI. The catch of the vessels gradually increases with vessel ranking.

Table 18. Percentage of Pot Catcher Vessels Using Pot Gear in BSAI with Minimum Catches of Pacific Cod (28 Vessels Participating)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	71	75	57	43	61	61
Vessels with 100mt	64	68	50	29	54	50
Vessels with 250mt	50	43	46	14	14	21

Figure 24. Average Retained Harvest of Pacific Cod by all Pot Catcher Vessels Using Pot Gear in BSAI, 1995-2000 (28 Licensed Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

2.3.1.2 Longline Catcher Vessels Using Hook & Line Gear

The Longline CV class includes all CVs that are not trawl CVs or pot CVs for which vessel length is greater than or equal to 60 feet and the total value of groundfish catch is greater than $2000, excluding halibut and state water sablefish. In 2003, under Amendment 67 to the BSAI Groundfish Plan, licensed vessels will be limited to those that retained at least 7.5mt of cod landings in the directed commeral BSAI Pacific cod fishery in any one year from 1995 to 1999. There are 3 CVs over 60 feet in length that meet these requirements, of which 2 participated during 1995 to 2000. Longline CVs under 60 feet in length are not affected by this amendment.

As shown in Table 19, since 1997, no licensed longline CVs have retained 50mt or more of PCOD using hook and line gear. In 1997, one vessel retained at least 100mt. No chart is included because only two vessels participated, which fall under the protection of confidentiality.

Table 19. Percentage of Longline Catcher Vessels Greater than 60 Feet in Length Using Hook and Line Gear in BSAI with Minimum Catches of Pacific Cod (2 Vessels Participating)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	50	50	50	0	0	0
Vessels with 100mt	50	0	50	0	0	0
Vessels with 250mt	0	0	0	0	0	0

2.3.2 Non-Trawl Catcher Processors Harvests Compared to Minimum Standards

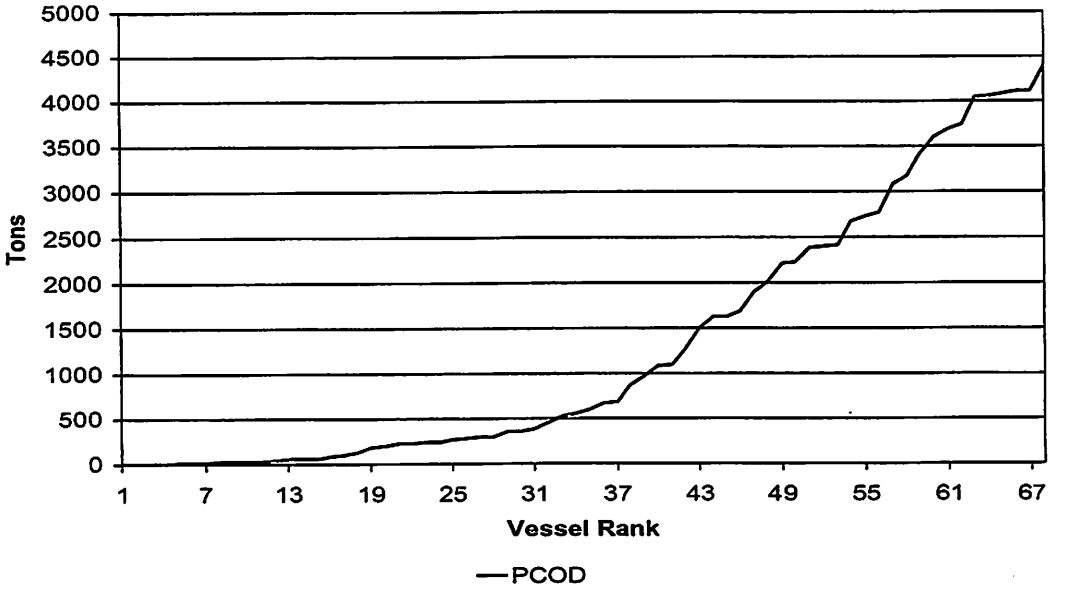
A total of 72 pot and longline CPs participated in BSAI fisheries using pot and longline gear. Of these vessels, only 45 are federally licensed and appear qualified to meet the requirements under Amendment 67 to the BSAI Groundfish Plan. Table 20 shows the percentage of CPs operating in BSAI with minimum catches of PCOD. Figure 25 shows the retained harvest by vessel rank.

As shown in Table 20, most of the licensed vessels have harvested significant amounts of PCOD. In 2000, 68 percent of the vessels harvested 50mt or more, and 58 percent of the vessels harvested at least 250mt. Figure 25 shows the retained harvest of PCOD by CPs operating in BSAI. The harvest size gradually increases with the vessel rank.

Table 20. Percentage of Pot and Longline Catcher Processors in BSAI with Minimum Catches of Pacific Cod (72 Vessels Total)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	63	67	57	56	65	68
Vessels with 100mt	61	67	57	53	61	65
Vessels with 250mt	58	63	54	51	57	58

Figure 25. Average Retained Harvest of Pacific Cod by Pot and Longline Catcher Processors in BSAI, 1995-2000 (72 Vessels Total)



Note: Top four vessels have been omitted to protect confidentiality.

2.3.2.1 Pot Catcher Processors Using Pot Gear

The vessels in this class of CPs use predominantly pot gear to harvest Bering Sea and GOA groundfish resources. Virtually all vessels in the P-CP class also fish and process crab in the BSAI. In fact, the crab fisheries in the Bering Sea are the primary fisheries for the class and groundfish harvest and production are typically secondary activities. Because of the focus on crab, operating patterns are much different than for other CPs. When harvesting groundfish the P-CP class focuses on high-value species such as sablefish and Pacific cod that can be captured in sufficient numbers with pot gear to generate adequate revenues. The operating characteristics and activities of this class are the result of both crab and groundfish regulations and the use of pot gear.

In 2003, under Amendment 67 of the BSAI Groundfish Plan, licensed vessels will be limited to those that have made at least 300,000 lbs. Of landings in the directed BSAI Pacific cod fishery in each of any of two of the years 1995, 1996, 1997, or 1998. There are 5 active CPs that met this requirement.

As shown in Table 21, 80 percent of licensed CPs in 2000 harvested at least 50mt of PCOD using pot gear, and 20 percent harvested 250mt or more. No figure is shown for these CPs, because removal of the top four vessels for confidentiality would leave only one other licensed vessel. No chart is included because of the small number of vessels participating.

Table 21. Percentage of Pot Catcher Processors Using Pot Gear in BSAI with Minimum Catches of Pacific Cod (5 Vessels Participating)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	100	100	40	40	80	80
Vessels with 100mt	100	100	40	40	80	80
Vessels with 250mt	100	100	40	40	80	20

2.3.2.2 Longline Catcher Processors Using Hook & Line Gear

Vessels in this class are about the same size as head and gut trawl CP vessels and produce headed and gutted products. The reasons for this vessel class producing headed and gutted products are similar to those described for head and gut CP vessels—loadline regulations plus a lack of space to accommodate additional crew and equipment. Pacific cod is the primary target species, with sablefish and Greenland turbot as important secondary targets. The longline CP class evolved because regulations applying to this gear type provide more fishing days than are available to other gear types. These vessels are able to produce relatively high-value products that compensate for the relatively low catch volumes associated with longline gear.

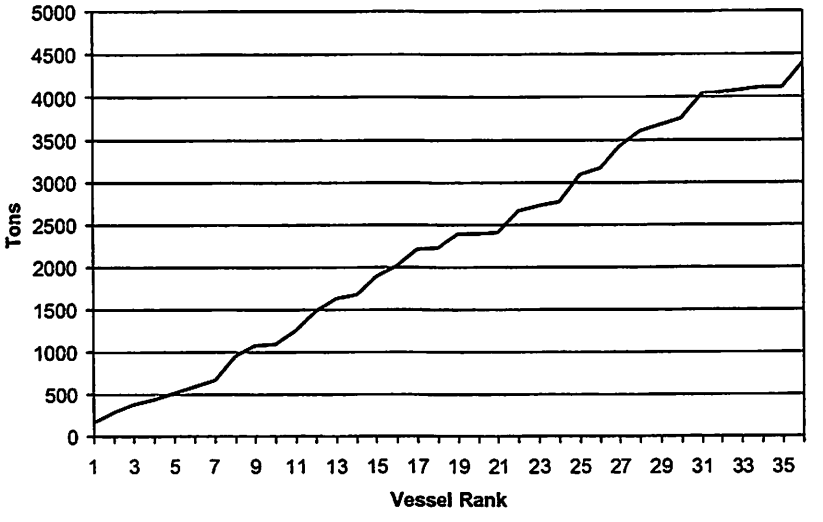
In 2003, under Amendment 67 of the BSAI Groundfish Plan, licensed vessels will be limited to those CPs that made 270mt of landings in the directed commercial BSAI Pacific cod fishery in any one year from 1996 to 1999. There are 40 active longline CPs that meet this requirement.

As shown in Table 22, 90 percent of longline CPs in 2000 harvested 50mt or more of PCOD using hook and line gear, and 88 percent harvested at least 250mt. Participation has steadily increased over the last several years. Figure 26 shows the retained harvest of PCOD by longline CPs using hook and line gear in BSAI. The harvest increases gradually with the vessel rank, although a slight break occurs at about 40 or 50mt, and again at 300mt.

Table 22. Percentage of Longline Catcher Processors Using Hook and Line Gear in BSAI with Minimum Catches of Pacific Cod (40 Licensed Vessels Participating)

	95	96	97	98	99	00
	Percent of Fleet					
Vessels with 50mt	80	85	88	85	88	90
Vessels with 100mt	80	85	88	85	83	90
Vessels with 250mt	80	83	88	83	83	88

Figure 26. Average Retained Harvest of Pacific Cod by all Longline Catcher Processors Using Hook & Line Gear in BSAI, 1995-2000 (40 Licensed Vessels Participating)



Note: Top four vessels have been omitted to protect confidentiality.

Appendices

The appendices to this report contain a series of tables that summarize the number of vessels in each class that have achieved various levels of harvest of each species. This introduction provides a brief description of the tables and explains how to read them.

The tables are titled with the CV or CP class, the type of species, and the area in which the species were harvested. The title also includes the number of vessels in that category. Only vessels that are federally licensed for the region are included.

In all of the tables, the Vessel ID is a six-digit random number designed to mask the identity of the CVs or CPs included in the table. CPs have been assigned numbers from of 100000 to 499999, and CVs are given numbers from 500000 to 999999.

The summary tables showing trawl catcher contain six sub-tables—each sub-table covering one species group. Each cell indicate the minimum harvest level in metric tons attained by the vessel in a given year for the species—a "<50" in a cell denotes a harvest of less than fifty metric tons while empty cells indicate that the vessel did not harvest any of that species in that year. Minimum harvest levels attained are also indicated by the cell shading providing a visual summary of harvests as follows:

- Unshaded cells indicate that the minimum harvest level was not attained
- Light gray cells indicate that at least 50mt were harvested
- Dark gray cells indicate that at least 100mt were harvested
- Black cells indicate that at least 250mt were harvested

Along the right side of each sub-table is a total of the number of years in which that particular vessel achieved a catch greater than or equal to the limit shown in the column heading (e.g. 50, 100, 250). Along the bottom of each sub-table is a total of the number of vessels that achieved the given harvest level in the year. In both totals (columns and rows), the harvest is counted at each level at which it qualifies. For example, a vessel retaining 200 tons would be included in counts for 50mt and 100mt.

For the tables showing non-trawl catches of Pacific cod, the summary table contains sub-tables with catch levels of 5, 25, 50, 100, and 250-metric tons, as well as a sixth table incorporating the information from all of the tables. Cells with a Less than sign (Less than) indicate that the vessel harvested less than the specified amount of the species.

Table 23 shows an example table as they appear in the appendices. The sub-table in the top left portion indicates the number of vessels retaining catches of 50mt or more. Looking across the first row, vessel 254416 retained at least 50mt in 1995, 1996, and 2000, a total of three years. Looking at the column labeled "00," four vessels caught at least 50mt in the year 2000. The bottom right portion of the table indicates summary information for all vessels. Looking at vessel 254416 again, the retained catch was 250mt or more in 1995 and 1996, and at least 100mt (but less than 250mt) in 2000. The three summary columns indicate that the vessel satisfied 50 and 100 metric ton limits during three of the years, and the 250 metric ton limit during two of the years. Looking at the summary rows, in the year 2000, four vessels satisfied the 50 and 100 metric ton limits, but only one vessel retained 250mt or more.

Table 23. Example Summary Table

Vessel ID	50 Tons						All Years	100 Tons						All Years
	95	96	97	98	99	00		95	96	97	98	99	00	
254416	50	50				50	3	100	100				100	3
151902	50	50	<50		50	50	4	100	100	<100		100	100	4
477939	50	50			50		3	100	100			100		3
322779	50	50	50	50	50	50	6	100	100	100	100	100	100	6
358622	50	50	50	50	50	50	6	100	100	100	100	100	100	6
Vessels with 50mt	5	5	2	2	4	4								
Vessels with 100mt								5	5	2	2	4	4	
Vessels with 250mt														

Vessel ID	250 Tons						All Years	50, 100, and 250 Tons						All Years		
	95	96	97	98	99	00		95	96	97	98	99	00	50	100	250
254416	250	250				<250	2	250	250				100	3	3	2
151902	250	250	<250		250	<250	3	250	250	<50		250	100	4	4	3
477939	250	250			250		3	250	250			250		3	3	3
322779	250	250	250	250	250	250	6	250	250	250	250	250	250	6	6	6
358622	250	250	250	250	250	<250	5	250	250	250	250	250	100	6	6	5
Vessels with 50mt								5	5	2	2	4	4			
Vessels with 100mt								5	5	2	2	4	4			
Vessels with 250mt	5	5	2	2	4	1		5	5	2	2	4	1			

The species indicated in the appendices use abbreviated species codes. The species groupings used in the tables are shown in the following table.

Table 24. Species Groupings

Species Group	Species Code	Species Included
Atka Mackerel	AMCK	Atka Mackerel
Pacific Cod	PCOD	Pacific Cod
Other Flatfish	OFLT	Arrowtooth Flounder, Flathead Sole, Turbot, and Other Flatfish
Rock Sole	RSOL	Rock Sole
Yellowfin Sole	YSOL	Yellowfin Sole

The appendices divide CVs into nine separate classes, and CPs into five classes. The vessel classes used in this report are the same vessel classes used in "Sector and Regional Profiles of the North Pacific Groundfish Fisheries—2001" submitted to the NPFMC by Northern Economics and EDAW in November 2001. Vessel classes in both this report and the sector profiles are defined based on a combination of vessel characteristics and fishing patterns. Table 25 provides descriptions of the 9 CVs classes and the 5 CP classes.

Table 25. Vessel Classes

Vessels Class	Description
TCV BSP = 125: Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is greater than value of catch of all other species combined, vessel length is greater than or equal to 125 ft., and total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.
TCV BSP 60-124: Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is greater than value of catch of all other species combined, vessel length is 60 ft. to 124 ft., and total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.
TCV Div. AFA: Diversified AFA-Eligible Trawl Catcher Vessels	Includes all vessels that are AFA-eligible for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
TCV Non-AFA: Non-AFA Trawl Catcher Vessels	Includes all vessels that are not AFA-eligible for which trawl catch accounts for more than 15% of total catch value, value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
TCV < 60: Trawl Catcher Vessels Less than 60 Feet in Length	Includes all vessels for which trawl catch accounts for more than 15% of total catch value, vessel length is less than 60 ft., and total value of groundfish catch is greater than $2500.
PCV: Pot Catcher Vessels	Includes all vessels that are not trawl CVs for which value of pot catch is greater than15% of total catch value, vessel length is greater than or equal to 60 ft., and total value of groundfish catch is greater than $5000.
LCV: Longline Catcher Vessels	Includes all vessels that are not trawl CVs or pot CVs for which vessel length is greater than or equal to 60 ft. and total value of groundfish catch is greater than $2000, excluding halibut and state water sablefish.
FGCV 33-59: Fixed Gear Catcher Vessels 33 Feet to 59 Feet in Length	Includes all vessels that are not trawl CVs for which vessel length is 33 to 59 ft., and total value of groundfish catch is greater than $2000.
FGCV = 32: Fixed Gear Catcher Vessels Less Than or Equal to 32 Feet in Length	Includes all vessels that are not trawl CVs for which vessel length is less than or equal to 32 ft., and total value of groundfish catch is greater than $1000.
ST-CP Surimi Trawl Catcher Processor	These factory trawlers have the necessary processing equipment to produce surimi from pollock and other groundfish. They are generally the largest of all CPs.
FT-CP Fillet Trawl Catcher Processor	These trawl vessels have the processing equipment to produce fillets from pollock, Pacific cod, and other groundfish. They are generally smaller than ST-CP vessels.
HT-CP: Head And Gut Trawl Catcher Processor	These factory trawlers do not process more than incidental amount of fillets. Generally, they are limited to headed and gutted products or kirimi. In general, they do not focus their efforts on pollock, opting instead for flatfish, Pacific cod, and Atka mackerel. HT-CP vessels are the smallest of the trawl CPs.
P-CP Pot: Catcher Processor.	These vessels have been used primarily in the crab fisheries of the North Pacific, but increasingly are participating in the Pacific cod fisheries. They generally use pot gear, but may also use longline gear. They produce whole or headed and gutted groundfish products, some of which may be frozen in brine rather than blast frozen.
L-CP: Longline Catcher Processor	These vessels, also known as freezer longliners, do not trawl or use pot gear but use longline gear with a focus on Pacific cod. Most L-CP vessels are limited to headed and gutted products, and in general are smaller than HT-CP vessels.

The appendices are organized into different sections based on the type of vessels involved (CVs / CPs), and the type of gear used (trawl / non-trawl). The appendices are shown in the following order:

A. Retained Harvest of Catcher Vessels Operating in BSAI

B. Retained Harvest of Catcher Processors Operating in BSAI

C. Retained Harvest of Catcher Vessels and Catcher Processors Operating with Non-Trawl Gear in BSAI

Within each appendix, the vessels are shown in the following order:

- Catcher Vessels:
  - Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length
  - Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length
  - Diversified AFA-Eligible Trawl Catcher Vessels
  - Non-AFA Trawl Catcher Vessels
  - Trawl Catcher Vessels Less than 60 Feet in Length
  - Pot Catcher Vessels
  - Longline Catcher Vessels
  - Fixed Gear Catcher Vessels 33 Feet to 59 Feet in Length
  - Fixed Gear Catcher Vessels Less Than or Equal to 32 Feet in Length
- Catcher Processors:
  - Surimi Trawl Catcher Processor
  - Fillet Trawl Catcher Processor
  - Head And Gut Trawl Catcher Processor
  - Pot Catcher Processor
  - Longline Catcher Processor

Finally, with each vessel class, the tables are shown in the following order:

- Summary table
- 50 Metric Ton Limit (except for PCOD)
- 100 Metric Tons Limit (except for PCOD)
- 250 Metric Ton Limit (except for PCOD)

NORTHERN ECONOMICS INC.

Memorandum

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To: Chris Oliver
NPFMC

From: Marcus Hartley
Vice President

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1.2.1 Current BSAI Pacific Cod Trawl Fishery

The description of the current fishery will include the following:

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AFA Harvest Sideboard Limits: In addition to the LLP, trawling in the BSAI is also restricted by the AFA—112 CVs and 21 CPs are permitted to fish for pollock under AFA. The AFA also limits harvests of non-pollock species for permitted vessels—the limits are currently enforced as aggregate harvest sideboard limits for AFA CVs and AFA CPs. The limits are caps not quotas—AFA permitted vessels are allowed to harvest up to the limits but are not guaranteed that amount because non-AFA vessels are not restricted.

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Table 6 also shows the number of vessels that have harvested Pacific cod since 1997. The number of CPs harvesting PCOD has declined steadily since 1997 from 58 in 1997 to 38 in 2000—the decline is due in part to AFA which removed 9 surimi and fillet CPs from the fishery in 1999, and which allowed AFA eligible CPs to pool their historical harvests and use fewer vessels. The number of CVs that have harvested PCOD since 1997 has been trending higher after a decline in 1998—a big increase in the participation of trawl CV < 60' occurred in 2000—15 vessels harvested PCOD with trawl gear in the BSAI compared to 6 in 1999. This increase was likely caused by the injunction on trawl gear in Steller Sea Lion habitat in August 2000 because small vessels that typically harvest in the GOA moved into the BSAI.

Table 6. BSAI Pacific Cod Trawl Harvests and Vessel Counts, 1997-2000

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Sector	Metric Tons of PCOD (Non-CDQ)				Number of Vessels			
Catcher Processors								
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Pot CP (Non-AFA)	a	0	0	0	1	0	0	0
AFA Subtotal	30,746	23,128	12,846	5,322	29	28	16	15
Non-AFA Subtotal	29,898	25,733	24,965	28,283	29	23	24	23
CP Subtotal	**60,644**	**48,861**	**37,811**	**33,605**	**58**	**51**	**40**	**38**
Catcher Vessels								
Trawl CV BS PLCK ≥125' (AFA)	13,964	7,619	8,416	6,028	32	30	32	30
Trawl CV BS PLCK 60'-124' (AFA)	29,380	15,800	12,136	16,280	52	48	42	45
Trawl CV Diversified AFA	13,484	18,240	14,313	12,343	18	23	31	26
Trawl CV Non-AFA	5,177	1,499	1,789	2,494	9	8	8	9
Trawl CV < 60' (Non-AFA)	12	79 [b]	6 [b]	164 [b]	6	3	6	15
Pot CV (Non-AFA)	0	b	0	b	0	1	0	1
Ghost CVs (Non-AFA)	0	b	b	b	0	1	2	1
AFA Subtotal	56,828	41,658	34,866	34,651	102	101	105	101
Non-AFA Subtotal	5,189	1,578	1,795	2,658	15	13	16	26
CV Subtotal	**62,016**	**43,236**	**36,661**	**37,309**	**117**	**114**	**121**	**127**
Trawl Vessel Total	**122,661**	**92,098**	**74,471**	**70,914**	**175**	**165**	**161**	**165**
Trawl Apportionment	126,900	91,298	76,951	83,907				
Harvest--Percent of Apportionment	97%	101%	97%	85%				

Source: Sector Profile Database, NPFMC.

Notes:

[a] Harvests of Pot CPs were added to H&G CP harvests to protect confidentiality.

[b] Harvests of Pot CVs and Ghost CV were added to Trawl CV < 60' harvests to protect confidentiality.

Latent Licenses: Rationalization of a fishery establishes a management system that significantly reduces the possibility that the harvests of individuals can be affected by the harvests of others. If entry of additional participants into a fishery is possible then it is unlikely that the fishery can be rationalized. Latent licenses represent the potential that additional participants may enter a fishery—the greater the number of latent licenses the less likely it is that the fishery can be rationalized.[7] Table 7 compares the number of active participants in the BSAI PCOD fishery with the number of latent licenses. Latent licenses were estimated by subtracting the number of active vessels from the

[7] The inability to identify owners of latent licenses—a problem caused by confidentiality restrictions—is a major constraint to rationalization. If owners of latent licenses can be identified it may be possible to keep them out of a particular fishery through contractual agreements with active participants.

total number of trawl endorsements issued for BSAI vessels.[8] In the CP fishery, it is estimated that there were 30 latent licenses in 2000 compared to the 38 vessels with landings. In the 2000 CV fishery is estimated there were 37 latent licenses.

Table 7. Estimated Number of Active and Latent Licenses in the BSAI Trawl Pacific cod Fisheries

	1997	1998	1999	2000
	Number of Vessels			
AFA CPs	29	28	16	15
Non-AFA CPs	29	23	24	23
Latent CP Licenses	19	26	28	30
CP subtotal	**77**	**77**	**68**	**68**
AFA CVs	102	101	105	101
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Latent CV Licenses	47	50	43	37
CV subtotal	**164**	**164**	**164**	**164**
Total	**241**	**241**	**241**	**241**

1.2.2 Potential Steps to Rationalize the BSAI Pacific Cod Fishery

There are many potential paths to a rationalized BSAI Trawl Pacific cod fishery. This discussion paper will examine two such paths. The first path, labeled "Subdivide and Rationalize," would create four separate BSAI Trawl fisheries two for AFA vessels and two for non-AFA vessels. The second path "The Chignik Approach" mirrors the process used by the Alaska Board of Fish in the Chignik Seine fishery.

Subdivide and Rationalize: This rationalization process would be accomplished as follows:

1. Subdivide the CP and CV fisheries into AFA and non-AFA fisheries.
2. Establish separate apportionments for each of the four fisheries by converting AFA BSAI PCOD harvest sideboards into quotas for the AFA fisheries and assigning the remainders to the non-AFA fisheries.
3. Establish separate halibut PSCs for AFA and non-AFA fisheries. Other prohibited species (e.g. for crab, herring and salmon) restrictions would also be subdivided.
4. Allow the AFA fisheries to form cooperatives stipulating that vessels not participating in cooperatives could fish in an open access portion where the amount in the open access portion is equal to the sum of harvest sideboards of the open access participants.
5. Eliminate latent trawl licenses in the non-AFA PCOD fisheries by amending the LLP program to create a BSAI Pacific Cod endorsement based on recency.
6. Allow the non-AFA vessels to form cooperatives. Vessels that do not choose to participate in the cooperatives can participate in an open access portion. Harvest amounts assigned to cooperatives and to the open access portions will be determined by an agreed upon formula.[9]

While this approach may appear to be expedient, it may be unlikely that non-AFA participants will agree to it—all of the potential costs of rationalization process appear to be borne by non-AFA vessels. First, non-AFA vessels become more limited under this process while AFA vessels are given a guaranteed harvest. Second, if additional vessels enter the fishery during the rationalization process

[8] For the years 1997 and 1998, Table 7 includes the 9 CPs that were removed from the fishery under AFA.

[9] The formula used is not specified here, but it could take many forms. Four different formulas have been employed in Alaskan fisheries—the halibut IFQ fishery, the sablefish IFQ fishery, AFA pollock fishery, and the Chignik Seine fishery.

non-AFA vessels will suffer the consequences. Finally, it is likely that the process for the non-AFA vessels could take several years to implement while the process for AFA vessels might take relatively little time.

The Chignik Approach: This approach to rationalization follows the process used by the Alaska Board of Fish to rationalize the Chignik Salmon Seine Fishery. This method would move directly to rationalization by establishing separate quotas for vessels participating in cooperative and vessels participating in an open pool fishery. To accomplish this the NPFMC would need to amend the BSAI FMP to create the process for establishing the separate apportionments (this may not be legal under the current congressional moratorium on ITQ's). An hypothetical example of the some of the issues follows—the Council would of course be free to change any of the elements of this hypothetical scenario.

If a majority of the active participants in 2001 (in either sector) agree to join a cooperative then each vessel joining would bring 90 percent of their harvests in 2001 to the cooperative on a percentage basis.[10] AFA vessels joining the cooperative(s) would bring their harvest amounts from the prior year, not their sideboard limit.[11] Vessels choosing not to participate in the cooperative would be allowed to participate in open access fisheries—the open access TAC would be equal to the amount of the trawl apportionment for CVs or CPs that are not allocated to the cooperatives. Any vessels that did not participate in 2001 would have to participate in the open pool fishery if they wished to harvest Pacific cod with trawl gear in 2002.

In subsequent years, vessels could choose to leave the cooperative or to join the cooperative. Vessels choosing to join the cooperative from the open pool could do so and would bring 90 percent of the catch they harvested in the previous year. Vessels leaving the cooperative would be allowed to take the unadjusted percentage they brought into the cooperative.[12]

The cooperatives could function similar to AFA cooperatives, or as alternatively, the Council may prefer to allow the CV cooperative(s) to be formed independent of processors. CPs could form one or multiple cooperatives if they chose (AFA-CP and non-AFA-CPs for example).

A Comparison of Approaches: There are two major differences in the two approaches specified above: In the "Subdivide and Rationalize" approach, AFA vessels would be assigned quota equal to their harvest sideboards and AFA vessels would be able to rationalize much sooner than non-AFA vessels, which could potentially have to wait for many year until the final program is implemented. Thus in the "Subdivide and Rationalize" approach AFA vessels would suffer relatively little pain in the rationalization process. Under the "Chignik Approach AFA harvest sideboards become moot because all sectors of the trawl fishery achieve rationalization at the same time, and because allocations to cooperative are based on the previous year's harvests.[13]

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[10] Thus if a vessels harvested 1,000mt of Pacific cod and the trawl allocation was 100,000mt then the vessel would bring 90 percent of the 10 percent their harvest represented—in other words, 9 percent of the total trawl allocation would be assigned to the cooperative.

[11] In this example, AFA harvest sideboards would remain a limitation on AFA vessels operating in the open access fishery—note that the amount a vessel brings into the cooperative is based on the previous years harvest and does not necessarily assigned the amount equal to its sideboard cap.

[12] Vessels leaving would take with them the amount they brought to the cooperative before the 90 percent was applied. Thus if the vessel discussed in footnote 10 chose to leave the cooperative it would bring 10 percent of the trawl allocation to the open pool fishery.

[13] This is particularly true given that AFA trawl vessels did not harvest their sideboard amounts in 2001.

NORTHERN ECONOMICS INC.

Memorandum

D-1(b)

Date: February 7, 2002

To: Chris Oliver
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From: Marcus Hartley
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While this approach may appear to be expedient, it may be unlikely that non-AFA participants will agree to it—all of the potential costs of rationalization process appear to be borne by non-AFA vessels. First, non-AFA vessels become more limited under this process while AFA vessels are given a guaranteed harvest. Second, if additional vessels enter the fishery during the rationalization process

[8] For the years 1997 and 1998, Table 7 includes the 9 CPs that were removed from the fishery under AFA.

[9] The formula used is not specified here, but it could take many forms. Four different formulas have been employed in Alaskan fisheries—the halibut IFQ fishery, the sablefish IFQ fishery, AFA pollock fishery, and the Chignik Seine fishery.

non-AFA vessels will suffer the consequences. Finally, it is likely that the process for the non-AFA vessels could take several years to implement while the process for AFA vessels might take relatively little time.

The Chignik Approach: This approach to rationalization follows the process used by the Alaska Board of Fish to rationalize the Chignik Salmon Seine Fishery. This method would move directly to rationalization by establishing separate quotas for vessels participating in cooperative and vessels participating in an open pool fishery. To accomplish this the NPFMC would need to amend the BSAI FMP to create the process for establishing the separate apportionments (this may not be legal under the current congressional moratorium on ITQ's). An hypothetical example of the some of the issues follows—the Council would of course be free to change any of the elements of this hypothetical scenario.

If a majority of the active participants in 2001 (in either sector) agree to join a cooperative then each vessel joining would bring 90 percent of their harvests in 2001 to the cooperative on a percentage basis.[10] AFA vessels joining the cooperative(s) would bring their harvest amounts from the prior year, not their sideboard limit.[11] Vessels choosing not to participate in the cooperative would be allowed to participate in open access fisheries—the open access TAC would be equal to the amount of the trawl apportionment for CVs or CPs that are not allocated to the cooperatives. Any vessels that did not participate in 2001 would have to participate in the open pool fishery if they wished to harvest Pacific cod with trawl gear in 2002.

In subsequent years, vessels could choose to leave the cooperative or to join the cooperative. Vessels choosing to join the cooperative from the open pool could do so and would bring 90 percent of the catch they harvested in the previous year. Vessels leaving the cooperative would be allowed to take the unadjusted percentage they brought into the cooperative.[12]

The cooperatives could function similar to AFA cooperatives, or as alternatively, the Council may prefer to allow the CV cooperative(s) to be formed independent of processors. CPs could form one or multiple cooperatives if they chose (AFA-CP and non-AFA-CPs for example).

A Comparison of Approaches: There are two major differences in the two approaches specified above: In the "Subdivide and Rationalize" approach, AFA vessels would be assigned quota equal to their harvest sideboards and AFA vessels would be able to rationalize much sooner than non-AFA vessels, which could potentially have to wait for many year until the final program is implemented. Thus in the "Subdivide and Rationalize" approach AFA vessels would suffer relatively little pain in the rationalization process. Under the "Chignik Approach AFA harvest sideboards become moot because all sectors of the trawl fishery achieve rationalization at the same time, and because allocations to cooperative are based on the previous year's harvests.[13]

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[10] Thus if a vessels harvested 1,000mt of Pacific cod and the trawl allocation was 100,000mt then the vessel would bring 90 percent of the 10 percent their harvest represented—in other words, 9 percent of the total trawl allocation would be assigned to the cooperative.

[11] In this example, AFA harvest sideboards would remain a limitation on AFA vessels operating in the open access fishery—note that the amount a vessel brings into the cooperative is based on the previous years harvest and does not necessarily assigned the amount equal to its sideboard cap.

[12] Vessels leaving would take with them the amount they brought to the cooperative before the 90 percent was applied. Thus if the vessel discussed in footnote 10 chose to leave the cooperative it would bring 10 percent of the trawl allocation to the open pool fishery.

[13] This is particularly true given that AFA trawl vessels did not harvest their sideboard amounts in 2001.

NORTHERN ECONOMICS INC.

Memorandum

Date: February 6, 2002

To: Chris Oliver
NPFMC

From: Marcus Hartley
Vice President

Re: NMFS Gear Endorsements

This memo is updates information submitted to the NPFMC regarding minimum landings requirements in the BSAI and the GOA. Recently NMFS finalized issuance of gear endorsements approved under Amendment 60 to the GOA Groundfish FMP and Amendment 58 to the BSAI Groundfish LLP. Table 1 below summarizes the gear endorsements issued by FMP. Three classes of gear endorsements are possible-Trawl Only, Non-trawl Only or Both Gears. Overall a total of 2,038 vessels have been issued gear endorsements—320 are eligible to use trawl gear and 1,881 to use non-trawl gear. The information can be used to calculate the number of latent trawl licenses when used in combination with our reports on minimum landings requirements.

Table 1. Summary of Groundfish Gear Endorsments by FMP and Designation

FMP	Trawl Only	Non-Trawl Only	Both Gears	Total
		Total Number of Vessels		
BSAI	142	389	90	621
GOA	126	1,591	152	1,869
Total	**157**	**1,718**	**163**	**2,038**
		Number of Catcher Vessels		
BSAI	91	306	73	470
GOA	94	1,515	143	1,752
Total	**106**	**1,616**	**146**	**1,868**
		Number of Catcher Processors		
BSAI	51	83	17	151
GOA	32	76	9	117
Total	**51**	**102**	**17**	**170**

Source: NMFS-AKR Internet site at http://www.fakr.noaa.gov/ram/llp.htm#list

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